

388-0019

3880019001504

ADD. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

1

PROJECT EVALUATION SUMMARY (PES) - PART I

1. PROJECT TITLE: Small Scale Irrigation Project

2. PROJECT NUMBER: 388-0019

3. MISSION/AID/W OFFICE: USAID/Bangladesh

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)

REGULAR EVALUATION [X] SPECIAL EVALUATION []

5. KEY PROJECT IMPLEMENTATION DATES
A. First PRO-AG or Equipment FY 76
B. Final Obligation Expended FY 81
C. Final Input Delivery FY 82

6. ESTIMATED PROJECT FUNDING
A. Total \$ 14,800,000
B. U.S. \$ 14,000,000

7. PERIOD COVERED BY EVALUATION
From (month/yr.) July 1, 1980
To (month/yr.) July 30, 1981
Date of Evaluation Review

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

Table with 3 columns: 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., sirgram, SPAR, PIO, which will present detailed request.) B. NAME OF OFFICER RESPONSIBLE FOR ACTION C. DATE ACTION TO BE COMPLETED

9. INVENTORY OF DOCUMENTS TO BE REVISED FOR ABOVE DECISIONS
Project Paper [] Implementation Plan [] Other (Specify) [X] none
Financial Plan [] PIO/T []
Logical Framework [] PIO/C []
Project Agreement [] PIO/P []

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT
A. [X] 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)
Paul A. Caouette, Project Officer PAC
Thomas R. Tiffitt, Chief RDE TCT
R.H. Khan, BADC
V. Mouldrem, PRO

12. Mission/AID/W Office Director Approval
Signature: Frank B. Kimball
Typed Name: Frank B. Kimball
Date:

PROJECT EVALUATION SUMMARY

Part - II

13. Summary

During the past 12 months the first major sales program was undertaken with surprising success given the lack of participation by one of the lead agencies. Cumulative sales by June 30, 1981 were over 63,000. The 1980-81 season saw 45,400 pump sets sold. Production of components by the private sector has now become a routine matter with very few problems.

Next year's focus will be on further expansion of the private dealership net work and more manageable loan programs for the pump set. The consultant to BADC projects next year's sales at 55,000. However, if the major advertising campaign impacts as USAID expects, sales may greatly exceed these projections.

14. Methodology

This was a routine annual evaluation to determine progress of the project in relation to outputs. The Consultant to BADC, Ammann and Whitney, prepared an evaluation paper for review by the evaluation committee. The AID project officer also submitted an issues paper for discussion at the meeting. A list of participants and the Memorandum of Conversation relating to the meeting is attached along with the A&W Discussion Paper and the AID Issues Paper.

15. Attachments

1. Ammann and Whitney Discussion Paper dated July 3, 1981.
2. Issues Paper prepared by Project Officer dated July 6, 1981.
3. Memorandum of Conversation dated August 11, 1981

MEMORANDUM

TO : Evaluation Committee

FROM : Paul Caouette

SUBJECT : Small Scale Irrigation Project (388-0019)
Project Evaluation

July 6, 1981

The following points are proposed for discussion at the Small Scale Irrigation Project (SSIP) evaluation scheduled for 1430 July 6, 1981.

A. Distribution Storage

Although total sales in the past twelve months have been very good, sales patterns from the BADC warehouses are quite uneven with the majority of sales occurring in the Bogra area.

Recommendations:

- 1) A thorough analysis of the reasons for low sales levels in the areas of distribution under SSIP. This analysis should provide BADC with sufficient information to make decisions on (1) how to boost sales in the slow areas, (2) optimum levels of inventory for each zonal area where a BADC warehouse is located.
- 2) Components in storage at all BADC warehouses should be balanced to help minimize inter store transfers.

B. Sales

Since the evaluation meeting held last year BADC has sold more than 45,000 pump sets. These sales were handled primarily through the newly appointed BADC private dealers. Other agencies have not participated as anticipated. Credit sales, in particular, have not been at a level which would indicate availability of allocated credit to the farmers.

Recommendations:

- 1) Determine the level of participation desired by those agencies who were originally in the SSIP program. This should be undertaken immediately.
- 2) Develop means to improve participation particularly in those credit institutions where farmers are able to obtain small loans.
- 3) USAID has proposed a program to Bangladesh Bank which would stimulate credit sales through the district branches of the sanctioned banks. This proposal should be expedited.

C. Parallel Programs

The World Bank, through DPHE and IRDP, is proposing a sales and distribution program for handpumps beginning in 1982. Coordination between BADC and IRDP is necessary to insure a coordinated effort by both agencies.

Recommendations:

BADC initiate a series of coordination meetings to insure that:

- 1) Its future activities will not be affected by this proposed program.
- 2) Pricing policies by other agencies will not be in conflict with its own program.
- 3) Manufacturing under the BADC program will be unhampered by the judicious allocation of imported resources, (coke, pig iron, steel).

D. Procurements

At the beginning of the sales season USAID was concerned about what it considered an overstocked and unbalanced position of handpump components in BADC zonal warehouses. In particular an AID audit team noted that, based on conservative estimates of sales, BADC had over one year's stock of hand pump sets in storage. The team recommended curtailment of component purchases by BADC until stocks were drawn down.

Sales for the season were greater than the AID projections but warehouse positions are still at a high level. BADC wishes to resume purchasing of the necessary components due to reorder considerations with existing manufacturers and the storage needs of the sub stores proposed for the upcoming sales season. At the request of USAID the consultant has developed a procurement program which insures a balanced stock position in all stores and has recommended resumption of purchasing to disburse the final allotment of funds for the project.

Recommendations:

BADC be allowed to reorder components and to request tenders for the balance of pump sets needed to disburse available funds based upon a procurement program which will minimize overstocking. BADC will also be required to implement a sales promotion program acceptable to USAID.

E. Project Completion Dates

Because of the procurement needs noted above and the expected lead time in acquiring some of the components (notably pipe), it is possible that the terminal date set for total disbursement of funds might be overrun.

Recommendation:

BADC review the future procurement position and the time needed to process vouchers and if necessary request USAID to extend the relevant dates as originally set forth in Project Implementation Letter No. 3.

E. Proposed Follow On Project

Given the success of the past season the possibility of a follow on program is being considered. Several key issues must be resolved by BADC prior to the development of this project.

Recommendation:

BADC initiate discussions with the Ministry of Agriculture and other relevant agencies to determine if a continued BADC effort in sales and promotion of hand pumps will be desirable. Within the first quarter of the BDG fiscal year BADC should put together a formal request through the appropriate agencies to USAID if it intends to continue the project and if it wishes continued USAID participation.

From : Paul A. Casuente, NDI, WASHDC

August 11, 1981

Subject: Small Scale Irrigation Project (388-0019):
Third Annual Evaluation

Date of Meeting: July 6, 1981 - 1430 hours

Place of Meeting: USAID Conference Room, Jiban Bina Building

Distribution: All Attendees

A. Attendees

Name & Designation

Address/Telephone No.

R.H. Khan, Deputy
Chief Engineer.

ADC STW Division
Motijheel C/A, Dacca

R. Karim
Engineer

Mann & Whitney
95, Motijheel C/A

A.B. Md. Anwar Hossain
Project Manager (SEP)

3/21, Malibagh
Chowdhury para
Dacca-17, Tel. 407534

Khalilur Rahman
Project Specialist

Jiban Bina Bhaban
USAID/Dacca, Tel 235880-9

A.M. Anwar Hossain
Dy. Director

IRDP
24-25 Dilkusha C/A, Dacca

Abdur Raquib
Director In-charge

ICPD
Bangladesh Bank, Dacca.

Morshid K. Khan
Ag. C.O.

ICPD
Bangladesh Bank, Dacca

Ehbidul Khabir
Dy Chief Eng.

National Tubes
Kongi, Dacca

Aminul Islam Chowdhury
Commercial Manager

National Tubes
Kongi, Dacca

Vivikka Mollrem

USAID/Dacca

A.K.M. Abdus Sattar

Water Resources Div
Planning Commission
Sher-e-Bangla Nagar

Handwritten initials

BEST AVAILABLE DOCUMENT

<u>Name & Designation</u>	<u>Address/Telephone No.</u>
Paul A. Caouette Project Officer	USAID/Dacca
M. Alauddin Dy. Gen. Manager In-Charge	BKS 84, Motijheel C/A Dacca
S. Abadeen Spl. Project Officer	BKS 84, Motijheel C/A Dacca
Mirza Hamidul Haque Coal Controller	Govt. of Bangladesh 48, Motijheel C/A Dacca
William Miller Controller	USAID, Dacca

B. Background

This meeting was the regular annual evaluation of the Small Scale Irrigation Project (SSIP) by Bangladesh Government agencies and AID. Documents submitted by the consultant to the project, Ammann & Whitney Consulting Engineering (A&W) and AID served as a basis for the evaluation and discussions regarding the project. Major findings and recommendations which were brought up at the evaluation are presented below.

C. Progress Reports

i. Bangladesh Agricultural Development Corporation Report.

After a brief welcome by USAID, Mr. A.B. Anwar Hossain, Project Manager for the Small Scale Irrigation Project reported on the progress of the project during the Bangladesh Government fiscal year 1980-81. He mentioned the role of the extended private dealership network which now includes 325 retail dealers throughout the country. Cumulative sales for the project period were 63,731 as of June 30 1981. Last years evaluation indicated a cumulative sales of 18,702. Of the 45,029 pump sets sold this year 24,098 were purchased by BADC appointed private dealers and 10,863 were sold by BADC to various other agencies such as expatriat Private Voluntary Agencies, the Nation Development Board and the Ministry of Jute. BADC's share of the sales were reported to be 78% of the total for the 1980-81 session and 55% of the cumulative sales.

Mr. A.B. Anwar Hossain also reported that due to cash flow problems the Integrated Rural Development Program (IRDP) failed to participate in the program and despite efforts on both sides IRDP was not successful in lifting its projected quantities from the BADC warehouses even on deferred payment basis through bank guarantee.

Mr. A.B.M. Anwar Hossain also reported accumulative sales to EKE participants of 12,508 of which 10,868 sets were sold this year and appreciated the role of rural credit facilities made available to both dealers and farmers, especially in North Bengal. Mr. Hossain further noted that warehousing of components was a problem since many of the stores are kept in leased facilities which are inadequate. He reported that this problem was primarily due to the withdrawal of 1.2 million dollars originally earmarked in the project for warehouse construction.

Mr. Abdus Sattar, from the Planning Commission stated that other warehouse facilities with BADC should be explored. Mr. R.H. Khan, Deputy Chief Engineer, BADC Shallow Tubewell Division replied that BADC is taking up necessary steps to reorganize the Shallow Tubewell Division and make new warehouse facilities available for meeting future demands.

In conclusion Mr. A.B.M. Anwar Hossain noted that due to high inflationary trend the overall volume of procurement and sales will be much lower than the original program.

2. Ammann and Whitney Report - Mr. R. Karim representing the consultant to the project presented a written report on the project which he reviewed in depth with the participants. During the presentation Mr. Sahidul Kabir, Deputy Chief Engineer of National Tubes took exception to the statement that zinc coating was estimated at 1.0 oz per square foot on the pipe supplied by them. He presented a copy of a letter to the committee which stated that the nominal coating of zinc on their pipe is 2.0 oz per square foot of surface area. The consultant replied that specifications according to BS 1337-1967 do not specify the coating thickness and National Tubes did not confirm the coating thickness prior to the meeting, however they would investigate the matter and test samples for verification of the thickness of zinc coating on the National Tubes Pipe.

D. Issues

What follows is a summary of the issues discussed at the evaluation meeting and the actions to be taken to resolve them.

1. Distribution Storage

Although total sales in the past twelve months have been very good sales patterns from the BADC warehouses are quite uneven with the majority of sales occurring in the Bogra area.

Recommendations:

1) A thorough analysis of the reasons for low sales levels in the areas of distribution under SSIP. This analysis should provide BADC with sufficient information to make decisions on (1) how to boost sales in the slow areas, (2) optimum levels of inventory for each zonal area where a BADC warehouse is located.

2) Components in storage at all BADC warehouses should be balanced to help minimize inter-store transfers.

Discussion: BADC with its Project Consultant reported that a plan of action for the coming year has been developed which will balance warehouse stores according to demand. The prime reason for slow sales in some areas is due to the scattered location of dealers who must travel long distances to get pumps. Many are reluctant to undertake lifting of pumps when such transportation cost is involved. BADC will take action to establish stores at feasible district and subdivision levels parallel to existing SSIP stores.

It was also suggested that warehouses be promoted at the private level. Mr. Raquib, Acting Director of Bangladesh Bank indicated that credit must be available for individuals who are willing to undertake such warehouse construction.

2. Sales

Since the evaluation meeting held last year BADC has sold more than 45,000 pump sets. These sales were handled primarily through the newly appointed BADC private dealers. Other agencies have not participated as anticipated. Credit sales, in particular, have not been at a level which would indicate availability of allocated credit to the farmers.

Recommendations:

1) Determine the level of participation desired by those agencies who were originally in the SSIP program. This should be undertaken immediately.

2) Develop means to improve participation particularly in those credit institutions where farmers are able to obtain small loans.

3) USAID has proposed a program to Bangladesh Bank which would stimulate credit sales through the district branches of the sanctioned banks. This proposal should be expedited.

Discussions: Mr. A. B. M. Anwar Hossain, Deputy Director of Integrated Rural Development Program (IRDP) indicated that since no loan funds were available for their use and since the terms of the bank guarantee were difficult to meet under the conditions governing the project, IRDP was not able to participate as it had hoped. Mr. Hossain further noted that under the UNICEF MOSH program they had successfully distributed 90,000 pumps from 1975 to 1978.

At this point Mr. Satter of the Planning Commission noted that some coordination was necessary and that under the new plans for government operations the local agency for Minor Irrigation Schemes would be BADC.

Mr. Caouette, of USAID, noted that if this is the case BADC should maintain the lead role in manufacturing and warehousing of pumps with IRDP utilizing World Bank loan funds to implement its loan programs as necessary.

3. Parallel Programs

The World Bank, through DPHE and IRDP, is proposing a sales and distribution program for handpumps beginning in 1982. Coordination between BADC and IRDP is necessary to insure a coordinated effort by both agencies..

Recommendations:

- 1) BADC to initiate immediately for further discussion the subject of parallel programs to the Ministry of Agriculture and the Ministry of Planning.
- 2) Its future activities will not be affected by this proposed program.
- 3) Pricing policies by other agencies will not be in conflict with its own program.
- 4) Manufacturing under the BADC program will be unhampered by the judicious allocation of imported resources, (coke, pig iron, steel).

A.

Both Mr. Khan and Mr. A.B.M., former Director of RADC indicated RADC's concern that a parallel program will hamper the success of the RADC GIZ project. Mr. Khan of the Ministry of Commerce observed that the program will only be a temporary measure.

USAD's

Conclusion

In the light of the above, RADC was advised that it considered an overstocked and unbalanced portfolio of heavy machinery components in RADC stock warehouses. In particular an audit was noted that in November 1964 that based on conservative estimates of sales, RADC had a surplus stock of heavy pump sets in storage. This is an unnecessary accumulation of equipment purchased by RADC and stocks were drawn down.

Sales for the year were greater than the RADC production. Warehouse positions are still at a high level. RADC wishes to resume purchasing of the necessary components due to order cancellations with existing manufacturers and the storage needs of the sub sector proposed for the upcoming sales season. The project consultant has developed a procurement program which insures a balanced stock position in all stores and has recommended very little of purchasing to disburse the final allotment of funds for the project.

Recommendations:

- RADC be allowed to reorder components and to request tenders for the balance of pump sets needed to disburse available funds based upon Project Consultant's procurement program which will minimize overstocking. RADC will also implement a sales promotion program acceptable to USAID.

Discussion: USAID assured RADC of its consideration for further procurements under the project.

The Board of Directors of the Local Union
is requesting a review of the Local Union's financial position. It is possible that
in an examination of the financial data set for total disbursement funds
might be required.

Administrative

The Board of Directors of the Local Union is requesting a review of the financial position
of the Local Union and if necessary request a review of the financial data on
monthly for each in Project Implementation of the No. 3.

Administrative The Board of Directors of the Local Union is requesting a complete
report by March 31, 1972.

6. General Review of Project

The Board of Directors of the Local Union is requesting a review of the possibility
of a review on program. The Board of Directors is requesting a review of the
by the Board of Directors to the development of this project.

Administrative

The Board of Directors is requesting to put up a financial request for a review of the
the Local Union intends to do so.

Administrative No objection was noted.

The meeting was closed with a prayer and a benediction. The Board of Directors
all participants for a meaningful and successful meeting.

03 July 1981

Bangladesh Agricultural Development Corporation
Shallow Tubewell Division

SMALL SCALE IRRIGATION-I PROJECT
US AID Project No.388-0019

INTRODUCTION

In accordance with AID policy, the project is to be evaluated on an annual basis to determine whether the outputs are being achieved and project purposes accomplished. To assist the evaluation committee, the following narrative has been prepared.

An evaluation review was held on 20 November 1978 and focused on procurement of maximum of 25,000 pumps during 78/79 irrigation season with first pump to be ready for sale in February 1979.

USAID conducted another detailed evaluation in March 1979 with the help of BADC and Ammann & Whitney.

The last evaluation was held on July 1980 and established policies and procedures for implementation of major scale sales program under the direction of BADC.

The project's purpose is to provide small farmers with irrigation equipment (primarily hand pumps) which can be privately owned. This is the single requirement which stands between small farmers in Bangladesh who are not part of other government sponsored irrigation schemes and their successfully growing a winter crop. Over 80% of all rural households in Bangladesh own less than 3 acres. This project is targeted to help these poor farmers who cultivate these small parcels of land.

The hand pump set consists of a cast iron hand pump of rugged construction with an approximate discharge capacity of 8 I.G. of water per minute; a 6 ft. 1.5 inch diameter brass jacketed galvanized iron pipe strainer; and, 1.5 inch galvanized steel tubes for column (blind) pipe in suitable lengths of 20 ft. increments.

The price of the pump set is subsidized by the Government. A set consisting of one No.6 hand pump, one strainer and 40 ft. of pipe has an estimated value of Tk.1600/- and is sold for Tk.1000/-. The price of sets ex warehouse during 1980-1981 were:

Set 1: Pump Head, 2-20 ft. pipes, 1-strainer	Tk.1000/-
Set 2: Pump Head, 3-20 ft. pipes, 1-strainer	Tk.1300/-
Set 3: Pump Head, 3-20 ft. pipes, 2-strainers	Tk.1600/-
Set 4: Pump Head, 4-20 ft. pipes, 2-strainers	Tk.1900/-

Dealers are allowed 10% commission on ex-warehouse price.

In the initial project paper it was estimated that with a hand pump set a small farmer will be able to irrigate an average of $\frac{1}{2}$ acre, increasing crop intensity and yield per acre to produce an additional $\frac{1}{2}$ ton of foodgrain per year per pump.

Hand pump sets are supplied to the farmers for cash through BADC dealers, on credit through Bangladesh Krishi Bank (BKB), and cash or credit through Integrated Rural Development Program (IRDP) and private volunteer organizations (PVO) and other government agencies.

Over 63,000 pump sets have been sold to date. Of these 52% have been sold between January and June 1981. With an active promotional campaign and utilizing BADC's STW stores for outlet to dealers a conservative accumulative sales projection is 115,500 sets by June 1982, and 174,800 sets by June 1983.

The project is financed under a \$ 14 million loan agreement, No.388-T-010, signed between the Government of the People's Republic of Bangladesh and The United States Agency For International Development on September 29, 1976. The project implementing agency is the Bangladesh Agricultural Development Corporation (BADC) acting through the Chief Engineer, Shallow Tubewell Division and Project Manager, Small Scale Irrigation Project.

Ammann & Whitney are engaged by BADC under an agreement dated 13 July 1978 and amended on May 29, 1979, to assist BADC in international procurement of raw materials (pig iron, coke, and pipes) and local procurement of completed pump heads, pipes and strainers. This assistance includes scheduling procurement, prequalification of manufacturers and suppliers, preparation of specifications and bid documents, invitation and processing bids, analysis of bids, recommending awards, supervising quality control and inspection of all work by manufacturers, evaluation of materials and modifications of pumps and components, training of BADC assigned personnel, and certification of acceptance for payment.

PROCUREMENTS

The following summarizes the procurement program for pump heads, strainers and pipe (local and imported) to meet requirement of 174,800 sets in two phases, 123,000 sets and additional 51,800 sets: (Ref. Annex)

	Further Procurement Program ('81 to '82)		Total Procurement
	123,000 sets	51,800 sets	
Pump Head	6,200	51,800	58,000
Strainer	-	49,500	49,500
Pipe	49,000	27,45,400	27,94,400

MISSING PAGE
NO. 3

Performance by National Tubes in supplying pipe has affected the project at the beginning. The following illustrates the supply of pipe by N.T.:

	<u>Purchase Order Date</u>	<u>Quantity</u>	<u>Scheduled Delivery Date</u>	<u>Contract Completion Date</u>	<u>Delay in Delivery</u>
1st Order	05.12.78	2.4 lac rft	31.12.78	17.09.79	8 ¹ / ₃ month
2nd Order	26.02.79	15.6 " "	31.05.79	30.07.80	14 month
3rd Order	27.02.80	15.0 " "	30.06.80	06.01.81	11 month

Under latest procurements the average cost of the components delivered to the stores are:

Hand pump	Tk.414/05 each
Strainer	Tk.148/20 each <u>1/</u>
Pipe (local)	Tk.19.98 per ft. <u>2/</u>
Pipe (import)	Tk.10.40 per ft. <u>3/</u>

1/ Does not include cost of pipe supplied to manufacturers by BADC nor sales tax to be paid by BADC.

2/ USAID reimburses BADC at Tk.10.95 per ft.

3/ US \$ 0.65 per ft. (C&F) at Tk.16 = \$ 1.00. Excludes duties and taxes.

MANUFACTURING

There has been no problem due to the lack of active participation by manufacturers in competing for contracts. A list of tenders and participants follows:

<u>Tender</u>	<u>Item</u>	<u>Participants</u>	<u>Awards</u>
1-S	Strainer	11	2
2-S	"	15	7
3-S	"	18	(Re-tendered)
4-S	"	15	5
1-HF	Hand Pump	9	2
2-HF	"	6	3
3-HF	"	17	5
4-HI	"	12	1
IFB No.1 Imported	G.I. Pipe	17	1

As part of the initial baseline information developed prior to the start up of the revised project a survey of firms who were interested in participating in the project was conducted. In April/May 1981 the Consultant interviewed 60 firms/organizations who had indicated interest at one time in the manufacturing/supply of hand pump heads but who have not participated in any of the tenders to determine the reason for non-participation.

Of 60 firms who had originally indicated interest in supplying hand pump heads for the project, 22 had participated in one or more tenders, 16 were found not operative or non-existent during survey, 3 are Government foundries and the remainder indicated lack of interest or financial difficulties include lack of working capital to purchase raw materials, difficulties in credit financing and delayed payment by purchaser.

The performance of manufacturers of hand pump heads and strainers has improved and they are meeting contract supply schedules. This is mainly due to imposing of liquidated damages on delinquent suppliers who fail to meet schedules or contract commitments and also through arrangement of pig iron imported by TCB and distributed through BADC.

TECHNICAL ASPECTS CONSIDERED UNDER CONSULTANT CONTRACT

There is a continuous inspection by the Consultant during manufacturing and at supply at stores for adherence to specifications is producing a hand pump and strainer superior to those previously made and sold in Bangladesh.

To increase the life of the locally produced thin wall diameter G.I. pipe, it is recommended to increase galvanization to conform to Specifications ASTM A 120. (1.8 oz per sq.ft.)

The Consultant is completing a brief over-view report on comparison of pumps in Bangladesh as to cost, efficiency, user acceptance, energy conservant, etc. The report will be available in early July.

The Consultant proposes under an extended contract to provide assistance to small foundries to advise on technological advances and manufacturing processes. The assistance is targeted to upgrading small foundries so that they can compete in tenders for procurement by improvement in method of manufacturing and reduction in production cost by conservative use of coke and pig iron.

As reported in the last evaluation meeting the coir wrapped pipe for a strainer is considered to be a desirable addition to the hand pump program. It is proposed as an alternative to the brass strainers and the farmer should be given the option of procuring the coir wrapped pipe strainer or brass strainer. The price of each should be established at cost to BADC to procure.

The Consultant has developed an all purpose tool which can be manufactured locally for use with the hand pump. It is proposed that this tool be made available to farmers at cost.

STORAGE

BADC stores are presently located in Jessore, Natore, Rangpur, Jamalpur, Comilla, Joydebpur and Bogra. About twelve sub-stores are expected to be located in shallow tube well (STW) storage areas in order to reach further areas.

The existing storage area and the number of hand pump sets that can be stored are:

Location	Area (Sft)			Storage For No. Sets Based on Area
	Covered	Open	Total	
Jessore	7,000	23,000	30,000	8,500
Natore	20,000	70,000	90,000	25,000
Rangpur	2,500	16,000	13,500	5,000
Jamalpur	3,000	40,000	43,000	12,000
Comilla	2,000	15,000	17,000	5,000
Joydebpur	10,000	40,000	50,000	14,000
Bogra	20,000	80,000	100,000	28,000
Total	64,500	284,000	348,500	97,500

A minimum area of 624 sq.ft. is required for 7,800 pipes of 20 ft. length; 73 sq.ft. for stacked 30 pump heads; and 110 sq.ft. for each 56 bundles (504 pieces) of strainers. The area noted includes 3 ft. aisle space.

Procurement must be dove-tailed in with available storage area, sales projections, balancing stock, minimizing trans-shipment between stores and related factors.

SALES: CASH & CREDIT

Sales and distribution procedures were developed in detail for sale of hand tube wells through BADC, IRDP and BKB.

The general sales policy is for 50% of HTWs to be sold for cash through BADC appointed HTW dealers and for cash/credit to other organizations. The remaining 50% will be sold through BADC stores to IRDP (25%) and BKB (25%) for cash. IRDP will sell HTW to farmers either on credit or for cash and BKB will sell HTW set to farmer on credit.

Bangladesh Bank ACPD: Circular No.8, 24.12.80 bank credit facilities were extended to both BADC and BKB appointed dealers and the small and marginal farmers for purchasing HTWs under SSIP. Thus credit facilities are available for the whole project. Target of sales were established by Bangladesh Bank.

Sonali Bank	-	17,000
Agrani Bank	-	14,000
Janata Bank	-	16,000
Rupali bank	-	11,000
Pubali Bank	-	9,000
Uttara Bank	-	3,000
		<u>70,000</u>

The progress in disbursement of loan by lending bank branches is monitored by Bangladesh Bank.

DISTRIBUTION AND SALES PROMOTION

BADC has appointed 329 dealers for direct sales of HTW sets to farmers. The 1st sales through dealers started in September 1980. Upto June 1981 i.e. in 9 months, dealers sold 24,098 sets (all category). BADC also directly sold to other agencies (Cotton Dev. Board, Directorate of Agriculture, and private voluntary agencies) a total of 6,161 sets from September 1980 to June 1981.

IRDF requested for an allotment of 25,000 pump sets in the beginning of 1980-81 season. IRDF lifted 3,962 nos. against an allotment of 20,000 sets.

BKB were allotted 15,000 sets as per their request and they have lifted 10,906 sets upto June 1981.

A current sales promotion program is under review by BADC and USAID to boost sales in the up coming season.