

MEMORANDUM

March 5, 1975

TO : Mr. Vincent W. Brown, USAID/A Director

FROM : Ernest J. Barbour, A/D

SUBJECT: Central Helmand Drainage and Irrigation Improvement,
No. 306-11-120-146

REF : Project Paper dated 14 February 1975

Since your departure for consultations in AID/W, the USAID staff has had time to study the referenced paper and to make comments on it. Hopefully, these comments will be useful for the reasons that we now understand that new projects in the Helmand will generally conform to the newly approved DAP strategy and project criteria; the NESA Advisory Committee has approved the project "in principle" meaning, probably, that there remain substantive questions on the project design; and John Wilson's impending TDY to work on the two Helmand papers represents an opportunity to modify the project design for the purposes of making it a more attractive project to the Afghans and ourselves as well as increasing the probability of success during implementing.

This memorandum is in two parts: the first presents critical comments on the Project Paper; the second contains a proposal for a modified project design. In addition, there are attached memoranda from individual officers on particular points which they feel bear closer examination than is provided in this memorandum.

PART I - COMMENTS ON THE PROJECT PAPER

1. Definition of the Project in Phases I and II. There are many parts to the problem of definition. The first is that several officers suggested that it will be necessary to define the geographic area in which we intend to work in the relatively limited and very short Phase I. They believe the Project Paper ought to specify that we are going to work in a well-defined area, e.g., Darweshan or Marja or Nad-i-Ali or Shamalan, but not in all four across the board in Phase I. The second definitional problem is whether project work, e.g., the construction of farm drains and the improvement of major drains, will take place on "project (meaning HAVA) land", "non-project" land or both. If work

will take place on non-project land to any significant extent, then some officers suggested that the updating of the master drainage plan must be accomplished before any physical work can be undertaken lest the drainage and canal system be overloaded by ad hoc designs and construction.

Further, USAID should be certain that it is not now being drawn into a situation where we are attempting to drain and improve land that has been classed since the 1950s as being unsuitable for either development or irrigation. Reasons for such classification include varying thicknesses of top soil with an underlying, impermeable layer of conglomerate causing high water table, major seepage from canals and drains aggravating the above problem, large scattered deposits of gypsum, large variations in soil qualities, and, in some areas, high salt content in sub-soils. Some of the recently settled areas between Nad-i-Ali and Marja in need of drainage apparently fall into this category.

2. The Inherent Complexity of the Project Design. One part of the project purpose is to construct "100 kms of farm drains". The text of the PP makes it clear that this construction will occur on settled lands rather than on lands being readied for settlement. Unfortunately, HAVA's record in relating to or securing the voluntary participation of farmers is very poor. HAVA has neither the experience nor a model of HAVA-farmer participation ready for testing. This is true for both on-farm drain construction and water management at the farm level. Thus, it was suggested that in order to increase the probability of success of a drainage program and also to gain experience in relating to farmers, HAVA ought to undertake the construction of drains on land which is about to be settled rather than on land already settled.

The Helmand Valley is not in any sense homogeneous in geography, soils, people, agriculture production or levels of development. If drainage work is proposed by HAVA in settled areas where the farmers do not perceive a major drainage problem and do grow what they consider to be a good crop, there will be major problems of implementation vis-à-vis the people. A possible exception to this statement would be to work with some of the khans who appear to have slightly higher production expectations than some of their poorer neighbors who can ill afford to experiment, even on credit.

If farm drain work is proposed by HAVA in settled areas where production is very poor, due to a poor class of land and/or poor drainage, we could reasonably expect farmer cooperation. The farmers have little choice.

In any case, it would be useful in the early stages of the project, to limit involvement in the construction of farm drains to areas where (1) the land classifications are favorable and (2) the farmers are demanding help from HAVA. Under these conditions, models of farmer participation could be developed and tested.

A second alternative would be to concentrate on-farm drain construction in uninhabited areas that are being prepared for settlement. This could be done in places like Darweshan or sections of the central Shamalan, areas of apparent development priority for HAVA. This would provide an opportunity to develop farmer-HAVA relationship models from the very beginning of settlement. If desired, it could allow for the development of a more comprehensive model for relationships involving not only farmer education on improper drainage but also in proper water control.

The construction of major drains across farmers' land will result in problems similar to those encountered but not solved in the Shamalan Land Development Project. In those cases where farmers lose land to new main drains, care must be taken by HAVA that those affected are paid for their loss. HAVA's poor historical performance in this area is related, in part, to the lack of land titles and, in part, to bureaucratic indifference.

An education program to demonstrate the need for drains to farmers coupled with a financial mechanism for medium to long term credits to farmers for building drains and water control structures appear to be minimum conditions for starting on the problem of direct farmer participation in the project. The project as currently designed in the PP overlooks these problems by proposing a rather paternalistic, or worse, authoritarian approach: HAVA will agree with AID to do work, contract with HACU for the execution of that work, and involve the farmers by paying them (or perhaps rural day laborers) for their labor in making capital improvements to their own land. This does not appear to be a feasible approach in terms of building HAVA-farmer relationships which would maximize developmental progress in the Valley and farmer participation in this progress.

The points to be stressed are that the focus in the early phases of the project should be on selected but limited areas where there is a maximum potential for farmer cooperation (conditions noted above) and with an eye to developing models for farmer cooperation and participation.

The production gains expected from the project assume farmer cooperation on drainage construction and on irrigation water management. It is a well-known and frequently documented fact that HAVA does not and has not attempted to introduce programs to manage the flow of water on farmers' fields below the macro-irrigation systems level. This important element of agricultural productivity in the Helmand is governed solely by indigenous social systems. Yet the Project Paper (p. 19) states:

"The project also would provide for irrigation plans to be set up. The plan would determine the water needs for each farm and irrigation schedules would be laid down in such a manner that they would have to be followed. A program of education and training to teach the farmers when and how to irrigate will be necessary."

The PP, unfortunately, does not explain what this "plan" is or how it will operate. We therefore are unable to assess whether HAVA or anyone in USAID has a workable solution to the on-farm water management problem. We do note that no provision of technical assistance is made for social anthropologists or small-scale irrigation specialists or others who might address these critical questions. Nor is there any suggestion that HAVA has either any expertise or interest in the problem of water management.

3. An incremental, Phased Approach. If the DAP approach were followed, the sequence of events might be something like the following: (a) test out the on-farm drainage construction element in a pilot effort using the fixed cost reimbursement method; (b) after the successful test, expand the program perhaps taking on a more complex problem (i.e., drainage on settled land rather than on nonsettled); and (c) expansion into a full-blown perhaps loan-financed stage. If the FCR method of financing were used through every phase, the cooperating agency would be accumulating foreign exchange with which it could purchase whatever it wished, but certainly equipment, spares, and imported materials. In the case of the referenced PP, the second part of the Phase I project purpose is the "...improvement of 80 kms of major drains..." It is not clear (a) that drainage improvement should be

constructed before the updating of the master drainage plan; (b) why USAID should grant-finance new equipment and spares when neither the new equipment nor the spares can be procured, shipped, or used in the rehabilitation of old equipment in time for the drainage improvement in Phase I; or (c) since the USAID is proposing the FCR method, why HAVA couldn't purchase its own equipment and/or spares with the U.S. dollar proceeds it will earn from the construction. In sum, the project as proposed appears to be out of phase with the evolutionary process envisaged in the DAP. At least one possible, improved sequence would be: to update the master drain plan first; improve the main drains; test the on-farm, preferably unsettled, drainage construction program; and if all of the foregoing were successful, make a loan for an expanded FCR drainage project. But since FCR uses foreign exchange payments as a performance incentive, there appears to be no justification for a separate grant to buy equipment and spares -- especially before HAVA's performance has been demonstrated.

4. Fixed Cost Reimbursement. The Project Paper proposes to involve U.S. technicians in the design, construction supervision and monitoring phases of project implementation using the FCR method. The USAID had previously determined in the cases of Rural Works, Rural Schools, and Basic Health Services that when the FCR method is employed for construction we should not provide technical assistance to solve the host country's design, engineering or construction supervision problems. Our rationale was that the GOA could then claim that the U.S. was responsible for any deficiencies in the construction which had resulted in the U.S. not paying the agreed sum. By contrast to our other new proposed projects, the technical assistance element in the Central Helmand project is very heavy and inserted at every step of the process from design through final inspection. This suggests that either the fixed cost reimbursement method cannot be used for drainage construction or, if an emphasis on HAVA performance and responsibility is desired, that the U.S. technical assistance component would have to be reduced. Put another way, using the FCR plus the heavy technical assistance implies that the designers of the project do not have confidence in their frequent statements that HAVA and HACU are among the best and most technically competent organizations in the country. In any event, USAID must be concerned that the people who are involved in the design are not also directly supervising construction and monitoring, inspecting and certifying for USAID. USAID PASA or contract advisors might help with the design problems in the master drains study but only check HAVA's on-farm drainage plans. Construction supervision should remain HAVA's problem while the process of monitoring inspection and certification of completed work should remain the responsibility of CDE's Chief Engineer. Any other method would appear to compromise either the FCR method or individual officers.

5. HAVA/HACU Capacities and Requirements. In the absence of an independent check there are several officers who are concerned that HACU -- the prime contractor under the proposed project -- may not have the slack capacity to take on the additional work. HACU's contemplated involvement in the ADB-financed Kajakai Gates, the road projects, the current contract work on the Chakbansur canal and other projects in the region may be near the limit of HACU's capacity. With respect to equipment and spare parts, some officers believe that an inventory of the kind, condition and physical location should be taken before any decision is made on U.S. grant or loan financing. In this regard HAV has failed to provide reports required by loan 306-H-012 which would help answer these basic questions (though some information was provided

Mr. Tyson during the joint project development exercise). Based on very sketchy information it would appear that poor maintenance and the physical dispersion of equipment, both operational and deadlined, is as serious a problem as the lack of spare parts (many of which were provided under Loan 012 and which should be verified by inventory). When a complete inventory of equipment and its condition is in hand plus the inventory of spare parts completed, the USAID would be in a better position to determine equipment and spare parts requirements though, per the discussion in 3. and 4. above, there is still a good case for not financing these parts at all or at least not in advance of HAVA's demonstrated performance. Some officers have argued that it would be unwise to order any equipment until the master drain plan is updated, since it is only then that actual work requirements will be known.

PART II. PROPOSAL FOR A MODIFIED PROJECT DESIGN

We believe that the Central Helmand Drainage and Irrigation Improvement project can be an excellent one, producing quick, high returns per dollar/afghani expended. We believe, however, that the project design as it now stands can be improved in the sense of increasing the likelihood of the project being a success, the criteria for the latter being those set forth in the DAP plus the additional criterion of increased food production. We believe that the PP is most weak in developing a mechanism for involving farmer participation in the project. We accordingly offer the following abbreviated project design for consideration:

A. Summary of the Essential Project Design Elements

Select two areas where project activity will be concentrated in constructing farm drains on lands classified as irrigable that are: (1) unsettled, waterlogged, salted land, and (2) settled land of very low productivity because it is waterlogged and salted and where farmers demonstrate a clear demand for assistance in draining their land. The demand could be indicated by a signed statement from each of the affected farmers that he wants assistance and will in return for assistance agree to participate in a water management program upon completion of drainage ditch construction. We would be inclined to encourage the GOA to provide grant assistance (or at least in an amount equal to USAID's FCR) to farmers during the first phase of the project in order to:

1. obtain leverage in securing farmer participation in a (largely experimental) water management program;
2. provide a demonstration effect. The grant can be considered as a cost of the educational/public information program required for modern water management in which farmers voluntarily participate;
3. generate information and quantitative data upon which HAVA-farmer participation models, in both drainage and water management development, can be based;
4. give the HAVA/GOA time to work out credit arrangements through which farmers can finance their own drain construction after Phase I.

For the land to be drained for settlement, a prerequisite to settlement might well be an agreement to participate in a water management program. Such a stipulation is not likely to be viewed with disfavor since the new settlers would need advice on water use anyway.

A project designed as suggested above would present an excellent opportunity to begin work on farm water management, an area that has been essentially closed to entry in search of solutions.

The design would also present excellent opportunities for developing HAVA participation models, including an educational/information component. In this regard, Phase I should include some very small on-farm drainage construction demonstration projects on land in other locations in the Valley and on land in differing degrees of salinization and waterlogging.

B. Project Phasing

Phase I. Elements (from approximately the end of FY 75 through the end of FY 76)

- update the 1950s master drainage study
- identify areas to be worked in over the next 5 years
- select one or two project areas, preferably on unsettled lands which are classified as irrigable and require drainage structure before settlement can take place, with care taken that the resulting irrigation requirements would not have a detrimental effect on adjacent settled lands (note: this is an issue which would be addressed in the overall requirements study of soil and water resources in the Helmand Valley)

-- begin the collection of sociological data on areas identified for development;

-- execute an agreement with HAVA using fixed cost reimbursement for the construction of farm drains, preferably using labor-intensive rather than machine-intensive methods under HACU supervision in the above identified selected project areas;

-- undertake a complete inventory of HAVA and HACU construction equipment and spare parts including physical location, operational condition and commitment to future jobs and concurrent review of HACU costs and charges for equipment use, labor, material and supervisory work. Upon the completion of the updating of the master drainage study it would then be possible to compile a list of equipment and spare parts requirements based upon current inventories and future work requirements.

Phase II. Elements (approximately Fiscal years 77 and 78)

-- loan-finance HAVA's and HACU's equipment and spare parts requirements;

-- loan-finance the construction of new and the improvement of old major drains using the fixed cost reimbursement method per the priorities and specifications of the master drainage study (and develop and test a right-of-way payment method);

-- loan-finance the construction of on-farm drains for unsettled project areas using the experience gained in Phase I;

-- develop a model and test it with grant financing to gain the financial and labor participation of farmers in the construction of on-farm drains in settled areas. This could be done using the FCR method with HAVA; however, the more important element would be to develop a model for farmer participation, testing, evaluation and redesign of the model until a workable process of HAVA-farmer cooperation is found.

Phase III. Elements (approximately Fiscal Years 79 and 80)

-- continue to loan finance the construction or improvement of major drains using the FCR method;

-- loan finance a share of the cost of constructing on-farm drains in settled project areas using the farmer participation model developed in Phase II.

Under this three-phase scheme the USAID would grant-finance the services of the direct-hire project manager, the short-term services of a PASA or contract group for assisting in the updating of the master drainage study, the services of small-scale irrigation specialists and an anthropologist for the development of farmer participation models, and the services of engineers to accomplish the review of designs and specifications and the monitoring and inspection of construction work under the FCR method. In addition, part of the \$ U. S. dollar proceeds of the fixed cost reimbursement method of financing might be placed in a special letter of credit for the use of HAVA and HACU in replenishing their spare parts. Beyond the grant-financed experimental phases, all costs of construction and equipment procurement would be loan financed except for U. S. overhead for a direct-hire project manager and engineering monitoring and inspection services.

Attachments

- A. Reilly/Standish memo dated 2/10/75
- B. Mitchell/Barbour memo dated 2/23/75
- C. Reilly/Brown memo dated 2/25/75
- D. Standish/Johnson memo dated 3/1/75
- E. Scott/Barbour memo dated 3/3/75
- F. Reilly/Files memo dated 3/4/75
- G. McMahon/Johnson memo dated 3/4/75
- H. Wilson/Johnson memo dated 3/5/75
- I. Tyson/Wilson memo dated 3/5/75

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