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A STUDY REPORT  
ON  
COLLABORATION AMONG:  
GRAMEEN BANK,  
DEPARTMENT OF  
PUBLIC HEALTH ENGINEERING  
AND  
UNICEF  
IN  
RURAL WATER SUPPLY IN BANGLADESH,  
1985-1986

VOLUME I, EXECUTIVE SUMMARY

INSTITUTE OF EDUCATION & RESEARCH CENTRE  
FOR RURAL WATER SUPPLY AND  
SANITATION (IRC)

Salma Akhter  
Institute of Education & Research  
University of Dhaka  
Short Term Consultant, UNICEF

Dhaka  
1987-88

822-6421

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## PREFACE

The United Nations Children's Fund (UNICEF) today continues to champion the cause of underprivileged children and mothers around the world. Its ceaseless efforts in Bangladesh carry the beakon of hope for our hapless millions struggling to survive and grow up.

UNICEF support and assistance in rural water supply in Bangladesh has come a long way in delivering safe drinking water in the countryside through the very able delivery system of the Department of Public Health Engineering (DPHE).

Over a period of two years the Grameen Bank (GB) set up has also provided valuable support in this respect through its collaboration with DPHE and UNICEF. This study deals with that collaboration.

An attempt was made in this study to provide specific information and analysis on a limited case basis on the status of Grameen Bank Tubewells and their use, perception of beneficiaries and non-GB beneficiaries regarding Grameen Bank, DPHE and other Tubewells. The study was mainly based on Primary data, collected through field survey, observation, interview and also study of documents.

I greatlyfully acknowledge the support and kindness rendered by personnel of these three organizations and the patience and eager co-operation of the care-takers and beneficiaries of tubewells in the villages without which this study would not be possible.

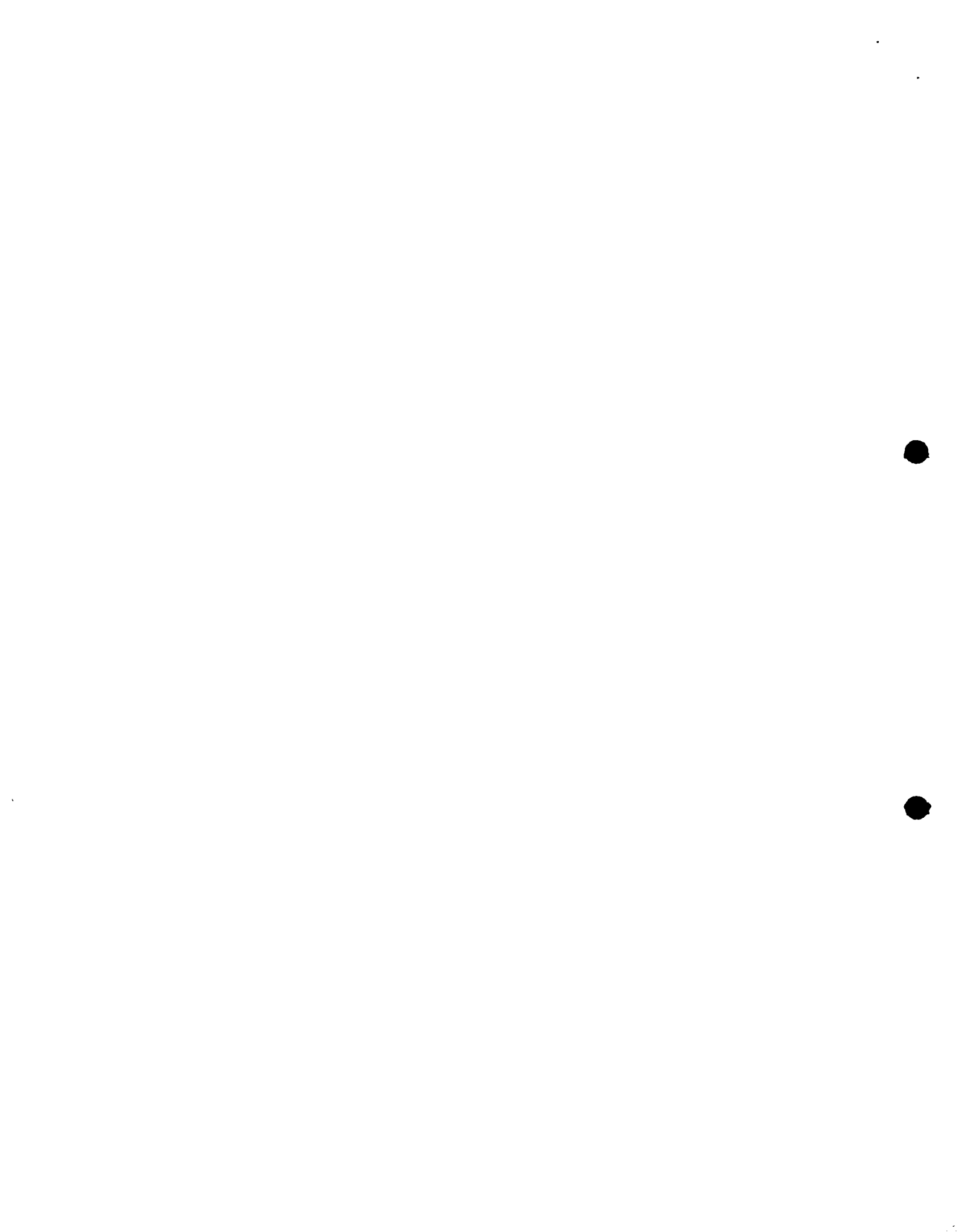
I would like to thank particularly Mr. Colin E. R. Glennie, Co-ordinator, Water and Environmental Sanitation Section, UNICEF, Mr. M. H. Khan, Chief Engineer, Department of Public Health Engineering and Mr. Mozammel Huq, Director, Grameen Bank for their assistance.

This report will have achieved its ends if it helps in decisions regarding future collaborations in the field of rural water supply between UNICEF and DPHE on one hand and GB or any other similar organization on the other.

LIBRARY INFORMATIONAL REFERENCE  
CENTRE FOR RURAL WATER SUPPLY  
Dhaka, Bangladesh  
Tel. 179, 181, ext 147/142

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Salma Akhter.



## CHAPTER - I

### INTRODUCTION

#### 1. Context of the Study.

UNICEF has been assisting the Government of Bangladesh through DPHE in installing Tubewells for Rural Water Supply since 1974 and to date some 500,000 Tubewells have been sunk<sup>1/</sup>. UNICEF also has had collaboration with and assistance for the Grameen Bank Programme of Bangladesh.

Since the goal of the UNICEF assisted National Rural Water Supply Programme is to particularly reach the poorest segment of the society who cannot afford a private tubewell and since it is also UNICEF's intention to involve more women at beneficiary level in such a programme, Grameen Bank's appeal to DPHE and UNICEF for assistance in the way of providing tubewells, was considered just the opportunity.

Grameen Bank, DPHE and UNICEF entered into an agreement by which materials for a total of 5,000 shallow tubewells and hand pumps would be provided to Grameen Bank over a period of 2 years (Jan '85 - Dec '86). These tubewells would be provided free of cost by DPHE/UNICEF and sold to GB group members by Grameen Bank in their four Project areas, Tangail, Dhaka, Rangpur and Chittagong. The fund thus accumulated would then be re-cycled by Grameen Bank for sustaining a Rural Water Supply Programme independently.

Whether or not there are further requests from Grameen Bank for continued support of a similar nature from DPHE /UNICEF, this collaboration in RWS being the first of its kind of such magnitude, DPHE and UNICEF felt it imperative that a study be conducted to evaluate this collaboration - hence this study.

The study was conducted by a consultant under contract over a period of 2 months (June-July, 1987) and used a methodology jointly developed by UNICEF and the Consultant

#### 2. Objective of the Study.

The objectives of the study were:

- 1) to review the project agreement between Grameen Bank, Department of Public Health Engineering and UNICEF,

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<sup>1/</sup>Water and Environmental Sanitation Section, UNICEF - Dhaka



- ii) to investigate into site selection, TW installation, quality of water and platform construction;
- iii) to identify the socio-economic status of recipients, their literacy and link with sanitation;
- iv) to know and analyse perception of beneficiaries concerning government TWs, GB TWs and private TWs and perception of non-users of GB TWs regarding GB, Govt. and other TWs;
- v) to know the perception of local DPHE, GB, and Upazilla officials regarding the present collaboration; and
- vi) to suggest improvements for the collaboration project, if it is to continue.

### 3. Methodology.

The study comprised two parts : A) DESK STUDY, involving study of documents, files and interviews at policy making and managerial levels in Grameen Bank, DPHE and UNICEF; and B) FIELD STUDY, involving observation, interviews at the beneficiary and implementation levels in Grameen Bank, DPHE and UNICEF.

For Field Study, four Upazillas in each Zone of Grameen Bank totalling 16 Upazillas were visited. In Dhaka and Rangpur Zones two districts, i.e. Manikgonj and Narsingdi in Dhaka Zone and Rangpur and Nilphamari in Rangpur Zone were visited for data collection on Rural Water Supply Project. Similarly in other two zones field visits were undertaken in Tangail and Mirzapur areas of Tangail District and Mirersharai and Patiya areas of Chittagong district. In all 100 Grameen Bank Tubewells were physically visited and observed. Besides, 100 DPHE, Private and other type of Tubewells were also visited and observed.

For Desk Study, Grameen Bank Head Quarters, DPHE Head Quarters, Circle and Store Divisions and UNICEF Head Offices were visited. Concerned/appropriate authorities were interviewed and documents studied.

### 4. Samples.

It was decided with UNICEF at the planning stage that 100 GB TWs would be physically checked and owners/caretakers be interviewed. Besides 2-3 persons using each GB TWs and 100 nonusers of GB TWs who use other TWs like Govt, Private and NGO TWs would be interviewed with the aim of knowing about their perception regarding GB TWs. Therefore in four zones 100 Grameen Bank Tubewell owners/caretakers, 284 Grameen Bank Tubewell Users and 100 non-users of Grameen Bank Tubewell comprised the sample population for this study.





## 5. Instrument.

One set of observation check-list and six sets of interview schedules were developed in consultation with UNICEF to collect data at the central, zonal and beneficiary levels.

## 6. Data Collection.

Data for the study were collected from 6 categories of sample population by the consultant and also by trained field investigators. The consultant was personally involved in 80% of the field works in each zone.

## 7. Time Frame.

The study was carried out during the months of June and July, 1987. Hence the last date of data collection was 29 July, 1987.

## 8. Techniques of analysis

Collected data were hand-processed and tabulated and expressed in terms of percentages for quantitative and qualitative analysis and interpretation.

## 9. The Report.

A wide range of areas was covered by this study and a considerable amount of statistically presentable information was generated. For all practical purposes, therefore, it was decided that the report will be in two parts, Part I being an Executive Summary of major findings and recommendations and Part II a more detailed report containing details of the methodology, specific findings and tables. The two parts are published separately as Volume I EXECUTIVE SUMMARY and Volume II MAIN REPORT. This then would be Volume I.

## CHAPTER II

### SUMMARY OF FIELD AND DESK FINDINGS.

This Executive Summary is a consolidation of the major findings from interviews and observations of the three collaborating agencies, GB, DPHE and UNICEF at all levels and TW owners and users of GB as well as non-GB TWs. Major findings from any one of the three agencies are indicated by identification tags in parentheses at the end while corroborating findings from two or more of the three Agencies carry no such tag. This, however is done only in the case of Desk Study findings. Whenever it is felt necessary to include two or more responses to the same queries from the various agencies, it is done so in a table form. Only major tables are included in the Field Finding section, while a more complete picture is available in the Main report.

The findings have been presented in this chapter as Summary of Field Findings (A) Physical checklist for GB TWs, (B) GB TW owners, GB TW users and non user of GB TWs and Summary of Desk Findings.



Summary of Field Findings

PART - A

Physical Check-list for GB TWs  
(100 Tubewells)

For field investigation, 100 tubewells were physically checked/examined regarding TW installation, handpump, quality of water, platform and location of the tubewells. An equal number of TWs (25 TWs per zone) were visited and checked in all the four zones of the Grameen Bank in Bangladesh. In each zone 2-3 areas were covered. These are Araihasar and Raipur areas in Narsinghdi district, Singair and Manikgonj areas in Manikgonj district in Dhaka Zone, Mirzapur and Tangail areas in Tangail Zone, Mithapukur area in Rangpur district, Jaldhaka area in Nilphamari district in Rangpur Zone, Patiya and Mirersharai areas in Chittagong Zone.

Following are the presentation of data as well as presentation of the corresponding findings :

1. Tubewell (Handpump)

A. Pumps easily	= 89%
Pumps not easily	= 11%
B. Water discharge good	= 96%
Water discharge not good	= 4%
C. Installation of TW proper	= 90%
Installation of TW not proper	= 10%
D. Bolts & Pins greased	= 42%
Bolts & Pins not greased	= 58%
E. Depth of TWs.	

<u>Depth in ft.</u>	<u>No. of TWs</u>
Less than 50	3
50 - 100	44
100 - 150	23
150 - 200	15
Greater than 200	12
Total :	97
No response :	3
	<u>100</u>

Average Depth - 117 ft.



2. Quality of Water

- A. Sand free and clear water = 99%  
Sandy and cloudy water = 1%
- B. Tastes Normal = 76%  
Tastes salty = Nil  
Tastes Iron = 24%
- C. On the question of iron in water creating problems for the users only 4% respondents said it was a problem for them.

3. A. Dimensions of the Platform

Area in sft.	Percentage of TW
1. 09 - 16	28
2. 16 - 25	37
3. 25 - 36	20
4. 36 - 49	03
5. 49 - 64	02

No platforms were found in 8 tubewells out of 100 tubewells checked physically. Two platforms were found badly broken, therefore no measurement was recorded.

B. Condition of platforms

Platform intact	80%
Platform broken	12%
Platform not yet constructed	8%

C. Condition of base of pump

Base of pump firm	87%
Base of pump loose	5%

4. Use of TW platform as Observed and Reported

Used for	By owners (in %)	By others (in %)
1. Collecting drinking water	100	100
2. Washing Clothes	80	34
3. Washing Utensils	92	43
4. Bathing	70	26



5. Location of TW

A. Inner compound	=	61%
Outer compound	=	25%
Common ground	=	6%
B. Clean site	=	88%
Not clean site	=	12%
C. Within 10 ft of latrine	=	18%
10 feet away	=	24%
Further away	=	58%
D. Easy Access for neighbours	=	90%
Not easy access for neighbours	=	10%
Easy access in Monsoon	=	82%
Not easy access in Monsoon	=	18%

Part - B

GB TW owners, GB TW users and non-users of GB TWs

1. Findings from GB TW Owners/Caretakers

The number of female owners of GB TWs far exceeds that of male; - approximately two and a half times more. This is commensurate with GB's policy regarding formation of groups i.e. more female groups/members than male groups/members.

Ownership:

Male	29%
Female	71%

Almost all are married.

Married male	93.10%
Married female	90.14%

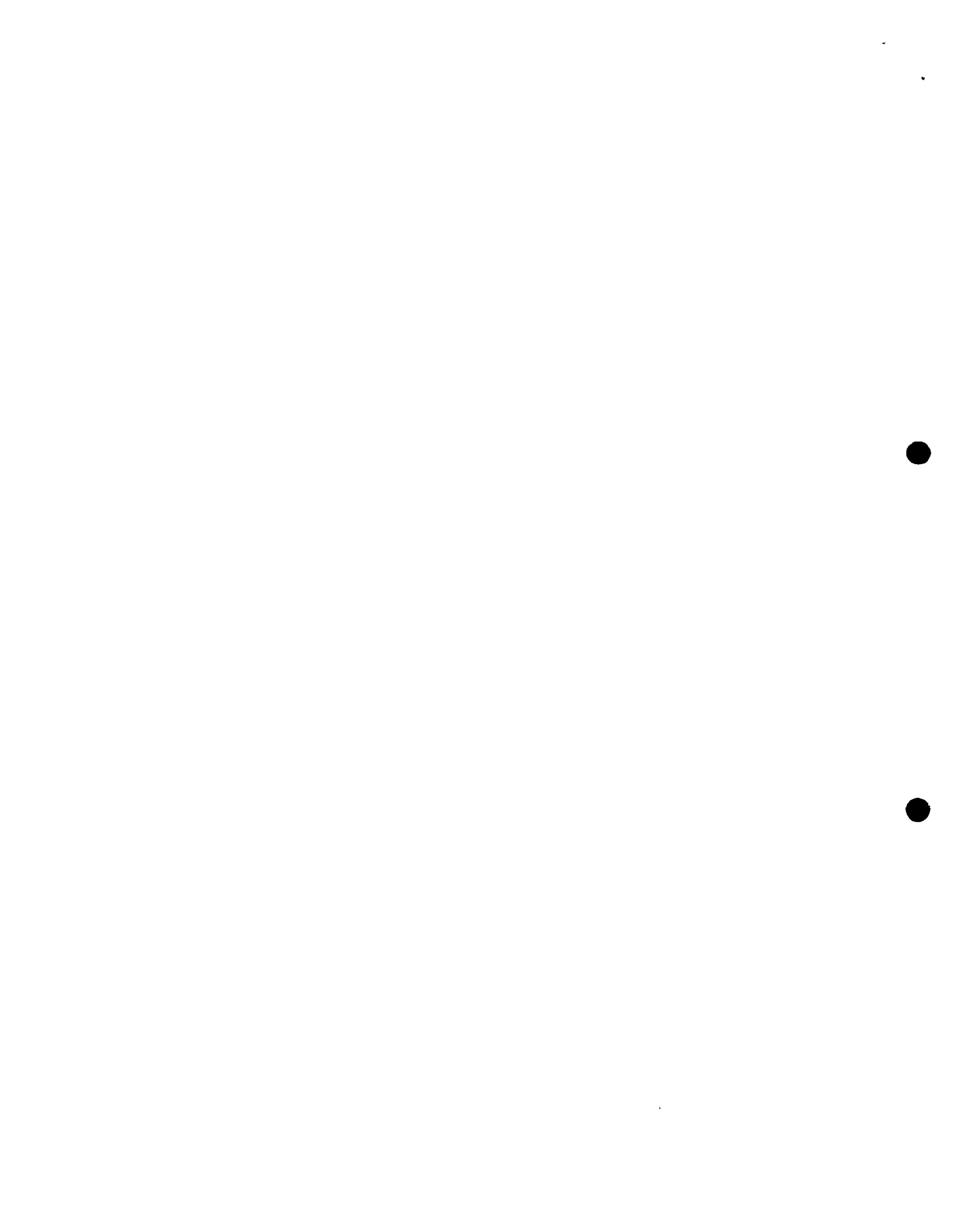
Unmarried (male & female) 6.25%

and the average family size of these owners is 7.6 persons (GB owners)

The ownership pattern is further definable in terms of individual ownership and group ownership as follows:

Female individuals	75%
Female Groups	25%
Male individuals	69%
Male Groups	31%

This indicates that individuals rather than groups took a greater advantage of availing TWs from GB due to their enhanced financial capability, although according to the GB Headquarters in Dhaka, the Bank's instructions were to give priority to groups rather than individuals.





2. The duration of membership with GB for these owners is between 1 and 8+ years for both male and female.

Membership for majority of male members is 3 to 4 years while in the case of females it is 4 to 5 years (GB TW owners).

3. Loans received from GB by these members so far are as follows:

	Range	Majority
Female	Tk. 2000 to Tk. 8,000	Tk. 3,000 to Tk. 5,000
Male	Tk. 1500 to Tk. 5,000	Tk. 4,000 to Tk. 5,000

Note that the highest loan received by the female members is Tk. 8,000 compared to Tk. 5,000 by male members.

4. The average monthly income of GB TW owners GB TW users and non-users of GB TWs compare as follows

	GB TW Owner		GB TW User		Non-user of GB TW	
	Range	Majority	Range	Majority	Range	Majority
Female	500 to 3100+	1100 to 2000 (57%)	300 to 3000	600 to 1500 (59%)	500 to 3100+	500 to 2000 (69%)
Male	500 to 3100+	1100 to 2000 (65%)	300 to 3000	600 to 1500 (60%)	500 to 3100	500 to 2000 (73%)

5. The weighted average cost breakdown for a GB TW including installation cost present the following picture

Item	Range in Taka.	
a) Cost of materials including pump	1,015	- 1,150
b) Carrying cost	7	- 45
c) Sinking cost	227	- 298
d) Platform construction (labour)	172	- 264
Total	1,421	- 1,757

Note that above costs include figures related to 12 TWs in the hilly regions of Chittagong which may have pushed average costs upwards.



6. The major source of funding for the TWs is not GB loans. Respondents account for those as "own income." "Bank loan" in the following table refers to GB loans. The pattern is as follows:

Source of Fund for Purchasing GB TWs

Source	Female respondent	Male respondent
1. Own income	71%	83%
2. Bank loan	13%	7%
3. Group fund loan	10%	7%
4. *Other loans (undefined)	7%	3%

\* GB members are not eligible for any other bank loan. These could be personal loans, though not specified as such (GB TW owners).

7. Reasons for purchasing GB TWs instead of using nearby TWs are shown by male and female GB members as follows:

Reasons	% of female respondents	% of male respondents
a. Need for own TW	74	74
b. Privacy and Purdah for female	41	48
c. Cuts down labour (for fetching water)	27	7
d. Prestige	13	6
e. Non-availability of Govt. TW (Usually out of order)	11	28
f. Possibility of increased use of TW water	9	3

Please note that respondents were requested to provide three main reasons for purchasing GB TWs instead of using nearby ones. Hence responses are not mutually exclusive. And not all respondents replied to this question.

8. The reasons shown by both male and female GB members for not purchasing TWs from the market are:

- a) It is more expensive - 60%
- b) They have an allegiance to GB - 40%

9. They have also shown the following reasons for not applying for Govt. TWs:

- a) Low socio-economic status resulting into limited access to the system - 65%
- b) Easy availability of GB TWs in contrast - 19%
- c) No reason shown - 16%



10. In 96% of the cases private mistries were used to install the TWs while "Govt. mistries" accounted for 4% of the installations.

While 82% of the respondents found it easy to get hold of mistries, 18% found it difficult.

Also note that GB workers arranged mistries in 96% cases while the owners themselves arranged mistries in 4% cases (GB TW owners)

11. Performance/Maintenance Status.

a) No trouble (running)	93%
b) Minor repair required (washer etc.)	6%
c) Handle stolen	1%

12. The number of family served by these TWs ranges between 3 and 16. The average number of families served by each TW is 8.6. Again 33% of the TWs serve only 4 families on an average while an average of 13.5 families are served by 9% of the TWs.

13. Use of TW water by GB TW Owner/Caretaker.

<u>Purpose</u>	<u>% of GB TW owners.</u>
a) Drinking	100
b) Washing Utensils	88
c) Washing Clothes	82
d) Bathing	86
e) Others (irrigation, washing cattle, paddy, cotton etc)	90

\* Please note that this differs from section 4 as the TW owners responded separately again on the use of TW water

14. Most of the GB TW Owners (80%) were found to use some kind of a pucca or kutcha latrine although great majority (74%) do not fit into UNICEF's definition of latrine (confinement of faeces). Again 20% owners did not have any latrine at all.

15. 77% are willing to buy a latrine if GB loan is available for this and 79% are willing to spend between Tk. 200 and 1,200 for an \*\*"improved latrine"

\*\*not defined



16. On continuation of the RWS project, about 95% of GB TW owners/caretakers suggested for continuation of the project and offered following opinions for improvement of the project.

Opinion	% of respondents
a) Costs should be reduced	80
b) Should be free of cost	4
c) Payments should be in instalments	10
d) Should be purchased by groups not individuals	4
e) No response	2

17. The educational qualifications of GB TW owners, GB TW users (non-owners) and non-users (not using a GB TW) compare as follows:

Education	GB TW owners	GB TW users	Non-users of GB TWs
<u>Female</u>			
a) Illiterate	1%	57%	50%
b) Literate (non-school)	72%	20%	19%
c) Literate (Class V to X)	27%	23%	31%
<u>Male</u>			
a) Illiterate	0%	44%	25%
b) Literate (non-school)	55%	11%	19%
c) Literate (Class V to SSC)	45%	45%	56%

18. Percentages of GB TW owners, GB TW users and non-users of GB TWs who are landless are as follows:

Landless	GB TW owners	GB TW users	Non-Users of GB TW
Female	28	36	13
Male	10	39	27





19. Comparison of use of TW Water.

Purpose	GB TW owner	GB TW user	Non-user of GB TW
a) Drinking	100%	100%	99%
b) Cooking	-	86%	72%
c) Washing Utencils	88%	71%	48%
d) Washing Clothes	82%	45%	45%
e) Bathing	86%	45%	46%
f) Other (irrigation, washing cattle, washing paddy etc.)	90%	--	-

20. On Free Access to TWs:

About 100% GB TW owners said the neighbours had free access to their TWs, while responses from users of GB TWs are as follows:

	<u>access free</u>	<u>access not free</u>
GB TW users	91%	9%
Non-users of GB TW :	85%	15%

21. Reaction of local people (non-users of GB TWs) regarding installation of GB TWs in the same locality:

Favourable reaction : 92%  
Mixed reaction : 1%  
Unfavourable reaction. 7%

Those who had unfavourable reaction to installation of GB TWs cited the following reasons:

Installation of GB TWs has caused group conflicts in the locality.

Installation of GB TWs has created quarrelsome atmosphere in the locality.

Site selection is not proper, (referring to installation of GB TWs inside the inner compound.

22. Regarding perception of local people (non-users of GB TWs) on continuation of the present RWS project, about 95% said that the project should continue as it expands the provision of safe drinking water and the poor landless people get TWs easily.



Summary of Desk Findings

(Please note that two or more corroboratory answers/opinions do not carry any identification tags whereas single party opinion carry these tags in parentheses after each statement)

1. Purpose of this collaboration as understood by the three agencies.

GB	DPHE	UNICEF
a) To supply TWs to poor and landless rural people at a market rate.	a) To reach the poorest communities of the rural society.	a) To be able to reach the underserved poor and more women directly through the Rural Water Supply Programme.
b) To supply pure drinking water for better health of beneficiaries.	b) To get more TWs directly to women.	
c) To facilitate small scale irrigation.	c) To get more TWs out to the beneficiaries and thus get a wider user coverage.	
d) To provide safe drinking water for the livestock.		
<p>While GB field staff maintained that except all the above 4 objectives,</p> <ul style="list-style-type: none"> <li>- facilitating ownership of TWs for poor people; and</li> <li>- free GB group members from humiliation of the rich,</li> </ul> <p>are also two important objectives of present collaboration</p>		



2. The collaboration did not involve anyone below Dhaka level within DPHE or in GB in its preparation.
3. This collaboration had nothing to do with promotion of latrine use or the sanitation concept (DHPE).
4. Supply of materials from DPHE has sometimes been slow, because there was no separate quota for GB and GB does not have any warehouse facility of its own (please see Vol II).
5. There has been no technical collaboration or guidance between DPHE and GB for this programme.
6. GB does not have the technical expertise to ensure quality control in TW installation.
7. There is no monitoring mechanism for the Programme within DPHE, and UNICEF does it on ad-hoc basis and progress reports from DPHE is irregular.
8. GB has its monitoring system that uses a standard proforma to report on status of sinking of TWs. Consolidated reports are periodically sent to WES Section and WDU, UNICEF Dhaka and DPHE Dhaka. These reports are numerical and not on quality, use etc.
9. Some GB Field level workers and beneficiaries have complains about the quality of materials particularly (a) poor quality of filter, solvent cement, cement, (b) broken PVC pipe (c) non-supply of straight couplings (d) straight handle of pumps etc (GB).
10. TWs are sold to GB members at the rate of Tk. 700/- for the Pump and Tk. 3.25 per foot of PVC pipe. Lowest cost per TW (materials including pump) is approximately Tk. 1,1000/-. Most GB workers and beneficiaries find the cost rather high (GB).
11. Approximately Tk. 2.8 million has been accumulated so far from sales proceed of TW materials (only pumps and pipes). So far only 3,129 TWs were released and sold to the GB members (GB field).
12. The benefit of GB TW ownership is more restricted to female members. (UNICEF).
13. The Bank wishes to continue this project (subject to evaluation report), and integration of sanitation project is emphasized (GBHQ). The collaboration should continue in view of a very large demand at the benefuciary level and sanitation should be a pre-condition(GB).
14. Some requests have been received for smaller family size TWs (GB).
15. TW collaboration is neither reflected in the Master Plan of operations nor in the ADP (UNICEF Zone).



RECOMMENDATIONS

On Continuation of DPHE - GRAMEEN BANK - UNICEF  
Collaboration in RWS Programme

This is an issue to be decided upon by the three parties after careful consideration of subject recommendations in this section.

One of the intentions of the collaboration, common among two of the three parties, 'reaching more women directly', seem to have been fulfilled. While Tubewells through Grameen Bank obviously increase Tubewell service coverage in addition to the National RWS Programme, these Tubewells do not necessarily serve the poorest section of rural population.

These additional tubewells do not seem to pose a great difficulty for DPHE and UNICEF but should it be decided to continue the collaboration, it should be done so with due consideration to the following recommendations specifically by agencies mentioned in parentheses at the end of each::

A. Purpose of Collaboration

1. This should be clearly understood by all parties in common terms leaving no scope for free interpretation. The purpose should be detailed out in writing, discussed thoroughly and strictly adhered to (GB/DPHE/UNICEF).
2. Policies and procedure derived at from the purpose/objectives must involve people staff lower than Dhaka level in the formulation stage (GB/DPHE/UNICEF).

B. Physical Components and Official Recognition

1. A collaboration of this nature should be mentioned in the MPO and reflected in the ADP (GOB)
2. Additional quota of materials should be earmarked for this and materials stocked at DPHE stores nearest to Grameen Bank project areas (DPHE).
3. Materials should be delivered /received at DPHE stores nearest to project sites, from Upazilla Stores, if possible (DPHE/GB).

C. Release Mechanism of Materials

1. Materials requested should be thorough and include details of most convenient stores and dates for such delivery. All parts requested for must be thoroughly recognized and their functions understood (GB).





2. Release order from UNICEF would be best called "Release Requests". Requests from GB should be promptly dealt with and release requests from UNICEF copied to all stores authorities concerned including the Chairman of UWSSC particularly when release is requested from Upazilla level (UNICEF).
3. Handing over of materials should take place on pre-selected dates as far as possible. Part delivery should be avoided as far as possible and when absolutely unavoidable all parts required for a certain number of complete wells/pumps should be delivered in each instalment (DPHE/GB).
4. Grameen Bank should build necessary storage facilities for parts closest to the project sites (GB).

D. Technical Collaboration.

1. There should be close collaboration and co-operation between Grameen Bank and DPHE in technical matters. Grameen Bank should avail of the technical expertise available with DPHE in tubewell technology, sinking and installation procedures at the implementation level (GB/DPHE).
2. Grameen Bank should consult DPHE about average depths of tubewells (GB).
3. DPHE technical supervision during sinking and installation should be available/used for quality control in general and in difficult cases, if any (DPHE/GB).

E. Monitoring

1. A regular monitoring mechanism should be instituted to look into the quality of construction, maintenance, use and problems of TWs, and reports be sent to DPHE and UNICEF regularly (GB).
2. UNICEF and DPHE should have a built in mechanism for similar monitoring on an agreed sample basis.(UNICEF/DPHE).

F. Site Selection.

1. A mechanism should be instituted for approval of sites by Grameen Bank and some potential beneficiaries after matching against criteria to be agreed upon by the three parties (GB/DPHE/UNICEF).



G. Costs.

1. Grameen Bank should sell tubewells at a lower cost. Some or all profits made from the sale of tubewells received free from DPHE so far, should be used to subsidise costs, if necessary, particularly for the less financially capable segments among Grameen Bank members (GB).
2. Payments for pumps/tubewells should be allowed in instalments particularly to less financially capable applicants (GB).

H. Sanitation and Personal Hygiene.

1. Proper sanitation and personal hygiene should be promoted. Construction and use of latrines and personal hygiene practices should be pre-conditions to sale of tubewell materials (GB).
2. Grameen Bank should set up more of their own production and selling centres with mobile teams for DPHE-type water seal latrines (GB/DPHE/UNICEF).
3. Grameen Bank should promote home made latrines as a general campaign in their project areas both among GB members and non-members alike (GB).

I. Tubewell Technology.

1. Possibilities of smaller, family size tubewells should be explored for future GB-DPHE-UNICEF collaboration in RWS programme (DPHE-UNICEF)

J. Maintenance Of Tubewells.

1. Grameen Bank owner/caretakers should be trained with the help and assistance of DPHE regarding installation and maintenance of tubewells (GB/DPHE).
2. Grameen Bank can help create a preferential group of mistries from among its poor members to handle installation of its TWs (GB).



APPENDIX : IX - A

EVALUATION OF UNICEF-GRAMEEN BANK  
RURAL WATER SUPPLY PROJECT

PART A

PHYSICAL CHECK LIST FOR GRAMEEN BANK TUBEWELL

I. Tube-well (Handpump)

1. Pumps easily \_\_\_\_\_ Not easily \_\_\_\_\_
2. Water discharge good \_\_\_\_\_ Not good \_\_\_\_\_
3. Installation of TW properly \_\_\_\_\_ Not properly \_\_\_\_\_
4. Bolts & pins greased \_\_\_\_\_ Not greased \_\_\_\_\_
5. Depth of TW \_\_\_\_\_

2. Quality of Water

1. Sandy water \_\_\_\_\_ Sand free \_\_\_\_\_
2. Cloudy water \_\_\_\_\_ Clear \_\_\_\_\_
3. Taste salty \_\_\_\_\_ Iron \_\_\_\_\_
4. If iron or salty, does it make any problem for the users? \_\_\_\_\_

3. Platform

1. Dimension \_\_\_\_\_
2. Platform in tact \_\_\_\_\_ broken at places \_\_\_\_\_
3. Base of pump firm \_\_\_\_\_ loose \_\_\_\_\_
4. Use of platform by Owners \_\_\_\_\_ Others \_\_\_\_\_
  - a. Collecting drinking water \_\_\_\_\_
  - b. Washing clothes \_\_\_\_\_
  - c. Washing utensils \_\_\_\_\_
  - d. Bathing \_\_\_\_\_

5. Location of TW

1. Inner house compound \_\_\_\_\_, Outside compound \_\_\_\_\_, Common ground \_\_\_\_\_
2. Clear site \_\_\_\_\_ Not clear (garbage pit etc.) \_\_\_\_\_
3. Within 10 feet of latrine \_\_\_\_\_ Further away \_\_\_\_\_
4. Access easy for neighbours \_\_\_\_\_ Not easy \_\_\_\_\_  
(walkable paths, no canals or fence etc.)



APPENDIX : IX - B

PART B

QUESTIONNAIRE FOR GRAMEENBANK TW OWNER

1. Name of the Owner \_\_\_\_\_
2. Apparent age . \_\_\_\_\_
3. Male \_\_\_\_\_ Female \_\_\_\_\_
4. Marital Status . Married \_\_\_\_\_ Unmarried \_\_\_\_\_  
Single \_\_\_\_\_ Deserted by Husband \_\_\_\_\_
5. How many members do you have in your family? \_\_\_\_\_
6. Level of education . \_\_\_\_\_
7. What do you do for living ? \_\_\_\_\_
8. Do you own land? If yes, what is the size of your land-holding? \_\_\_\_\_
9. What is your approximate monthly income? Taka \_\_\_\_\_
10. How many are the owners of the TW? \_\_\_\_\_
11. Name of the loanee, loanees and amount of loan \_\_\_\_\_  
  
Name \_\_\_\_\_ Loan (in amount) Tk \_\_\_\_\_  
Name \_\_\_\_\_ Tk \_\_\_\_\_  
Name \_\_\_\_\_ Tk \_\_\_\_\_
12. Relationship between/among them: \_\_\_\_\_
13. Why did you decide to get a TW of your own instead of using nearby TW?
14. Why did you not buy TW materials from local market with your own money?
15. Why did you not apply for a Govt. tubewell?
16. Where did you get information for GB TW?
17. Who in GB approved your loan for TW? \_\_\_\_\_
18. (a) What was the total cost of TW materials  
obtained from GB? Tk \_\_\_\_\_





(b) What was the total cost of carriage Tk. \_\_\_\_\_

(c) What was the total cost of sinking Tk. \_\_\_\_\_

(d) What is the total cost of platform  
construction including material Tk. \_\_\_\_\_

Total Tk. \_\_\_\_\_

19. Who installed the TW? Was it readily available in the locality?

20. Is your TW functioning well? If not what are the maintenance problems?

21. What are the maintenance costs and have you been able to meet them?

Cost, Tk. \_\_\_\_\_

22. Have you had any problems with (if so, state what)

a) obtaining allocation \_\_\_\_\_

b) obtaining loan. \_\_\_\_\_

c) obtaining TW material. \_\_\_\_\_

d) arranging installation \_\_\_\_\_

e) completing platform \_\_\_\_\_

23. Do you have any complaint about the help you received from GB Staff? \_\_\_\_\_

24. Do you have any complain about the quality and quantity of materials from GB? \_\_\_\_\_

25. If GB allowed it, would you prefer to use your loan money to buy TW materials directly from the local market, why?

26. Why did you decide to spend money for TW rather than other income generating activities?

27. What are the uses of TW water in your household:

Drinking \_\_\_\_\_ Bathing \_\_\_\_\_ Washing utensils \_\_\_\_\_ Washing clothes \_\_\_\_\_  
Others (Specify) \_\_\_\_\_

28. Do you get any other benefits from TW? If so, what? \_\_\_\_\_

29. Where do you go for washing your utensils, clothes and bathing? \_\_\_\_\_

30. How far do you have to walk (minutes): \_\_\_\_\_

31. What was your source of drinking water before your TW? \_\_\_\_\_

Govt. TW \_\_\_\_\_ Private TW \_\_\_\_\_ Other Source \_\_\_\_\_

How many minutes walk \_\_\_\_\_

32. How many families use your TW? \_\_\_\_\_



33. Do your neighbours have free access to use your TW? Yes            No
34. If no, what restrictions do you impose . \_\_\_\_\_  
Why \_\_\_\_\_
35. Does GB encourage you to use improved latrine for better sanitation? Yes  
No
36. What type of latrine do you use ?  
a. Pucca superstructure without pit  
b. Pucca with pit  
c. Kutcha with open pit  
d. Kutcha with covered pit  
e. No latrine
37. Are you interested in getting a loan to buy a sanitary latrine? Yes  
No
38. If yes, how much do you want to pay for latrine? Tk. \_\_\_\_\_
39. Do you suggest that GB should continue and expand the present TW project?  
Yes                            No
40. If yes, what are your recommendations for improvement of the present TW  
Project?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
41. What other activities in water and sanitation do you like GB to help  
you with?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Observation of socio-economic condition of the Respondents: Condition of  
house, roof, clothes, utensil, radio, bicycle etc: \_\_\_\_\_



APPENDIX X

QUESTIONNAIRE FOR GB TW USER

1. Name of the respondent \_\_\_\_\_
2. Apparent age \_\_\_\_\_
3. Male \_\_\_\_\_ Female \_\_\_\_\_
4. Marital status . Married \_\_\_\_\_ Unmarried \_\_\_\_\_  
Widow \_\_\_\_\_
5. How many members do you have in your family? \_\_\_\_\_
6. Level of education \_\_\_\_\_
7. What do you do for living ? \_\_\_\_\_
8. Do you own land? If yes, what is the size of your land holding? \_\_\_\_\_
9. What is your approximate monthly income? Tk. \_\_\_\_\_
10. Are you a GB member? Yes \_\_\_\_\_ No \_\_\_\_\_
11. Who is the owner of the tubewell? \_\_\_\_\_
12. Do you have free access to use TW at all? \_\_\_\_\_  
Yes \_\_\_\_\_ No \_\_\_\_\_
13. If no, what the restrictions and why? \_\_\_\_\_
14. Do you face any problems in using TW? \_\_\_\_\_
15. What are the uses of TW water in your household. Drinking \_\_\_\_\_  
Bathing? \_\_\_\_\_ Washing utensils \_\_\_\_\_ Washing clothes \_\_\_\_\_  
Others (Specify)? \_\_\_\_\_
16. Do you get any other benefits from TW, if so what? \_\_\_\_\_
17. Where do the male members of your family go for bathing and washing clothes? \_\_\_\_\_  
Distance \_\_\_\_\_ in minutes
18. Where do you go for washing your utensils, clothes and bathing? \_\_\_\_\_
19. How far do you have to walk (in minutes)? \_\_\_\_\_
20. What was your source of drinking water before?  
Govt. TW \_\_\_\_\_ Private TW \_\_\_\_\_ Other TW \_\_\_\_\_  
Other source \_\_\_\_\_ How many minutes walk \_\_\_\_\_
21. Do other neighbours have free access to use GB TW? Yes \_\_\_\_\_ No \_\_\_\_\_
22. Which TWs do you prefer to use if they are located at equal distance from your house?  
GBTW \_\_\_\_\_ DPHE TW \_\_\_\_\_ Private TW \_\_\_\_\_  
Other TW \_\_\_\_\_
23. Why do you prefer that TW? \_\_\_\_\_



APPENDIX XI

QUESTIONNAIRE FOR NON-USER OF GB TW

1. Name of the respondent \_\_\_\_\_
2. Apparent age \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_
3. Marital status Married \_\_\_\_\_ Unmarried \_\_\_\_\_  
Widower/Widow \_\_\_\_\_ Deserted husband \_\_\_\_\_
4. How many members do you have in your family? \_\_\_\_\_
5. Level of education \_\_\_\_\_
6. What do you do for living? \_\_\_\_\_
7. What is the size of your landholding? \_\_\_\_\_
8. What is your approximate monthly income? \_\_\_\_\_
9. Do you use TW water? Yes \_\_\_\_\_ No \_\_\_\_\_
10. Is the TW you use GGB/DPHE \_\_\_\_\_ Private \_\_\_\_\_
11. Are you caretaker \_\_\_\_\_, Owner \_\_\_\_\_, User \_\_\_\_\_
12. Who is the owner of that TW \_\_\_\_\_
13. Is the maintenance adequate? Yes \_\_\_\_\_ No \_\_\_\_\_
14. Why do you use that TW instead of using another nearby TW? \_\_\_\_\_
15. Do you have free access to use TW at all? Yes \_\_\_\_\_ No \_\_\_\_\_
16. If no, what are the reasons and why? \_\_\_\_\_  
\_\_\_\_\_
17. Do you face any problems in using TW? \_\_\_\_\_  
\_\_\_\_\_
18. What are the uses of TW water in your household?  
Drinking? \_\_\_\_\_ Bathing? \_\_\_\_\_ Washing utensils? \_\_\_\_\_  
Washing clothes? \_\_\_\_\_ Others (specify) \_\_\_\_\_
19. Do you get any other benefit from TW, if so what? \_\_\_\_\_
20. Where do you go for washing your utensils, clothes and bathing? \_\_\_\_\_
21. How far do you have to walk (minutes)? \_\_\_\_\_
22. What was your source of drinking water before? \_\_\_\_\_
23. Which TWs do you prefer to use if they are located at equal distance from your house?  
GBTW \_\_\_\_\_ DPHE TW \_\_\_\_\_ Private TW \_\_\_\_\_ Other TW \_\_\_\_\_
24. Why do you prefer that TW? \_\_\_\_\_
25. What is your opinion of the GB TW?
26. Why don't you use the GB TW?
27. Has the installation of the GB TW caused any problem in the para?
28. Do you think GB should continue to provide loan for TWs to its members?  
State why? \_\_\_\_\_

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