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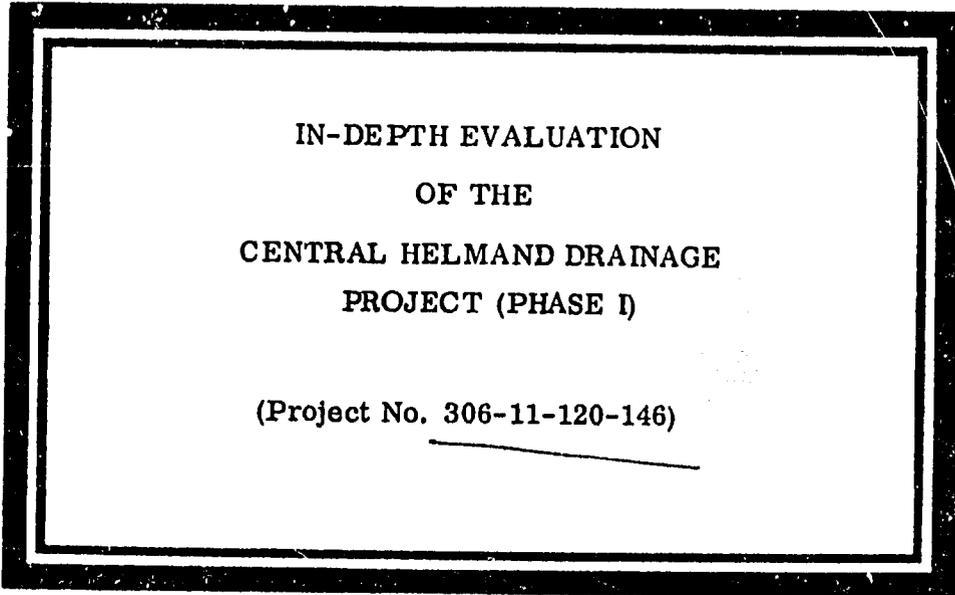
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Conducted by an Evaluation Committee
Composed of:

- Ernest J. Barbour, Chairman, RD
- Donald W. Reilly, CDE Chief Engineer
- Raymond Hooker, DP Economist
- James Stephenson, Consultant
- Andrew Evans, CO
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Completed July 31, 1976

PAR No. 76-11

A.I.D.
Reference Center
Room 1650 NS

(2)

Barbour, Ernest J.; Donald W. Reilly, Raymond Hooker, and others
In-Depth Evaluation of the Central Helmand Drainage Project
(Phase I); (Project No. 306-11-120-146)

July 31, 1976

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This evaluation seeks to diagnose existing problems and issues which affect project implementation and to offer specific recommendations for their resolution. The project planning concepts and objectives remain sound. Increasingly close communications and a developing team spirit now characterize the working relationship between Helmand-Arghandab Valley Authority (HAVA) and USAID. Reasonable agreement exists on objectives, although priorities seem to differ. General project implementation was delayed by lack of full, continuous, full-time management on the part of USAID. Drain construction completed to date has been of acceptable standards and according to specifications but targets have not been met. Master planning for Phase II has been overshadowed by the heavy pressures on HAVA and the Soil Conservation Service to demonstrate progress on physical construction. The evaluators make specific recommendations about USAID project management, HAVA project management, design production, field data collection and analysis, farm drain construction, main drain construction, and planning for Phase II. Their primary conclusion is that there is insufficient basis to recommend a go-ahead decision on Phase II until there is clear evidence that expanded physical output is likely and planning has clearly delineated implementable project content.

IN-DEPTH EVALUATION
OF THE
CENTRAL HELMAND DRAINAGE
PROJECT (PHASE I)

(Project No. 306-11-120-146)

Conducted by an
Evaluation Committee
Composed of:

Ernest J. Barbour, Chairman, RD
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Completed July 31, 1976

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* Includes Evaluation Data Worksheets as Annex C

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ANNEXES

- A. Evaluation Logical Framework**
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GLOSSARY

GOA	Government of Afghanistan
HAVA	Helmand-Arghandab Valley Authority of GOA
HCC	Helmand Construction Corporation of GOA
WAPA	Water and Power Authority of GOA
MinPlan	Ministry of Planning of GOA
AID	Agency for International Development of U.S. Government
AID/W	The Washington headquarters of AID
USAID	The AID Mission in Afghanistan
CDE	Capital Development and Engineering Office of USAID
DP	Development Planning Office of USAID
CO	Controller's Office of USAID
RD	Rural Development Office of USAID
MGT	Management Office of USAID
SCS	Soil Conservation Service of the U.S. Department of Agriculture
PASA	Participating Agency Service Agreement - Document which commits SCS to provide services to USAID
FAR	Fixed Amount Reimbursement
LOU	Letter of Understanding. A document setting forth actions to be taken as agreed between HAVA and USAID.

GLOSSARY (cont'd.)

-2-

- PAR** **Project Appraisal Report. Standard USAID evaluation report.**
- As-built** **Actual size and shape at completion of construction.**
- Conglomerate** **Gravel-like pieces of rock which have been tightly cemented by finer material which has characteristics of solid rock.**
- Caliche** **Gravel-like pieces of rock which have been cemented together, but not as tightly as conglomerate.**
- Sine qua non** **Being absolutely essential.**
- "Who-struck-John"** **Without implying fault.**

I. INTRODUCTION

In Phase I of the Central Helmand Drainage Project, HAVA and USAID have embarked on a joint venture to determine at what pace proper drainage can be provided to the farmers of the Helmand Valley. Even though Phase I does not represent a large investment, it does require considerable attention from both parties to succeed in accomplishing its objectives.

This evaluation has been premised on the conviction that actual performance is more persuasive than promises and assumptions about future performance and that farm drain construction is the key to reducing waterlogging and salinity so that farmers may benefit from the full productive potential of their land. All other aspects of this project are considered subservient to this consideration,

This report is intended to be decision-oriented. It does not dwell on a description of project failings and "who-struck-John" assessments. Rather, it seeks to diagnose the existing problems and issues which affect project implementation and to offer specific recommendations for

their resolution. These recommendations may or may not be accepted by the responsible management authorities of both parties, that is their prerogative and decision. The evaluation aims only to fulfill its responsibility for presenting clear options for decision-making. Accordingly, it has opted for candor over diplomacy. The Evaluation Committee trusts it will be read in this spirit.

There remains only to thank all the participants in this evaluation for their time and thoughts on how this project can achieve its aims more rapidly.

II. SUMMARY CONCLUSIONS

1. Substantial progress has been made in establishing a close working relationship among HAVA, SCS and USAID, particularly in the last five months. This conclusion is based on the following facts:

a. substantially shared perceptions on roles prevail;

b. reasonable agreement exists on objectives, although priorities seem to differ, especially with regard to main vs. farm drain construction, machine vs. labor emphasis, and physical construction vs. master planning;

c. promised technical manpower resources have been delivered;
and

d. most key problems have been identified and discussed among project parties, even though all have not yet been resolved.

2. This relationship, however, has so far produced limited results in terms of physical outputs or master plans for Phase II.

3. A continued closer HAVA, SCS and USAID relationship will require clarification and agreement upon respective priorities. HAVA's interest in maximum geographic spread and USAID/SCS's interest in

technically adequate farm drain spacing can and need to be reconciled.

4. While the Evaluation Committee is able to identify positive signs to indicate that preliminary work on Phase II Project Paper preparation is warranted, it concludes there is insufficient basis to recommend a go-ahead decision on Phase II until there is clear evidence that expanded physical output is likely and planning has clearly delineated implementable project content. The Committee believes that the following would constitute minimal evidence to support moving ahead with Phase II:

a. demonstration that HAVA (or HCC) can establish an effective system to recruit and manage a substantial farm drain work force (e.g., at least 500 workers per day);

b. demonstration of a harmonious and effective HAVA-HCC working relationship and of HCC capability to perform as evidenced by at least four draglines working simultaneously on the drainage project in at least two project areas;

c. preparation of jointly accepted master drainage, construction and equipment plans for Phase II; and

d. demonstration that field data are recognized as essential inputs to the project as evidenced by a fully operational soils laboratory which is adequately staffed and equipped.

III. METHODOLOGY *

A. Revised Logical Framework

The key tool used in the evaluation was the Logical Framework, which is USAID's primary project design and evaluation schema. The first task of the evaluation team was to verify that the project Logical Framework was valid and reflected original intent. Through a thorough examination of the Project Paper, Project Performance Track, Project Agreement, Letters of Understanding and discussions with those who participated in designing the project, the original project hypotheses, objectives, assumptions and indicator targets that signal successful achievement were specified in a revised comprehensive Logical Framework (see Annex A). This Logical Framework represents the plan of the project against which actual achievement was measured by the evaluation team.

B. Information Needs

The next step in the evaluation was to decide the information that would be required to measure planned against actual achievement, to determine the causes of success or failure, to validate the assumptions and test the hypotheses. For this purpose, the evaluation team developed a list of questions for each target and each assumption which was used as a guideline

* This methodology was developed with the assistance of Dr. Alan Roth, a consultant from Development Alternatives, Inc. of Washington, D.C.

in developing needed information about each indicator and assumption. Then the best source(s) of information for each need was identified.

C. Key Issues

The Logical Framework, representing only original intent, did not identify all of the key issues that the evaluation had to address. Two additional issues were: (1) whether a farmer information and education program is needed as an integral part of the project; and (2) to what degree should HAVA expand its organizational involvement in the project. A separate series of questions for each issue was developed so that necessary information could be obtained in a systematic fashion.

D. Interviewing

Thirty-three persons were interviewed in Lashkar Gah and Kabul and a number of reports were reviewed during the evaluation (see Annex B). Considering the large number of people interviewed, the amount of time needed with each interviewee and the fact that only 15 days were allotted to interviewing, it was necessary to break up the evaluation team for one-on-one interviewing. A pairing of interviewers seemed appropriate in the case of the President of HAVA.

.. full schedule of interviews was developed by the end of the second day in Lashkar Gah. The first day's results were used to judge the amount of time required for an interview. The latter part of the team's stay in Lashkar Gah was devoted to follow-up interviews to fill gaps in information.

The evaluation team met after each day of interviewing to compare notes and identify new information needs. It was essential that each interviewer be briefed on the findings of the other interviewers in order that future interviews could proceed from a progressively more fully informed base and appropriate questions asked.

Each information need in a questionnaire that was developed was coded (100 series for assumptions, 200 series for indicators and 300 series for key issues) and during the course of an interview as each subject was discussed, the reply was coded. When the secretary typed the interview notes, the name of the person interviewed was put before the code number so when the notes were assembled by code number, he could be identified. The notes were then filed by code with a complete copy of the interview available for each team member. The interview notes were treated as confidential by the evaluation team. They were used as needed during the evaluation and are to

be destroyed upon completion of a Phase II Project Paper. Documents consulted during the evaluation were filed by subject to the degree possible so that relevant information could be retrieved quickly during the preparation of the evaluation report.

E. Data Analysis

A preliminary analysis of data was undertaken by the evaluation team on the sixth day of interviewing in order to brief the Chairman of the Evaluation Committee upon his arrival in Lashkar Gah. A final analysis of each subject was done in Kabul when all interviewing had been completed. Subject files were assigned to each committee member for preparation of summaries of information obtained. Assignments were based on the members' experience. For example, the CDE representative examined the engineering outputs (design criteria, Master Drainage Plan, etc.). Each committee member developed a work sheet on each subject he reviewed. For indicators the work sheet covered current status, why, forecast and recommendations; for assumptions it decided validity and made recommendations; for key issues it offered conclusions and recommendations. These work sheets were then discussed by the Committee as a whole until a consensus was reached. The

team also determined whether there were sufficient data to support the position adopted in the evaluation report. Based on these work sheets and the Committee's deliberations, a discussion paper reflecting its preliminary findings and tentative recommendations was prepared for briefings with the SCS Administrator, USAID Director, and outside consultant, James Stephenson. The latter joined the Committee on July 5 and helped to refine the evaluation findings and recommendations.

The draft was used for HAVA-HCC-WAPA-USAID-SCS discussions in Lashkar Gah on July 11, 12th and 13th. All recommendations, major as well as minor, were fully discussed but the main body of the final report focuses solely on the major recommendations.

IV. MAJOR FINDINGS

What Went Right

1. The project planning concepts and objectives remain sound.

The inputs that have been provided by all parties, with some restructuring and improved allocation, appear adequate to achieve the desired outputs, though the original timetable has proved over-ambitious. The hypothesis that once these outputs are delivered a close HAVA-USAID working relationship will be cemented for expanded efforts appears still valid although it will be further tested during the remainder of Phase I. Finally, an expanded drainage effort, especially if directed at farm drain installation concurrently with main drain construction can be expected to reduce significantly water logging and salinity levels in the project area over time. A number of project assumptions, however, remain to be proven valid and a few have proved invalid.

2. HAVA participation in the project was expanded to include the entire Technical Department following the December 1975 reorganization. Originally the project had begun under the leadership of a HAVA soil scientist working with one engineer. When this limited involvement proved inadequate to meet project demands, HAVA management recognized the need

LOGICAL FRAMEWORK
FOR
HELHAND DRAINAGE PROJECT EVALUATION

Annex A

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	ASSUMPTIONS									
<p>GOAL (Post Phase D)</p> <p>Water logging and salinisation reduced to desired levels throughout four project areas.</p>	<p>Indicators (quantity, quality, time) to be determined from plans and studies executed during Phases I & II.</p>	<p>HIGHER ORDER OBJECTIVES</p> <p>Small Farmer Productivity and Income Increased.</p>									
<p>PURPOSE (Phase D)</p> <p>Collaborative working relationship between HAVA and USAID developed and demonstrated.</p>	<p>END OF PROJECT STATUS</p> <ol style="list-style-type: none"> 1. Shared perceptions among HAVA/MC/USAID project personnel regarding respective roles. 2. FAR concepts accepted by all parties. 3. Priorities and objectives stated similarly by all parties. 4. Promised resources delivered on schedule (or failures not attributable to Project staff). 5. All key problems identified by each party have been discussed with the other parties concerned. 6. A record of timely negotiation of Letters of Understanding (timeliness as judged by Project staff consensus). 	<p>PURPOSE TO GOAL</p> <ol style="list-style-type: none"> 1. Accelerated output performance by HAVA will result in accomplishment to fuel further expansion and improved performance. 2. HAVA capabilities improved in Phase I will be maintained. 3. ODA will provide adequate resources to HAVA for expansion of drainage construction. 4. Improved drainage will result in production benefits to justify project costs even without improvements in water management practices. 5. Project objectives can be met within current water maintenance charges. 6. Drains will be adequately maintained. 7. Farmers understand need for drainage. 									
<p>OUTPUTS</p> <ol style="list-style-type: none"> 1. Engineering criteria established. 2. HAVA engineering and design capabilities upgraded. 3. Drains constructed/improved. 4. Farm socio-economic survey conducted/analysed. 5. Detailed benefit/cost analysis completed. 6. Master drainage plan developed. 7. M soc. construction plan developed. 8. Equipment plan developed. 	<p>MAGNITUDE OF OUTPUTS</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Design criteria and construction specifications prepared by 1/76. b. Cost estimating procedures established by 2/76. c. Drawing review and approval system established by 2/76. 2. <ol style="list-style-type: none"> a. HAVA field data collection and laboratory work completed ahead of design office needs and of adequate quality to meet design needs. b. HAVA design office production stays ahead of scheduled construction. c. Field supervision and as-built data collection provided as needed. 3. <table border="1" style="margin-left: 20px;"> <tr> <td></td> <td style="text-align: center;"><u>5/76</u></td> <td style="text-align: center;"><u>12/76</u></td> </tr> <tr> <td>a. Farm drains built to specifications.</td> <td style="text-align: center;">40</td> <td style="text-align: center;">70</td> </tr> <tr> <td>b. Main drains built to specifications</td> <td style="text-align: center;">30</td> <td style="text-align: center;">50</td> </tr> </table> <ol style="list-style-type: none"> c. Water table lowered to design standards in Phase I areas. d. Drain construction in areas meeting technical, economic and social criteria. 4. Includes population, nature of settlement groups, distribution of farms, economic status w/ groups, off-farm employment, farming practices, organization of water distribution, attitudes toward project, construction laborers. Completed by 2/76. 5. Includes (all by 4/76): <ol style="list-style-type: none"> a. Internal rates of return by project area. b. Average financial benefits to farmers by project area. c. Assessment of impact from secondary round of expenditures. d. Financial viability of project for ODA. 6. Plan includes: <ol style="list-style-type: none"> a. Soils, conglomerate, and water table data available. b. Drain spacing, size, depth modules. c. Costs of overall work requirements. 7. Specific areas to be built identified and conceptual drawings prepared. 8. Plan includes: <ol style="list-style-type: none"> a. Purchase of new equipment <ol style="list-style-type: none"> (1) type of equipment (2) source and state of equipment b. Rehabilitation of used equipment c. Maintenance of equipment 		<u>5/76</u>	<u>12/76</u>	a. Farm drains built to specifications.	40	70	b. Main drains built to specifications	30	50	<p>OUTPUT TO PURPOSE</p> <ol style="list-style-type: none"> 1. HAVA recognizes benefits of collaboration with USAID on output achievement. 2. HAVA made a new relationship with USAID.
	<u>5/76</u>	<u>12/76</u>									
a. Farm drains built to specifications.	40	70									
b. Main drains built to specifications	30	50									

INPUTS (ACTIVITIES)

1. a. Review existing standards and specifications.
b. RCW prepares and submit the design criteria to HAVA.
c. Negotiate and approve content of criteria.
2. a. Procure additional equipment (field, lab, office engineering equipment).
b. RCW advise HAVA staff on design.
3. a. Prepare designs.
b. Rehabilitate equipment.
c. Organize maintenance and warehousing.
d. Organize hand labor force.
e. Prepare cost estimates.
f. Negotiate FAR agreements.
g. Negotiate contracts.
h. Undertake work and inspection.
i. Certify completion and make payment.
4. a. Prepare questionnaire.
b. Recruit and train field surveyors.
c. Prepare sample.
d. Undertake survey.
e. USAID recruit and train coders.
f. Code and analyse data.
g. Extract beneficiary data.
5. a. Examine labor availability question (Eighty).
b. Conduct machine vs. labor, open vs. closed drain studies.
c. Review Farm Economic Survey results.
d. Collect price info.
e. Calculate benefits and costs.
6. a. Collect all available reports, studies, maps on drainage in four project areas.
b. Check and verify above data and fill in any info gaps by field work.
c. Establish standards and specifications for drain improvement.
d. Perform lab tests of soil conditions.
7. 24 month construction plan.
a. Collect field data and perform lab tests in four project areas.
b. Perform lab tests and analyse data to determine soil characteristics and water table and conglomerate locations.
c. Determine specific areas to be worked and develop conceptual designs.
d. Specify labor and equipment needs and rough costs and production rates.
e. Develop schedule of draining preparation and fieldwork for each of four areas.
8. Equipment plan developed.
a. Develop conceptual designs sufficiently to indicate depth, reach and quantities to be dug.
b. Identify range of necessary equipment types and capacities.
c. Select specific types, sizes and quantities of equipment.
d. Select sizes, types and numbers of auxiliary equipment.
e. Prepare estimates of cost.
f. Prepare procurement specifications.

PHASE I INPUTS

USAID:

	FY 75	FY 76
1. D-H Project Manager	1 MM	13 MM
2. PABA Group (two drainage design engineers assigned and short term)		26 MM
Soil and Water Data Collection		6 MM
Trainer		9 MM
3. Contractors: Master Mechanic		15 MM
Wagonmen		18 MM
Engineering Monitoring		12 MM
4. Spare Parts & Shop Tools/Equipment (\$000)		
5. Fixed Cost Reimbursement of Farm Drains 70 Km* (70% of agreed costs) (\$000)		
6. Fixed Cost Reimbursement of the Improvement of Major Drains (70% of agreed costs) (\$000)	8116 for 60 Km*	

OCA:

1. Counterparts to U.S. Technicians	12 to 18	12 to 18
2. Survey and data collection teams	22 staff	22 staff
3. Soils Laboratory staff	10 staff	10 staff
4. Design, drafting, technical planning and drainage engineering staff	46 staff	46 staff
5. Construction/heavy equipment operators and support personnel	148 staff	148 staff
6. MAV share of on-farm drainage construction (\$000)		
7. MAV share of major drain improvement (\$000)		

* period of obligation

SCHEDULE

INPUT TO OUTPUT ASSUMPTIONS

1. Adequate unskilled labor will be available for farm drain construction.
2. Farm drain labor payment is necessary to insure farmer cooperation and labor availability.
3. Existing social structure will not impede achievement project objectives.
4. Other HAVA activities will not intrude on drainage effort.
5. FAR acts as incentive for HAVA to perform well and at increasing rate.
6. Adequately trained people to work on drainage are available to HAVA.
7. ICC's other commitments will not detract from drainage project.
8. PABA with requisite skills can be recruited by AID on timely basis.
9. PABA team will be operational upon arrival in Helmsland Valley.

to provide additional resources. This was an important step in improving project implementation.

3. Flowing directly from 2 above and following a transition of review and revision of previous design work, a marked increase in design output has occurred in the last few months. Designs are ahead of actual construction. The challenge, however, will be for the design work to remain ahead of scheduled construction once the latter begins to accelerate.

4. Drain construction, which has been accomplished, has been of acceptable standards and according to specification.

5. Increasingly close communications and a developing team spirit now characterizes the HAVA and USAID working relationship. This is permitting early discussion and consideration of project issues and differences.

B. What Went Wrong

1. General project implementation has been delayed by lack of forceful, continuous, full time management on the part of USAID and of clearly-defined responsibilities among USAID project personnel. From the outset, the project experienced delays in recruitment of a PASA team

and a USAID project officer. Once on board, little effort was made to orient the SCS team on project objectives and USAID organization. In the absence of a Project Officer, the role of the Project Liaison Officer was far from clear and his extended absence shortly after the arrival of the SCS team contributed to confusion. It was unrealistic to assume (as done in the original design of the project) that the SCS team could become operational immediately nor without guidance. This problem went unresolved until the arrival of the Project Officer, since staff changes and absences in Kabul had required a shift of project management responsibilities from the Development Planning (DP) office to the Rural Development (RD) office, back to DP, then to the Capital Development and Engineering (CDE) office and finally back to RD.

The arrival of the Project Officer and his assignment to Lashkar Gah, along with increasingly frequent visits from Kabul staff helped to clarify objectives and relationships. However, the roles of the RD Division Chief in Kabul, who became the Project Officer, and the Project Officer who became the Project Advisor in Lash remain ambiguous. An additional element of uncertainty was added when the Project Liaison Officer position

was vacated, leaving two people to fill three roles.

A fundamental question is whether by virtue of its heavy engineering and construction character, this project is manageable with generalist skills alone, quite aside from the obvious engineering monitorship requirement. The Evaluation Committee is inclined to think that direct experience in construction projects and tight scheduling would facilitate effective management, though it recognizes that this alone is no guarantee of project success. It sees then a Kabul Project Officer playing this virtually full time role and the Project Advisor in Lash playing the role of coordinator and providing day-to-day policy guidance. Whatever roles are decided upon and whoever plays them, however, it is imperative that these roles and relationships be clearly defined.

2. Only 10 percent of the interim farm drain construction target for May 1976 has been met, specifically because:

a. Though labor is presumably available for farm drain excavation, HAVA has encountered administrative problems in contracting large numbers of laborers. HAVA has only been able to mobilize a maximum of 150 laborers on any given day for farm drain excavation so far. This

was possible only after a hard excavation study requiring active SCS participation had been undertaken.

b. Farm drain designs were not available until the end of January 1976.

c. HAVA's Technical Department has emphasized main drain construction so much in its preoccupation with providing adequate outlets that implementation of farm drain construction has received secondary attention.

d. HAVA remains undecided as to the most efficient labor-machine mix.

3. Only 28 percent of the interim main drain construction target for May 1976 has been met, specifically because:

a. Delays were experienced in developing approved designs and specifications in the early months.

b. Construction contract negotiations between HAVA-HCC have often been protracted and frequent misunderstandings over contract interpretation have arisen.

c. HCC's other commitments have at a minimum distracted HCC's management attention from early resolution of pressing problems affecting the drainage project.

d. Poor scheduling and utilization of available equipment have increased the time the equipment has been idle.

e. Long delays have been experienced in delivery of engines and spare parts (to have been supplied by AID), which would have increased equipment capacity and reduced down time. This has tended to obscure recognition of other fundamental reasons for slow progress on main drain construction (i. e. , b, c and f).

f. There has been inadequate construction liaison and supervision between and by HAVA and HCC, due to: (1) the insufficient exercise of authority by HAVA field inspectors; (2) the delay in assigning a person full time in HAVA's Engineering Section to supervise construction; (3) differing work hours between HAVA and HCC; (4) casual adherence by HCC to HAVA drawings and specifications as witnessed by the fact that drawings are not available at field site; and (5) lack of contact between HCC and HAVA field construction counterparts.

g. SCS/HAVA/HCC have had disagreements over reasonableness of HCC costs.

4. Field data collection and analysis needs have been inadequately addressed. Field data have been collected on a minimum, immediate need basis and the soils laboratory has yet to become fully

operational. A qualified soil scientist has yet to be assigned to the laboratory.

5. The Fixed Amount Reimbursement (FAR) method of USAID project financing is imperfectly understood and often questioned by many parties, Afghan and American alike. The concern has been that actual costs may exceed estimated costs for drains completed under varying excavating conditions. No actual cost data (e.g., machine hour usage, quantity and type of soil excavated), however, has been accumulated in one place and analyzed for the purpose of refining cost estimates for future drain construction. Finally, given the absence of any reimbursement under FAR to date, FAR has not had the desired incentive effect.

6. Master planning for Phase II has been overshadowed by the heavy pressures on HAVA and SCS to demonstrate progress on physical construction. The almost concurrent need for master planning was not recognized until May 1976 when preliminary thinking in this direction was initiated by SCS and CDE. Clear definitions and delineation of appropriate scopes for Master Drainage, Construction and Equipment Plans needed for Phase II project development were generally agreed upon within USAID and SCS only in July. Although HAVA has been heavily involved with its 7 Year Plan, it has yet to focus upon detailed master drainage planning needs and organize itself to accomplish this task.

V. MAJOR RECOMMENDATIONS FOR PHASE I

In the hopes of improving Phase I output performance and adequately preparing for Phase II, the Evaluation Committee makes the following recommendations:

Re USAID Project Management

1. USAID should immediately establish a Project Implementation Committee chaired by a representative of Capital Development & Engineering (CDE) and composed of representatives from Controller (CO), Development Planning (DP) and Management (MGT). The CDE representative will be the project officer and will be expected to spend 8 - 10 days a month in Lash at least until Phase II Project Paper preparation is completed. The Committee's function would be to provide needed support to the project from the staff offices represented by its members. It should meet as often as necessary but at least once every two weeks.
2. USAID management should clearly define the roles and responsibilities of the Project Officer in Kabul and of the Project Advisor in Lashkar Gah, and address the question of whether a Division Chief can reasonably be expected to perform the additional duties of project officer.
3. The SCS Team Leader, while retaining his team leadership role, should assume a construction advisor role. This will require his delegating more

responsibility to other team members. He should establish a triangular counterpart relationship with the Head of HAVA's Technical Department and HCC's Vice President in order to bridge the need for construction management until a full-time U.S. advisor can be brought on board in Phase II. The SCS Team Leader should be relieved of any further substantive responsibility for the Soils and Water Resources Survey.

4. SCS should restructure team roles so that one member is responsible for advising HAVA on master drainage planning and the SCS soils expert is assigned specific tasks for collecting and interpreting soils data as needed for this effort.
5. USAID should integrate its equipment maintenance and warehousing advisors more fully into drainage project planning and implementation as they relate to HCC equipment excavation capacities and availabilities, HAVA warehousing and vehicle maintenance, expediting of delivery and operation of field data collection equipment, and the like.
7. Day-to-day operating problems should be delegated to project implementers and direct managers. This would enable the HAVA President and the USAID Director to deal only with high policy matters and/or unresolved issues every two or three months.
8. Consultants should be considered jointly by HAVA/USAID as appropriate to supplement Project staff in meeting planning, field data identification,

design criteria refinement and construction needs for Phase I, if a particular expertise or project staff time is not available.

10. USAID should assign an administrative assistant to Lashkar Gah to relieve the Project Advisor of the heavy administrative burden he now carries, thereby ensuring that more of his time is available for project coordination.

Re HAVA Project Management

1. HAVA should designate within project-related departments one person(s) who is specifically assigned to act as liaison on drainage matters. Such persons should work as a drainage project team with SCS/USAID personnel.

2. HAVA should identify where, within its organization, responsibility for detailed master drainage planning should be placed.

3. HAVA should assign a qualified soil scientist full time to handle both the soils laboratory and a soil classification survey.

4. HAVA should define the functions of the Soils Laboratory and expedite its installation.

5. HAVA should carefully consider what departments, in addition to the Technical Department, need to become more involved with the drainage project as the pace of work accelerates.

Re Design Production

1. HAVA/SCS/USAID should continue their early cooperation in drawing preparation, checking, and review and should adhere to standardized practices and procedures.

Re Field Data Collection and Analysis

1. HAVA/SCS should identify field data needs for both immediate design and construction and master drainage planning and schedule their collection in order to maximize the effectiveness of available resources.
2. HAVA/SCS should build up the data collection and analysis capabilities to meet these needs.
3. As HAVA completes the work and requests USAID reimbursement under the Letters of Understanding, USAID will need as-built data to support certification for payment and also for reference for future cost estimates on actual type of excavation material being encountered.

Re Farm Drain Construction

1. If HAVA's petition to WAPA for greater contracting authority in hiring small individual groups of laborers is approved, HAVA should proceed immediately to begin experimenting with this system.
2. In this event, HAVA should appoint a person full time to manage the labor program and increase the number of field supervisors as required to excavate farm drains properly.
3. If HAVA's petition is refused, HAVA and WAPA should explore the possibility of contracting with HCC for hand excavation.
4. In any event, satisfactory resolution of this problem within the next few months should be a major determinant of whether to move to Phase II.

5. In the event funds become a constraint for HAVA in the future, USAID should be prepared to make advances of funds for farm drain construction as further inducement to HAVA to recruit and mobilize an adequate labor force.

6. USAID should make available to HAVA the Wheeler/Jones Report* and endorse its recommendation in favor of hand-labor excavation of farm drains.

7. HAVA/SCS should go ahead with their proposed field experiments to determine independently the optimum equipment/labor production potential to assist in planning and possible renegotiation of HCC rates at higher GOA levels.

8. If an added incentive to attract greater number of laborers is not adopted, a piece-work approach is not adopted, HAVA should consider paying a higher daily wage rate. If this requires a waiver from WAPA, MinPlan or the Cabinet, one should be requested.

Re Main Drain Construction

1. HAVA/HCC contracting procedures should be improved as follows:

a. In order to facilitate contracting and equipment scheduling, HAVA/HCC should negotiate umbrella contracts for broader sections of work than at present. This will encourage HCC to give more priority to drainage work

* See Annex B for full title.

because it will permit better scheduling of equipment and offer a greater potential return to HCC. Task orders can then be issued for segments as designs, specifications and costs are developed. USAID should match this with umbrella non-funding Letters of Understanding. Task Orders can then be handled by FAR sub Letters of Understanding a, b, c negotiated through routine channels.

b. Contracts should include clear provision for payment for different kinds of excavation (e.g., conglomerate under wet as well as dry conditions, caliche, and common excavation). On costs of bypass structures and responsibility for obtaining right-of-way, HAVA and HCC together should work out an equitable solution to this problem.

c. Field experience from most recent work needs to be factored into new contracts.

2. USAID should make an all-out effort to expedite delivery of the new replacement engines for the draglines assigned to the project by the end of July 1976.

3. HCC should consider establishing a Helmand Drainage Project Construction Unit within its organization, perhaps as part of the proposed Operation and Maintenance Unit.

4. HAVA and HCC should coordinate their construction efforts more closely by ensuring that:

- a. HAVA field inspectors exercise their delegated field authority and their hours coincide with those of HCC;
 - b. HAVA/HCC regularly discuss and resolve any differences early on and use letters only to confirm understandings;
 - c. HCC and HAVA field construction supervisors are introduced and work together; and
 - d. drawings and specifications are adhered to.
5. WAPA should emphasize the joint responsibilities of HCC and HAVA in the drainage project and ensure they work as a team in achieving project objectives.

Re Fixed Amount Reimbursement (FAR)

1. USAID should review FAR cost estimating procedures to minimize cost overruns to the GOA. This suggests the need to accumulate and analyze as-built data (i.e., amounts and types of soils excavated in completed segments) to provide a cost basis for varying excavation conditions. USAID/CDE and CO should provide assistance in this review. This should facilitate a further testing of the FAR approach during Phase I.
2. USAID/CO should determine promptly reasonable rates of HCC overhead and profit for fixed amount reimbursement purposes.
3. HAVA should request and USAID should initiate the certification and reimbursement process promptly upon HAVA's completion of segments of work covered by Letters of Understanding.

VI. FORECAST FOR PHASE I CONSTRUCTION

1. Assuming that the labor contracting and utilization questions are satisfactorily resolved and that design work remains ahead of construction, 40 kms more of farm drains should be completed by January 1977. Considering that during the winter labor availability is at its peak, it is not unreasonable to expect that at least another 30 kms of farm drains could be finished before the 1977 harvest season.
2. Assuming that at least four draglines outfitted with new engines work continuously and with some double shifts under close HAVA/HCC field supervision, 60 more kms. of main drain construction and improvement can be accomplished by June 1977.
3. Consequently, by June 1977 Phase I should have completed a total of some 74 kms. of farm drains and about 68 kms. of main drains, thereby exceeding the original Phase I targets of 70 kms. of farm drains and 50 kms. of main drains, but falling slightly short of the revised targets of 100 kms. of farm drains and 70 kms. of main drains.
4. Phase I will have, in fact, accomplished these targets after a nine-month extension of the original time frame to June 1977.

VII. PHASE II PLANNING AND TIMETABLE

A. Planning Recommendations

1. Preparation of a Master Drainage Plan, a 36-month Construction Plan and an Equipment Plan should begin immediately. These will define the scope and project content of Phase II.
2. Concurrently, work can begin on some of the standard sections of a USAID project paper for Phase II. A USAID project design committee should be appointed to coordinate the PP preparation. This committee's membership would not necessarily coincide with that of the project implementation committee, the establishment of which has been recommended earlier.
3. USAID/SCS and HAVA should jointly develop and agree upon drainage area selection and spacing criteria that reflect technical, socio-economic and political requirements. Other priorities (e.g., labor versus machine-intensive approach) as well as objectives for Phase II also must be discussed and agreed upon.
4. Pre-implementation steps for equipment procurement need to be examined by USAID/SCS/HAVA/HCC to determine how Phase II procurement can be expedited.
5. A farmer information and education program needs to be developed
 - a. an integral part of Phase II. Although farmers may have a general appreciation of the need for drainage, they do not know how the drainage project will

affect their land, when a change will be noticeable, and what the magnitude of that change is likely to be. HAVA and USAID must squarely address this problem to ensure maximum farmer support and to lay the basis for an information delivery system which will ensure that optimum production benefits are derived from drainage.

6. Adequate maintenance of main and farm drains must be recognized as a sine qua non for successful drainage and improved production. Farmer responsibilities must be defined and agreed to by them in advance of drain installation. The GOA/HAVA must establish a policy and a schedule of operations to insure that drains will be adequately maintained. In this regard, the proposal to establish a Heimand Valley Operations and Maintenance Unit within HCC is considered a step in the right direction. In any event, these issues must be addressed in the design and negotiation of Phase II.

7. FAR procedures may need to be modified for Phase II depending on the experience with this financing method in Phase I and the outcome of the proposed AID centrally-funded research study of FAR.

8. HAVA and HCC should understand that expanded staff and physical resources will be required for Phase II, and begin planning for their provision. This should include plans for increased logistic support.

9. HAVA should consider the establishment of a socio-economic unit to perform basic research on project beneficiaries for use in project area selection and evaluation of project impact on farm production and income.

10. USAID will have to identify the in-house organization needed to provide adequate management and monitorship of an expanded Phase II.

B. Schedule of Key Events

	<u>Description</u>	<u>Responsibility</u>	<u>Estimated Completion Date</u>
(1)	At least 4 draglines working in two project areas on Phase I construction	HAVA/HCC	9/1/76
(2)	Soil Laboratory fully operational	HAVA	9/1/76
(3)	Project area beneficiary analysis from Farm Economic Survey	USAID/DP	9/1/76
(4)	Benefit/Cost Analysis for Phase II ready	USAID/DP	10/1/76
(5)	Master Drainage, Construction and Equipment Plans	HAVA/SCS	11/1/76
(6)	Project Paper assembled	USAID	11/15/76
(7)	Labor contracting issue resolved and system of worker management operational	HAVA	12/1/76
(8)	Decision to GO AHEAD with submission of Project Paper (if items 1 - 7 above are met)	USAID	12/1/76
(9)	Loan authorized (if project accepted)	AID/W	2/15/77
(10)	Loan agreement negotiated and signed	GOA/USAID	4/15/77
(11)	Conditions precedent met and Letter of Commitment requested	GOA	6/15/77
(12)	Phase II start-up		8/1/77

EVALUATION SOURCESA. INTERVIEWS

Governor Sherzai, President of HAVA
 Mr. Zafari, Vice President of HAVA
 Mr. Shuja, Head of Technical Division/HAVA
 Mr. Raveq, Planning Section/Technical Division/HAVA
 Mr. Rashid, Engineering Section/Technical Division/HAVA
 Mr. Niamatullah, Head of Administrative Division/HAVA
 Mr. Asif, Head of Soils Laboratory
 Mr. Hafizullah, O & M Section/Technical Division/HAVA
 Mr. Aziz Gul, Planning & Statistics/Technical Division/HAVA
 Mr. Ghulam Farouq, Agricultural Economist/HAVA
 Mr. Aman, President of HCC
 Mr. Gouhary, Vice President of HCC
 Mr. Hadi Ashiqullah, Chief of Warehouse, Supply/HCC
 Mr. Bakhah, Warehouse Foreman/HCC
 Mr. Dadino Apacible, Chief Accountant/HCC
 Mr. Nur Mohammed, Shop Foreman/HCC
 Mr. Eshaq, President of Planning/WAPA
 Mr. Morshidi, Acting President of Planning & Statistics/Ministry
 of Planning

Mr. Brown, Director USAID
 Mr. Standish, CDE/USAID
 Mr. Rogers, DP/USAID
 Mr. Tyson, RD/USAID
 Mr. Scott, DP/USAID
 Mr. Tayeb, CDE/USAID
 Mr. Sherzai, DP/USAID
 Mr. Obaldi, CDE/USAID
 Mr. Stone, RD/Lashkar Gah
 Mr. Geter, SCS Team Leader
 Mr. Honeyfield, SCS/Planning
 Mr. Burton, SCS/Engineering
 Mr. Andersen, SCS/Soils
 Mr. Lister, RD/Lashkar Gah
 Mr. Anderson, RD/Lashkar Gah

B. REPORTS

**Trip Report on Helmand Valley Drainage Work by
G. C. Vittetoe, dated September 12, 1975**

**Trip Report on Central Helmand Project by E. J. Pope,
dated November 22, 1975**

**Farm Drains in the Central Helmand Valley of Afghanistan
by R. R. Nathan Associates, dated May 1976**

**Trip Report on visit to Afghanistan by Gladys Frazier,
dated May 25, 1976**

**End of TDY Report on Central Helmand Drainage by H. R.
Sketchley, dated June 21, 1976**

**R. B. Scott's Memorandum of June 9, 1976 on Key Issues
for Phase II Planning**

**R. B. Scott's Memorandum of June 14, 1976 on a Proposed
Research Unit within HAVA**