

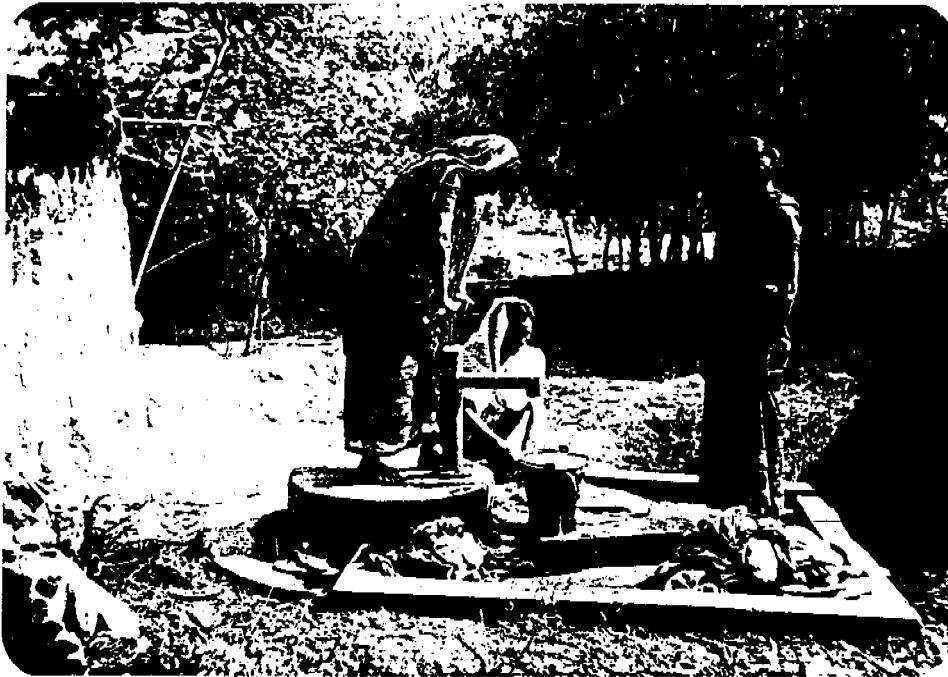
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# EVALUATION OF PERFORMANCE OF WOMEN AS TUBEWELL MECHANICS

## A Feasibility Study

## FINAL REPORT



PREPARED FOR:

DPHE — UNICEF

MARCH 1995

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United Nations Children's Fund  
জাতিসংঘ শিশু তহবিল (ইউনিসেফ)

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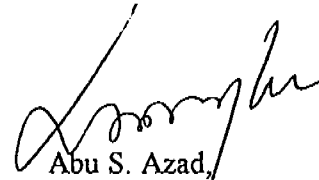
Dear Sir/Madam,

Please find enclosed a Feasibility Study Report of Women as Tubewell Mechanics working in the Department of Public Health Engineering (DPHE). We would appreciate your necessary action to take up the findings of the Study on the Suitability of Women as Tubewell Mechanics and recommend for recruiting more women in this job.

Thanking you.

With regards.

Sincerely yours,

  
Abu S. Azad,  
Officer-in-Charge,  
WES Section

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The cover photo : Uses of water and beneficiaries of village Fatepur Marash, Thana Nawabgonj.

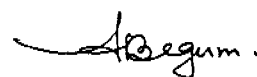
## PREFACE

This brief study is about the performance of women tubewell mechanics. The main objective of the study is to evaluate their work, status and acceptability by the community as well as to assess the feasibility of recruiting more women as tubewell mechanics. An attempt has been made to look at this feasibility in the overall context of the society.

We are thankful to Mr. Philip Wan, Chief, WES section, UNICEF, who gave us the opportunity to undertake this study. We thank Mr. T. Kanagarajan, project officer, and Ms. Hosne Ara Begum Minu, UNICEF who readily provided us with necessary guidance and assistance. We are grateful to Prof. B.K. Jahangir, Director, Centre for Social Studies, Dhaka University who provided us with necessary advice and infrastructural facilities. We express our thanks to the Department of Public Health Engineering (DPHE) and special gratitude to their six thana level staffs for the cooperation and overall support.



Hasina Ahmed



Suraiya Begum

Centre for Social Studies  
Dhaka University  
Dhaka, Bangladesh  
March, 1995

## EXECUTIVE SUMMARY

The main objective of the study was to evaluate the performance of six women tubewell mechanics appointed by the DPHE and posted in six different thanas of Bangladesh. It was also designed to provide relevant information about their work, their status, their acceptability by the community as well as the feasibility to recruit more women as tubewell mechanics.

The overall approach was anthropological and the principal mode of inquiry was participant observation, interviews, case studies and conversations with concerned personnel. A carefully developed checklist was applied to elicit information. We interviewed SAEs, MTWMs, WTWMs, villagers/ beneficiaries and other people. The time schedule for the study was from January 10 to February 15, 1995 and it was the main limitation for the research work.

The experience we gathered from the field visit points to the positive as well as negative aspects of the programme initiated by DPHE. The positive aspect is significant. We found the rural people, especially women accepting the programme wholeheartedly. There is no problem regarding the social acceptance of women mechanics. Because NGO workers are working in the various fields, existing notions of women's work have undergone change and have gained acceptability from the villagers.

On the positive side women mechanics play and will play in the future, a very important role in motivational work which constitutes 45% of the total responsibilities. The male mechanics does not have easy access to village women for purposes of social mobilization. On the other hand a woman mechanic can do this very easily. The main objective of the DPHE programme is to provide safe water to the people rapidly and to make people aware of hygiene. This constitutes an essential part of the programme. And women mechanics play an important role in creating that consciousness. With a view to highlighting this role, further appointment of women in this profession is suggested with the result that it will lead to the enhancement of the performance of their work. Women

mechanics perceive both advantages as well as disadvantages in dispensing their duties. They get cooperation from all quarters especially from their male colleagues without any major hindrance or inconvenience. They have some problems also i.e. transportation, hesitation, internalization of social values etc.

\* The negative aspect is that it is not always possible for them to play an active role in the technical aspect of the programme. They lack technical expertise i.e. women mechanics could not perform various technical jobs and they find it difficult to work in cases of major repair work of tubewells. They hesitate to do it or avoid it altogether because they have not much skill and experience. Secondly, there is no compulsion nor active close supervision and monitoring of their work by their higher authority. But they perform their duties and manage it through other people. Regarding their technical expertise, a negative attitude of men towards women mechanics can be noted. In this connection it can be said that there operates a notion of sexual division of labour and patriarchal values.

Reviewing the work environment, expertise, advantages and disadvantages of work of six women mechanics of six thanas we have arrived at this conclusion that inclusion of women into this new profession is a non-traditional step to a gender-biased profession. There may have been some lacunae, limitation at the primary stage, but we have to remember that these women mechanics were appointed only one and a half year ago, i.e. in June 1993. The present nature of the DPHE programme is predominantly motivational. Though partially successful in other responsibilities, women mechanics have, to a great extent, performed their duties with responsibility. So, from this perspective women mechanics can be considered successful in their work. Our impression is that this project could be worth continuing if certain administrative steps are taken to create some work ethics e.g. solving the main problem of transport; more active supervision and regular skill development training to enhance the expertise of the women tubewell mechanics.

## 1. INTRODUCTION

### 1.1 Objective

The main objective of this study is to evaluate the performance of women as tubewell mechanics with the view to explore the possibilities for recruiting more women in this occupation. In the middle of 1993, the Department of Public Health Engineering (DPHE) appointed six women tubewell mechanics in six different districts of Bangladesh. It is relevant to mention that such recruitment is a new idea in Bangladesh since this job was absolutely dominated by males. Against this background this study will examine the following :

- job performance of women mechanics and their acceptability in the rural areas;
- how these women are accepted by the villagers, beneficiaries;
- how the higher authorities and male colleagues evaluate their job;
- how they themselves evaluate their activities;
- whether or not their socio-economic status has changed along with the notion regarding women's involvement in non-traditional occupations like tubewell mechanics and finally;
- to assess the level of empowerment achieved by these women following their recruitment into the job of a tubewell mechanic.

### 1.2 Methodology

The methodology followed in the study was anthropological, since the study was qualitative in nature. But rather than a long term ethnographical study we concentrated on adopting techniques such as interviews, case studies, conversation with relevant resource persons to fit in with the short period specified for field work. A detailed checklist was prepared for conducting interviews, collecting case studies and carrying on conversation for a fairly rapid appraisal of the situation. The overall approach remained in depth.



We interviewed six Sub-Assistant Engineers (SAEs), eleven Male Tubewell Mechanics (MTWMs), five Women Tubewell Mechanics (WTWMs) and eighteen Caretaker Families (CTFs) from the village communities/ beneficiaries ( see Annex B ).

Information from a cross section of people such as government and non-government personnel, newspaper reporters, chairmen, farmers, traders, day-labourers, rickshawpullers, housewives, students, passers-by and other professionals to know various socio-political and economic issues of the locality concerned. Thus an effort has been made to understand and evaluate the progress of work and position of women mechanics along with the condition of the mechanics employed in the DPHE programme.

### 1.3 Problems of the Data Collection

The study has the following limitations :

- the time allotted for the study was very short in view of the emphasis for qualitative data in the study. For example, the entire study lasted from January 10 to February 15, 1995;
- we could not scan the relevant literature for proper understanding of the background information of the topic due to the very short period allotted for the study;
- our field work was limited because of the absence of two of our respondents from their locality. We could not interview one female mechanic while the other joined us later for a brief interview upon being instructed by her superior;
- non-availability of any performance report on mechanics.

### 1.4 Selection of the research locale

The research locale selected in the study covers a thana in six districts of Bangladesh. These thanas are Satura in Manikgonj, Domar in Nilphamari, Nawabgonj in Dinajpur, Mohangonj in Netrokona, Fenchuganj in Sylhet, Mohammadpur in Magura districts. At present the six women tubewell mechanics are posted in these thanas (see Annex C).

## 2. WATER AND SANITATION PROGRAMME AND THE TUBEWELL MECHANICS

### 2.1 Background of the Study Area

One of the basic objectives of the study is to evaluate women tubewell mechanics working in the DPHE Programme in the context of the rural areas. The beneficiaries live in these remote villages.

Our task was therefore to look into the villages of the six selected thanas of Bangladesh. The information about the thanas has been collected from the available literature and the conversation with people we met.

Table I: Basic information about the research area.

Thana	Distance from head quarters	No. of Union	Area in acres	No. of House-holds	Population		Literacy rate %
					Male	Female	
Saturia	19 km.	9	34621	27174	69890	70325	22.0%
Domar	22 km.	10	61984	33490	89787	85720	39.0%
Nawabgonj	69 km.	9	77759	34999	87338	82963	24.2%
Mohangonj	28 km.	7	60092	24011	66525	62890	27.8%
Fenchugonj	25 km.	3	28289	13368	41676	39929	39.0%
Mohganonj	24 km.	8	57894	28158	81107	79233	25.8%

From the above mentioned table we find some basic information about the studied thana area from the 1991 census report.

From the socio-politico and economic study of six thanas it appears that the condition of the rural areas has by now changed with infrastructural development like the construction of roads, establishment of schools and colleges, extension of electric facilities not only to the thana headquarters but also to some remote villages.

The people want to participate in various programmes. In all the thanas, the top level NGOs like BRAC, CARITAS, ASA, CARE, Proshika, CIDA, RDRS are engaged in executing their respective programmes with an emphasis on development of women. Women try to be autonomous through their income generating activities. Their participation in this area is increasing. With their participation in different jobs and activities, their social acceptability, as well as mobility has largely increased. Some local voluntary associations are also engaged in social welfare activities through organizing programmes like cultural shows, games and sports, mass and adult education, afforestation, pisciculture and credit for women. There is no association exclusively for women at the thana or village level.

Agriculture is still the main occupation of the people. But many small scale mills and factories, trade and commerce are now growing. The use of modern technology has produced change in agriculture.

Against this background, the government and non-government organizations since independence, have been working in rural areas to introduce different public health programme. DPHE, has undertaken the programme to expand safe water facilities through tubewells at grass root level. Generally, tubewells are the only source of safe water in rural Bangladesh. At present, DPHE has started the social mobilization programme to arouse consciousness among the people on sanitation alongwith the importance of tubewells. To facilitate the DPHE programme a number of tubewell mechanics are working at thana level - where six women tubewell mechanics are working right now.

## **2.2 Water and Sanitation Programme**

Since 1972, the Bangladesh government has been undertaking the programme to expand safe water facilities beyond large cities. In order to supply safe water in the rural areas, the government's implementing agency DPHE, took up various programmes at different times. Besides the government's own fund, the UNICEF extended special help along with different donor agencies in this programme.

### 2.2.1 Safe Water Programme

Generally, the supply of water is available in deep and shallow tubewells installed by DPHE and they are distributed among the village people according to certain guidelines chalked out by this department. In 1985, there were over 1.2 million tubewells in the country, of which 632870 were publicly and 575000 were privately owned (GOB, UNICEF and DANIDA, 1986; UNICEF, 1988). Along with the tubewells installed by the DPHE, the common people have also installed some tubewells at their own initiative or through the NGOs. Thus at present, the supply of safe drinking water is largely within the reach of rural people. There are also some areas which are not linked to this programme. From a government source there is a tubewell for every 125 people in the country. It is supported from the following table.

Table II : Condition of Tubewells in the Research Area.

Thana	Number of TW			Population	Average no. of people using one tubewell
	in order	out of order	Total		
Saturia	1540	37	1577	140215	88.91
Domar	1769	72	1841	175507	95.33
Nawabgonj	1893	115	2008	170301	84.81
Mohangonj	1291	61	1352	129415	95.72
Fenchuganj	1183	57	1240	81605	65.81
Mohammadpur	1876	23	1899	160340	84.43
Total		365	9917	857383	

It may be mentioned that on an average, above every 86 people of the thanas under study get the benefit of one tubewell, though 3.68% of them are lying out of order.

The above table is prepared on the basis of information collected from the 1991 census and the monthly progress reports of the six studied DPHE thanas.

From another source, the government of Bangladesh has achieved a considerable water supply coverage in the rural areas, with 85% of the population having access to tubewell water within 150 metres and 96% using tubewell water for drinking. Although only 16% use it for all water needs.

Each year, the DPHE supplies materials free of cost to install a good number of tubewells in rural areas. The DPHE supplies the full set of a tubewell only. But people have to pay 700 taka for each shallow tubewell, Taka 2000 for deep tubewell and for PSF taka 2000 and taka 1000 for Tara pump and ring well. Besides, the DPHE helps and supervises the installation of the tubewell. In the studied areas, we came to learn about a provision for the allotment of one tubewell per ten families selected by the DPHE and the local chairman. Among the ten families one family is identified as 'care taker' one. His/ her house has been selected to install the tubewell. The caretaker family is responsible for minor repairs, regular maintenance and cleaning the tubewell platform.

### **2.2.2 Sanitation Programme**

In 1986, when it became obvious that safe water by itself was not enough to achieve health objectives, the government changed its policy towards an 'integrated' approach - the approach, combining provision of safe water and sanitary latrines with health education. In continuation of this programme they started a new programme since January 1993 to June 1995, the government launched a programme 'Social Mobilization for Sanitation' with the help of other donor agencies, under the control of Rural Water Supply and Sanitation (RWSS) and the overall supervision of the government implementing agency- DPHE. The purpose was to mobilize people at all levels to create a conducive social environment to promote sanitation at the family level. They are working to provide a sanitary latrine for every family within 2000. On this occasion, very recently they have observed the 'National Sanitation Week' at the union and thana level and it is believed to have created interest and enthusiasm in the locality.

### **2.3 Tubewell Mechanics and Their Work**

The Rural Water and Sanitation Programme of the DPHE is at the Thana level, controlled and supervised by a sub-assistant engineer (SAE). Along with other officials there are four other mechanics under the SAE who carries out the functions through them.

### 2.3.1 Responsibilities of Tubewell Mechanics

In this programme, the SAEs are in charge of the overall supervision of the six thanas under study. They distributed the responsibilities and allotted the unions among the mechanics. The present responsibilities of the mechanics and the approximate annual time allotted for their work which is collected from the research area are mentioned below :

RESPONSIBILITIES	ALOTTED TIME
- Motivating the people to create public consciousness on sanitation.	45%
- Repair Tubewells and advise for their maintenance	35%
- Supervision of sinking and resinking tubewells, along with training work of the caretaker and user families.	12%
- Assist to take the measurement of the sunk and re-sunk tubewells, along with reconstruction and extension of the cracked/ broken platform of tubewells.	05%
- Carry out responsibilities as per orders by the higher authority.	03%

Source : Mohongonj, DPHE

Moreover, some other responsibilities are as follows :

- a. Assist SAE in preparation of group list for CTF training phase II and distribution of invitation letter to the CTF for attending the course both for phase I and phase II training separately.
- b. Assist the SAE in sales proceeds of handpump spare parts.
- c. Conduct Annual Routine Survey on selected TWs on declination of water table (2 times) in her/ his area.
- d. Conduct survey and list out the choked up TWs in her/ his area.
- e. Prepare and submit all the field reports to the SAE.
- f. Collection of money for Tubewell from the CTFs.

All the mechanics have to perform the above mentioned responsibilities in their respective union at grass root level.

According to the SAEs and from the available data it is found that for social mobilization and consciousness on sanitation, 45% annual time has been allotted which is about half of the total responsibilities. Now more importance is given to fulfil sanitation related programmes where mechanics are playing a great important role through their activities. When in 1993, the social mobilization programme was started six women were appointed as tubewell mechanics.

Since a great emphasis is given on social mobilization to sanitation, they gave less importance to the maintenance of tubewells. Their work for tubewell for which 35% time is allotted constitutes repairing, supervising and counselling to caretaker families for maintaining their tubewells properly. Except Sauria and Domar all four thanas have Tara and Shallow tubewells. In the areas under study, the mechanics are mainly responsible for the upkeep of these tubewells.

The remaining 20% perform other responsibilities like conduct survey, collection of money, prepare a group list for CTF training etc.

### **2.3.2 How do they Perform their Responsibilities**

The tasks of the mechanics may be divided into two categories, technical and non-technical. The technical aspect may include the repairing of tubewell and the non-technical aspect includes the provision of training to users and the caretaker families, site selection, money collection from the users, selling spare parts and motivational work on consciousness on sanitation.

A working day for the mechanics normally means working in the field from 10:00 a.m. to 5:00 p.m. The office maintains a register where the mechanics either once or twice a week or daily specify in a 'movement register' the nature of the job they are going to do in the Union at village level thereby - giving the understanding of the type of work they do in a specified day at a specified village.

The SAE sometimes oversees whether or not the mechanics are performing their responsibilities properly and also helps them settling problems of major scale.

The mechanics have to prepare a fortnightly or a monthly report containing the details as well as the progress of their work with the CTFs in each village. This has to be approved by the concerned local Union Parishad chairman and then submitted to their office (see Annex D).

The SAE sometimes supervises whether or not the mechanics are performing their responsibilities properly and also helps them settle problems of major scale.

When the tubewells are out of order, the members of the CTFs make the complaints at the office, or inform them while on supervision or on the way, or in market places. The mechanics of the concerned Union then repair them.

One important task for mechanics is the sinking and resinking of tubewells in villages which starts in cooperation with the SAE, TWM and chariman, the last playing the major role in site selection. After site selection, money is collected for tubewell from the beneficiaries. Sometimes this becomes troublesome for mechanics because they have to go to each family 10 to 12 times for actual collection of money and in cases of the CTFs lying at a distance of 10 to 15 miles, they have to go more than this. The mechanics must be present during the sinking and resinking hour especially during filter setting. This work goes on day and night and in a few cases the mechanics need to stay away from home to attend the work.

Generally, the platform of the tubewell is constructed one or two weeks after sinking the tubewell. After installing a Tara pump the mechanics have to organise training for the users and the CTFs. The aims and objectives of the training programme are a. to keep in order the Tara pumps all the time; b. to make expert and skilled people especially the women in maintaining as well as repairing tubewells, and; c. along with these, to make them conscious of personal as well as family hygiene. This training is given in two phases through various rules. In this training, the mechanics play the role of organisers and trainers.



In addition, they do the motivational work to make conscious of the safe water, sanitary latrines and to maintain personal as well as environmental hygiene in houses and often attend courtyard meetings in houses, schools, or sometimes in mosques after the Friday prayer.

According to the SAEs and TWMs, the women mechanics perform the above responsibilities in keeping with time, capacity, suitable circumstances and in full cooperation with the concerned people.

### 2.3.3 Situation of the Working Field

The people no longer ask government mechanics for minor repairs. Either they do it themselves, or have them repaired by a nearby professional mechanics either free of cost or for some money. Moreover, the DPHE has given the members of the CTFs some primary training on it. The tubewell owners call upon the government mechanics mainly for major repairs. Because they get their services free of cost. But they have to purchase all the other necessary spare parts for tubewells. Another factor for low interest in repairing is due to the fact that people have to purchase every spare parts from the DPHE which previously they used to get free of cost. Now selling of the spare parts of tubewells is a work specified for them. Sometimes people prefer purchasing the spare parts from the local market because they get them at lower price or on loan.

We have observed that the mechanics are no longer active in repairing and supervising work. They have some supervisory work for Tara pumps and even little work for repairing shallow tubewells. In most cases it has been found that as the Tara pumps are new, they need not be repaired. The SAEs and the mechanics informed us that now-a-days they are very much involved and spend more time on sanitation related programmes. With respect to work rules no difference has been made between men and women mechanics regarding their duties and responsibilities as according to the official rules, work specification for every one is fixed. Women mechanics perform their responsibilities more or less in accordance with instruction by higher authorities.

### 3. ACCEPTABILITY AND PERFORMANCE OF WOMEN TUBEWELL MECHANICS

#### 3.1 Status and Acceptability of Women Tubewell Mechanics by the Rural Community

In the prevailing rural social structure the male mechanics have been working for long in the rural areas. In the same milieu, women mechanics have very recently been working in such non-traditional technical profession. The focus of this section is to know, the rural people's attitudes who are not only the direct observers of their activities but also the beneficiaries of their services. We have tried upon the views of different professions and members of the caretaker families/beneficiaries to understand the social acceptance of the women mechanics as well as their attitudes toward further appointment of women mechanics. Having 33 CTFs members/beneficiaries we got some positive and negative remarks from them. Out of 33 interviewed respondents fifteen women and nine men (total twenty four) gave their comments in favour of women mechanics' work :

#### Positive Aspects

According to their opinion it can be mentioned here that there is no significant resistance to the issue of the women mechanics being socially accepted in rural areas. They have raised the question if the female workers of the NGOs, BRDB and family planning can without hindrance work with the males, riding a bicycle or a motor cycle, or walking through villages, where is the bar to their working as women tubewell mechanics? As these female workers are being socially accepted, there is also no bar to the women mechanics.

Beyond their expectation to get government employment with mid level education, the village women, in particular, have taken up this job with much honour and importance. They have disclosed that the work of women mechanics and their mutual relationship have inspired them to understand as well as to know various issues such as family planning, personal hygiene, TW maintenance, sanitation etc.

They have also disclosed that the tubewell mechanics have performed the work of supervision and social mobilization well only because of mutual cooperation resulting from their being acceptable to and esteemed by the people of the concerned area. Many beneficiaries have talked of DPHE programme, with the remark that women perform well the task of motivating other women. In support of it, women say that they are good at this work because of free and frank talk of any kind with them - which is not possible with males.

While asking the question whether women are fit for the post of tubewell mechanics e.g. for repairing tubewells along with performing the responsibilities related to it and for motivational work, responses have been mixed but leaning favourably towards women. Out of fifteen respondents eleven women and four men mentioned that mechanics can perform the task, and better performance would be assured if they were trained and imbued with experience without facing any confrontation or inconvenience.

Besides, they further said that if, by making repairing -related training popular, the members of the CTFs are trained, the women of the CTFs themselves repair the tubewells well.

One woman expressed that there should not be any gender inequality in work and that those who are able to do work shall be acceptable and that they will face no difficulty in establishing or achieving their position in society. If they come to this profession, they apparently see no hindrance to being socially accepted.

Out of fifteen, ten women and five men have mentioned that women should come in large number to such jobs because if women approach women, they can talk to one another freely. Because of the social or family taboo or due to the dislike of the husband, as a woman has disclosed, they cannot go to male persons.

However it was observed that 'if the women mechanics can at least make women conscious of public health, it will bring forth good result'. One beneficiary said that, 'If women can wield state power,

they will also be able to do the work of a tubewell mechanic'. 'If the government requires to serve the rural people, they undergo a lot of hardship while moving from door to door. So, everybody should cooperate with them. It does not matter if she/ he is a woman or male mechanic, a statement made by one male beneficiary.

A Union Parishad member has opined that women should come in larger number because they learn through demonstration. He holds this view that seeing the women employees of the NGOs and the women mechanics, the women of his locality can break through the bounds of conservatism. 'If women can grind stones in Iraq, why can't they do the job of tubewell mechanics here'? In view of this, a former chief of the gram sharker said, 'women can do everything without any social obstacles'. Most of the people look upon their job with awe and respect. A sort of social acceptance has, by now, been created as the women mechanics think.

The most significant change that has taken place is that previously the involvement of women in tubewell repairing was almost nil, but now-a-days they participate in this task. Besides their job has helped to increase physical mobility. It has also succeeded in improving the overall status of women in the locality.

### Negative Aspects

Some negative aspects also emerge from their opinions. These are:

Three women and six men were against women working as tubewell mechanics. One male respondent commented that, while the male mechanics could wear a gamchha (a towel) and wade through waters with the bicycle on head in the rainy season, could women go through villages in such circumstances?

Such adverse remark regarding women working in public places is frequently heard in a patriarchal society like ours. The argument here is that working in the rainy season is troublesome and it is irrespective of any sexual division. If this question is raised, we can say, do the rural women keep

indoors during rainy season ? Don't they do any outside work ? During the rains, the rural women go to fields, perform household affairs. In that case, the work ethics is the main thing that matters. If one is deposed to working or under pressure of work, the question of rainy season stands irrelevant. In this respect it can be mentioned that if the working rural women do their respective work, women mechanics can also perform their responsibilities.

In view of the ability, expertise and physique of women, a woman has opined. 'The Bengalee women cannot do this job'. With regard to this opinion the same traditional norms have got the upper hand. The notion of sexual division of labour has been internalised by them. The existing notions are that Bangalee women are shy, soft and in purdah . But in Bangladesh today, this sort of notion is changing, especially technological improvement is changing this norm. That's why the physical strength of women does not allow them to repair the heavy parts. On the other hand, because of technological development, repairing the light parts of the Tara pumps is no longer physically impossible for women.

From the view of the above mentioned statement we have come across that there are arguments both for and against. Here the strong positive aspect in the question of social acceptability, status and capability is evident. In the changing rural social structure, involvement of women in different developmental activities as well as in the NGO sponsored socio-economic programme has created a kind of consciousness regarding women's work. Because of this, there is hardly any obstacle to the government accepting women mechanics in the rural areas. What is needed here is the desire to work only.

### **3.2 Performance and Job Evaluation of Women Tubewell Mechanics**

In this section we are trying to evaluate the performance of women tubewell mechanics through the perception of their colleagues and their monthly or fortnightly reports. More specifically it is our intention to understand the perception of their immediate higher authority (5 SAEs) as well as their colleagues (11 MTWMs) in evaluating the activities and work of the women mechanics. Through their opinion and perception, the performance level of the women mechanics will be ascertained.

The various aspects reflected from job evaluation of women mechanics made by the higher authority and the colleagues are described below :

### Technical Activities

As regards technical activities few are in favour of women mechanics. The following summarises this viewpoint :

- ◆ Four SAEs and seven male mechanics have said that only the lesser repairing work is done by the women mechanics.
- ◆ The two SAEs and three male mechanics expressed that the repair of the Tara pump is easier for women mechanics. Because the Tara pump technology is more sophisticated than the no. 6 shallow tubewell.
- ◆ The three SAEs and three male mechanics have mentioned that women mechanics can carry out their duties skillfully regarding CTF training and demonstration.

On the other hand we got some negative comments regarding technical activities.

- ◆ Five SAEs and eleven male mechanics have said that women mechanics cannot do heavy and complicated work like cylinder and barrel change, open the nuts etc. They consider that women are physically not fit for this kind of heavy work.
- ◆ The three SAEs have expressed that the women mechanics get these technical and complex activities done with the help of their close relatives and skilled male colleagues.
- ◆ One SAE has said that women mechanics have problems to work at night in sinking and resinking of tubewells.

- ◆ One SAE has expressed that in performing their duties women mechanics spent more time to reach their place of repair or sinking of tubewells because they do not use the bicycle.

### Non-technical Activities

- All of them have said that the women mechanics have been doing very well in the motivational work for social mobilization and they possess the necessary skills for the work. Particular in motivating women, they do a very effective job.
- All male mechanics have said that in motivational work particularly for the dissemination of the sanitation idea to women, they have the problem of access to the village women.
- One SAE has said that the DPHE sometimes cooperates with the government and non-governmental organisations in publicity work both formal and informal of general health programmes. The family planning workers and NGOs meet the mechanics who attend the group in courtyard meetings and use the opportunity to speak about the use of tubewells, sanitary latrines, personal health care etc. In cooperating with other fellow organizations, the planning and execution of programmes and public relations for women mechanics have been playing important role.

### Personal evaluation

- ★ The two SAEs have said that the sincerity and punctuality of women mechanics have been noted and they put their utmost effort to perform their duties.
- ★ One SAE and two male mechanics have said that women mechanics also help their male colleagues in motivational work for their clients.

- ★ One SAE has expressed that as government employees women mechanics possess a kind of status. Initially people expressed some doubt whether women could become mechanics at all.

Male dominated values forced men and in many cases even women to doubt the capability of women for carrying out this kind of work. Gradually the notion that women are not capable has been changing. Moreover, people have convincingly seen that they have contacts with important people and organisations from whom they readily get help.

- ★ One SAE has said that one woman mechanic is very introvert, and does not share her feelings.

However, our observation is different regarding her. Infact she had the chance to share her problems with us. We found that her introversion was due to her notion as a member of minority community.

#### On future recruitment

With regard to the qualifications for these jobs and on future recruitment of more women in these types of work, the responses of SAEs and male mechanics have been found divided.

- ⊕ One SAE has observed that in the future recruitment of more women in these posts will create no problem.
- ⊕ One SAE has argued that those who are interested in social change should come to this profession.
- ⊕ Two SAEs has expressed that the mechanics should have the skill of riding bicycles as they have to travel through the villages.



- ⊕ One SAE has mentioned that nobody should engage herself/ himself in any position which her/ his nature does not suit. In other words, everybody should go for jobs which she/ he can adjust, and also should be free from any kind of hesitation.
- ⊕ One male mechanic has said that the women have a right to enter this profession just as they have the right to enter any other professions. Since scarcity prevails in everybody's household, everybody should work.
- ⊕ Two male mechanics have expressed that women will be very efficient in this job as they have access to the innermost section of a household.
- ⊕ One male mechanic has mentioned that a change in attitude is necessary in order to resolve the problem of women's security.

Therefore, they should come to this profession in increased number as they can contribute to social mobilization as already mentioned.

- ⊕ One male mechanic has said that women have no problems to come to this profession but they should be articulate so that they can attract the people to motivate for social mobilization. They should have the preparation to work under any circumstances.
- ⊕ Two male mechanics are against recruitment of women. They also observe that in situations where the number of unemployed men is increasing, it seems that it is more appropriate to provide men with jobs. According to them if one man gets a job, a household is provided with necessary provision.

### Our observation

It has been observed that in some areas there exists good relations between men and women mechanics as colleagues. One SAE has said that the mechanics do not make any complaints against their colleagues because not only do they work in the same profession and they are united, but also that such complain against any colleague may jeopardise their professional interest. In some areas the situation has been found to be reverse. Where women mechanics are given less load than the male mechanics, it compels the male mechanics to take more load in work.

The observations made by the male mechanics about the work of women mechanics have not always been founded on empirical knowledge. Some observations have been made out of bias of perception. It is doubtful whether the male mechanics could observe closely the activities of women mechanics as their fields of activity have been separated.

In the case of villagers evaluation on the activities of women mechanics and the amount of respect shown to them by the villagers, the male mechanics seemed to have conceal some information about women mechanics. It seemed to us that they did not like to furnish the image of their department and that of their colleagues to outsiders like us. Therefore, their comments were not actual. Professional unity seemed to have operated here.

With regard to the qualifications of women in this job and whether they should be taken in increased numbers, some liberal responses have come out.

It is found that all the SAEs and male mechanics are of the opinion that the women are not physically fit for technical work. But when asked if further appointment of women in such posts is possible, all the interviewees spoke of the possibility of appointment of women. But they have appended some conditions, which in one sense disclosed contradiction in themselves. In another sense, it seemed that they thought of women to be connected more with motivational work.

It has been observed that the special favours extended to the women mechanics by their higher authorities in some cases are mentioned below :

Women mechanics were deputed to the district headquarters under order of the district Executive Engineer.

- Being a woman, a female mechanic is not sent for repairing heavy parts. In cases of remote visits, she is allowed to work alongwith male mechanics or her husband as the case may be.
- Under verbal order by the district Executive Engineer a female mechanic works more in the office and less in the field.
- In cases of repairing heavy parts, a male mechanic in place of female mechanic is sent.
- A male mechanic needs to attend office on working days, whereas a woman mechanic may attend only one day in a week.

As women, the female tubewell mechanics enjoy the above mentioned favours, which in another sense bar the development of their expertise. We have seen that no pressure has ever been put on the women mechanics for completing their work. Two SAEs have admitted that they have been verbally requested by the Executive Engineer to give special favour to women mechanics. As a result, they cannot take any effective measure against them.

While making the job evaluation it has been found that the higher authority favours women mechanics, a fact that gave rise to a tendency among women mechanics not to work. Women cannot do field level work. From this notion, and because of the small number of women mechanics, it is commonly held that women are given special favours. On the other hand, two women mechanics expressed their apathy towards working in the field. Notions resulting from sexual division of labour prevailing in society are embedded in such assumptions. Here it is

thought that male and female have different fields of activity. And out of this notion, the work of man and woman is specified. The ideology of sexual division of labour works everywhere i.e. in society, in the household and in the field. Such notion is blatantly manifest among the male colleagues. As a result, they are against further recruitment of women mechanics. A change in the notion of sexual division of labour in the field can be effected only through motivation. Only then is it likely that the women mechanics will be dynamic in their activity.

### Performance Report

Review of monthly/ fortnightly performance reports is another way of evaluating the job of women mechanics. They prepare reports of their activities which have to be approved by the local chairman of the concerned union parishad - which has been discussed before. But the report they make is in a specified format that was not filled in properly. So it was very difficult to come to the right decision. In spite of that, some information on repairing and supervising tubewells by women mechanics was gathered.

Table III : Activities of the Women Mechanics

Thana →	Saturia	Domar	Nawabgonj	Mohangonj	Fenchgonj	Mohammadpur
Total Union	1	N.A	2	1	1	1
No. of village working	15		63	25	28	29
Total months report	12		9	8	11	11
Higest no. of CTFs visited in one month	47		44	25	33	13
Higest no. of CTFs visited in one village	11		4	5	7	8
Highest no. of CTFs visited in a day	3		2	4	6	5

Source : DPHE thana office.

In this table, the reports of five women mechanics have been discussed. The field report of one woman mechanic was not available. From the above table we can see that only one woman mechanic out of five is in charge of two unions though the woman mechanic of Saturaia has been given the charge of one more union since January 1995. These women mechanics have been discharging their duties in at least 15 to 63 villages. In this regard, it is found that they have, at a time, visited 4 to 11 villages and the houses of 13 to 47 CTFs. Again, it is seen in the report that they have done repairing and supervisory work of tubewells in 2 to 6 CTFs. The reports read that the participation of women mechanics in tubewell repairing work is not worth mention a dimension that has resulted from their new entry into the job. But we cannot say that they are not at all active in repairing tubewells at the field level, rather these reports bear testimony to their activeness.

### **3.3 Perception and Evaluation of Women Tubewell Mechanics about their Job**

The main focus of this section is to find out the women tubewell mechanics' perception and evaluation about their job through their opinion.

The opinions are :

1. Encouragement of close relatives in obtaining job with little competition.
2. The need and comfort of the family, economic scarcity unempolymnt and the lack of opportunity mainly led them to join this job.
3. With regard to perception regarding job they have referred to their prior knowledge of this profession, with four of them have been intimately connected with this job.
4. Everyone said that they all liked the profession.
5. The scope of being acquainted with various shades of people, and of working to obviate, superstition, job-perception etc. as some of them mentioned to be the inspiring factors to accept this type of work.
6. In the field of work they enjoy cooperation from all quarters especially from male colleagues in various ways, without any major hindrance or inconvenience.

7. Being a government employee with the prospect of pension, everybody, identified it as a secure job and also attached a great deal of importance to it. Besides, the TA and DA during training hours have also been mentioned.
8. After joining this job, though no appreciable change is noticeable in the decision making process, even their importance both in the private and family life increased, as they said, 'now I spend my own money for the family, in the past I could not spend any money on my own, now I can do', 'infact in the past I subsisted on my husband's income, now on my own'. Another respondent said, 'if I was unemployed, I would be a burden for the family. Now even the kith and kin respects me'. Again, in the case of married women, the couple jointly takes any decision of the family, and in the case of ummarried one, their views are taken into account by the guardians.
9. The members of the family take issues relating to her job very seriously and cooperate with her to tide over any problem. Being a government job, they also attach importance to it. They give her freedom to take decision relating to the job.
10. According to them, the village people have, by now, become more conscious of hygiene than before and they think that they contributed towards this consciousness. Interest of other women to come to this job has whetted their zeal. A woman mechanic has observed, 'formerly, women would live within the purdah, now they have broken conservatism'.

It has been found that the women mechanics are deposed towards having some special favours through application. Two of the women mechanics maintain high ambition. They regard the present job to be of low status. So, they aspire to join any clerical post. It is to be mentioned here that, their present position is without any promotion. The women mechanics have the desire to work.

In the rural areas, the women workers of the NGOs go to the remote areas riding bicycles or motor cycles to fulfil the target of their work. Concientization prods these women workers of the NGOs to be mobile. NGOs are private organisations, and the workers are bound to fulfil their duties otherwise they lose their job. On the other hand, women mechanics know that they are government employees and their job is permanent. They maintain a kind of distinction from the NGO worker in some cases. So, they hesitate to ride bicycles or to move alone.

### 3.3.1 Problems of Working as Woman Tubewell Mechanics

Women mechanics have put up some problems of the profession whose solution will result in encouraging them to remain in this job, broadening their expertise, helping the DPHEs programme achieve all out success and making more women interested to come to this profession in future. The problems and some solution made by them are as follows :

1. All the women mechanics have, without reservation, singled out transportation to be the main problem. Women mechanic are mainly in charge of 15 to 63 villages of at least one union each. Most of the roads connecting the villages being rather bad, a mechanic has either to walk or to go by rickshaw van. Walking is time consuming and going by rickshaw van costly. Regarding transportation problem, all the concerned mechanics hold that the use of at least 50 cc honda in place of a bicycle will facilitate the work of the mechanics, side by side enhance their status, like officers, and at the same time accelerate the tempo of work and uplift its quality.
2. Though there is the provision of giving bicycles, many mechanics do not get them for some reasons specifically due to insufficient allocation of fund.
3. In the field of communication, a sense of insecurity haunts them. On many occasions, they have to go 8 to 10 miles through remote villages, char or forest areas. In such cases, a woman mechanic is accompanied by a male.
4. Transport problem and time factor associated with posting outside one's respective union. Every one is of the opinion that it is better to have one's posting in one's respective thana or union that will result in better performance and enhanced expertise for the job.
5. The situation of not having female staff anywhere generates a kind of loneliness among the women mechanics. They need more female colleagues for spiritual, psychological and social identity, a view also shared by their male colleagues along with them. Because, being the only one female worker, she may face difficulties in socializing with her colleagues.
6. Irregular monitoring and supervision by higher authority either decelerates the tempo of their work or discourages them. Regular accompaniment by them would have increased their status or the importance of the work to the villagers or to other people.

7. Allocation for TA and DA is not made available in time. A small amount of taka is sanctioned after five or six months. The system to sanction TA beyond five miles has to be modified with the reduction miles.
8. Appeal for higher pay scale. Because working under such small pay scale, it becomes difficult to discharge duties in rural area and it is difficult for them to maintain family within the salary drawn under the present pay scale.
9. Arrangement for further training will enhance their desire to work, side by side, give them the pleasure in learning something new, offer them the opportunity to share acquaintance as well as experience with the colleague, resulting in their gaining knowledge about the technique of work, notions of others.
10. It is arduous for a woman mechanic to be in charge of two unions at a time. So, one mechanic should be appointed for one union only.
11. Demand for changing title. In social mobilizational work they are not so acceptable to people as mechanics. So, demand for changing title, the titles like - health motivator, health promotor or social worker are expected by them. The change of titles will act as some kind of promotion among themselves.

Some of the problems that are pointed out here are particularly for women mechanics. The rest apply to both man and women mechanics. They also try to suggest some solutions in their own way. Sometimes they solve some problems in different process. But the concerned authority can easily settle some problems with the facilities under their disposal. The solution of other problems in short term as well as long term planning.

Though there are some minor problems in enhancing the expertise of women mechanics, there is no major problem. But the women mechanics were found to be less disposed to working. In this respect, no good answer emanated from our queries. Due to the time constraint, no indepth study was possible - especially as they were found less disposed to maintenance work in the field level.



We have seen that women encounter some problems while they work within the prevailing government structure of the DPHE. On the other side, they face less obstacles in the rural areas, because a kind of acceptability is already there. Under the prevailing circumstances some measures have to be taken for the women mechanics. At the same time these measures are to be taken in the administrative level of the DPHE and in the field of work of the women mechanics. The type of measures that can make the women mechanics' work dynamic is discussed below :

1. In order to solve communication problem, the women mechanics have to be given bicycle and riding them has to be made compulsory. 50 c.c motor cycle will make their work more dynamic.
2. Women mechanics have to be motivated through training. The nature of this motivation should be such as will enable them to overcome the existing notions.
3. Supervision and monitoring by the higher authority should be made strong to make the women mechanics' work dynamic. This applies to all women mechanics. The SAEs are to be active in this respect.
4. More reading materials and other equipments (Flip chart, film show) have to be supplied for CTFs training so that people can easily realize the problems. Emphasis should be given on demonstration also.
5. Insecurity - being a problem in remote areas. Women mechanics should not be posted in unions lying in the remote areas.
6. Work ethics should be there. Unnecessary favours should not be allowed.
7. The male colleagues will have to be motivated. Both males and females have to be motivated in order to overcome the existing norms resulting from the sexual division of labour. Otherwise no organisation can run properly.
8. More women are to be appointed in other thana level posts. It will lessen the loneliness of the women mechanics.

### 3.4 Socio-economic Status and Empowerment of Women Tubewell Mechanics

One of the aim of this study is whether the involvement of women in non-traditional occupation like that of a tubewell mechanic has brought about any change either in their socio-economic condition or in the prevailing notions of work. In this regard, it has been found that the change on the rural socio-economic condition and on the notions regarding occupation has been brought about because of social needs and the demand of time. Side by side, the large extent of NGO activities has resulted in a kind of acceptability for women's involvement in various occupations and their mobility. As a natural outcome of this change, women have come to this profession. There were some complaints at the very initial stage of their involvement in such new occupation. But not, there is some sort of acceptability among the villagers.

Direct involvement in jobs has added to the socio-economic status/ position of these women mechanics. Along with it, it has created empathy among the higher secondary certificate holders, though this kind of occupation is not a symbol of their socio-economic status. They try to involve women mechanics - a fact reflected in two women mechanics. Connected with it are the prevailing values about women - like no solitary movement, no staying outdoors at night, covering the head, various regulations for the daughter-in-law's in her in-laws house etc.

As the women mechanics have been brought up in these values, they are internalized among them. But they are the first recruits as tubewell mechanics, such shyness is natural in the socio-cultural milieu of Bangladesh.

The question of empowerment enters in this context. Has involvement in this profession actually empowered them? 'Empowerment' is implied at every stage of a person's life. It is true that involvement with government jobs has empowered them in one sense - because it means participation in the structures of power. Along with it income-earning capacity has empowered them economically. But the extent of empowerment in respect to consciousness is a matter for research - and it is not possible to find it out within the time constraint of 3-4 days.

### 3.5 Why Women Tubewell Mechanics are Fit for the Job

It has been seen in our previous discussion that a woman mechanic is good at motivational work. This task constitutes 45% of the total volume of responsibility. Besides they are capable of repairing the minor defects of the No.6 hand tubewells and all kinds of defects of the Tara pumps. This work constitutes 35% of their total allotted responsibility. They also perform the remaining 20% responsibility properly. That is, they perform all their responsibilities except heavy repairing.

At present the main emphasis of the DPHE programme is on social mobilization for sanitation and personal hygiene. All the SAEs and the male mechanics maintain that the women mechanics are good at social mobilizational work-an observation corroborated by the CTFs, beneficiaries and the villagers.

In the DPHE programme, supervision and maintenance of tubewells constitute a part of the responsibility of tubewell mechanics CTF training is important for this maintenance. While making job evaluation, the SAEs and the male mechanics have said the women mechanics can give CTF training excellently.

Very minimum repairing training is given in the CTF training which is not adequate for maintaining tubewells. So, mechanics are needed. The women of the CTFs and the beneficiary families have opined that discussing problems of tubewells with women mechanics is easy, because most of the water related work is done by women. So their advantages should be given preference - one of the objectives of the DPHE programme.

From our talk with NGO Forum, we have come to know that quite often they give training on the sinking and maintenance under the title 'Technical Skill Training on Tubewells'. A good number of women take part in this training, thereby justifying the need of women for tubewell mechanics in rural areas. In this perspective, the women mechanics of the DPHE are fit for their job.

Maintenance of tubewells by the female members of the CTFs is hopeful - a fact corroborated in books also. In this respect the women mechanics can play a significant role in mobilizing and training the women members of the CTFs. If the women members of the CTFs are motivated and trained it will not only make them efficient but also lessen their dependence on their male counterparts. The role of the women mechanics is undeniable in making this expertise.

More than 70% people are still illiterate in our rural areas. In such circumstances, supplying only equipments i.e. tubewells and sanitary latrines under the DPHE programme, no good result can be expected from any development programme. It needs strong social mobilization. The need for software and hardware is undeniable for development. In the software i.e. in motivational work, the women mechanics can prove themselves to be the main activists.

Women were involved in the development process of the Bangladesh Government under Women in Development (WID) programme during the Women's Decade (1975-85) of the UN. Their involvement in this programme has led to the development of conscientization programmes alongside economic development - a bold step towards empowering women. This programme is active in the policies of the present government and in the fourth five year plan. In the circumstances, motivational work is necessary for empowering the rural women. This motivation should be everywhere, even in the DPHE programme. In the DPHE programme the women mechanics can play a significant role. So, here their presence and number should be increased.

#### 4. CONCLUSION

At first it has to be mentioned that the appointment of six women tubewell mechanics in six thanas by the DPHE is a non-traditional step towards gender biased recruitment. To evaluate the propriety of this step constitutes the main objective of this study.

The two principal aspects of the work of women mechanics are technical and non-technical. Technical work requires technical know how and physical labour, while non-technical work needs knowledge as well as the articulation to approach people. In the field of technical work, women mechanics' skill has not developed. They have not yet achieved expertise to repair heavy parts of tubewells, but they are capable of repairing small parts. While the interviewed male mechanics have been working for 3 to 17 years, the length of service of the women mechanics is only one and a half years. So being new at the job, with little experience, the relative inexperience of the women mechanics is acceptable to all. As no other women mechanics were appointed in this profession before, these six women mechanics have neither observed nor known the continuity of this job - with the result that they have to face the problems associated with this new profession, thereby making a path for their successors - a path naturally strewn with mistakes, and inexperience. But most of the women mechanics have apathy towards field level technical work. In this case, societal prejudices, middle class mentality are at work resulting in their mobility and scope of work being limited - a phenomenon opposed to work ethics and work spirit.

On the other hand, that the non-technical has enhanced the skill of the women mechanics, is proved from our query. Again, increasing rate of sale of sanitary latrines by the DPHE can be cited here. The women mechanics feel easy in motivational work. While discharging professional responsibilities, the women mechanics with preference for and stress on this aspect of their profession, want to change in consistence with their work, the title of their post.

In the field of social mobilization the presence, as well as, the role of women tubewell mechanics has acquired a kind of social acceptance. And it has been possible through the active presence and

activities of government and non-government women workers, working in the field level, especially the participation of rural women in various NGO initiated programmes and activities has facilitated the inclusion of women in social mobilization. In such circumstances, women mechanics have enhanced their expertise in motivational work especially among women.

From the gender perspective we see that rural women have posited that the women mechanics are good for them because they can approach them, speak out to them, know about them, learn from them, and feel comfortable amidst them - a phenomenon quite difficult for men to achieve. Being a Muslim majority area social values along with religious taboos are in operation. Many women workers have said that their husbands dislike their going or approach with male persons. Being in a patriarchal society one has to abide by the social norms with the convention that women imitate male persons and vice-versa. So, a male person is motivated as soon as his female partner is motivated, and women especially have talked of motivation of men. From this perspective social mobilizational work by women mechanics gets acceptability.

On the question of technical expertise, the negative attitude of men towards appointing women mechanics is more or less apparent. Some male biased answers arise out of notions such as 'men are the principal bread earners', or 'physically men are more capable than women' etc. A male-dominated power structure is inherent here. It is to be remembered that these government jobs belong to the power structure. When males monopolize these jobs, the appointment of women mechanics facilitate the inclusion of women into the power structure, a fact which may prove threatening to a male-biased establishment. In view of this perspective, men resist the acceptability of women mechanics.

In the case of empowerment, the economic empowerment of the women mechanics is of little significance because of the low salary. Increasing mobility and articulation by women are the positive sign of their social empowerment. In the case of political empowerment it has been observed that women mechanics exercise power in their respective area. But empowerment in terms of social values is insignificant. In total, a significant change is discernible in the empowerment of women.

There were complaints, counter complaints, arguments, debates among concerned persons on the performance report, supervision, maintenance, site selection, caretaker family training etc. The explanation or analysis of all these factors is not possible within the short space of this study. Nor is it the objective of the study. Individual study can be conducted on these aspects.

On the whole, there are some problems the women mechanics face in their work. Despite this, it can be said that like their male counterparts, women mechanics are working in the DPHE programme, except in cases where there are social obstacles. Above all, in evaluating their performance, it is to be remembered that the women mechanics are but new comers in their field with brief experience of one year and a half years. It can be concluded that the way they are performing their responsibilities in the DPHE programme even though their experience may be brief is worth mentioning. If they are given further facilities, together with close monitoring and supervision and are motivated to overcome the norms resulting from the sexual division of labour, the expertise of their work will be sharpened and their social acceptability will also be enhanced.

## 5. FINDINGS AND RECOMMENDATIONS

### Findings :

Our findings from this brief study are as under :

- In this research we have seen the performance of newly appointed six women tubewell mechanics and their activities.
- The principal aspect of women mechanics' work is technical and non-technical.
- While the male mechanics have been working in this field for a long time, the length of service of the women mechanics is only one year and a half.
- In the field of technical work women mechanics' skill has not developed much but they are capable of small repairing - specifically the Tara pump repairing is easier than No.6 shallow tubewell.
- Women mechanics have enhanced their skill in non-technical work. They are more capable in motivational work and CTF training.
- In the field of social mobilization women mechanics have acquired a kind of social acceptance by the beneficiaries.
- Increasing mobility and articulation by women mechanics are positive sign of social empowerment, but in conscientization process level of empowerment is insignificant.
- There are some problems of the women mechanics that they face in their work. The transport problem is one of them. Others are inadequate TA, DA, posting etc.
- There is no compulsion as well as close supervision and monitoring for women mechanics by their higher authority.
- Most of the DPHE staffs have expressed that more women can be recruited in future for the mechanics post but they have put some conditions.



## Recommendations

Some recommendations based on the findings of this research are given below :

- ★ The social acceptability which women mechanics enjoy among the villagers and beneficiaries of the programme can be consolidated if the former give emphasis on the technical aspect of their work.
- ★ Higher authorities will have to be more active to supervise and regularly monitor the work of the women mechanics. It will enhance the expertise of the women mechanics.
- ★ In order to have more technical expertise, more demonstration is essential in the training period for women mechanics. It will enhance their expertise.
- ★ Special training in both technical and non-technical aspects of their work should be give and gender issues should be incorporated in their training.
- ★ In order to solve the main problem of transport system, every woman mechanic should be given a vehicle. And it should be made compulsory for them to use it.
- ★ In their training programme the basic conceptualization of gender issues, conscientization and empowerment should be incorporated.
- ★ Having observed the total situation, we suggest the recruitment of more women for the post of tubewell mechanics.
- ★ Appointment of more women will arrest the tendency on the part of the higher authority to extend special favour to women mechanics. Moreover it will generate skill and a change of attitude of the higher authority towards their female employees.

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10. Bangladesh Population Census 1991, Volume 2, Union Statistics, Bangladesh Bureau of Statistics, December 1993.

## ANNEX — A

### Terms of Reference for Consultants :

#### Purpose of Assignment :

To conduct a feasibility study on Women Tubewell Mechanics.

#### Major tasks to be accomplished :

- Review the available Performance Report of Women TWM.
- Develop a questionnaire for study and discuss with DPHE and UNICEF.
- Visit six Districts to interview Women TWM, Male TWM and SAE, Rural Communities/ Beneficiaries and collect data.
- Analyse and compile the data.
- Share the 1st draft report with DPHE and UNICEF.
- Finalise the report with recommendations.

## ANNEX — B

### List of Interviewee :

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1.	Sub-Assistant Engineer	6
2.	Women Tubewell Mechanics	5
3.	Male Tubewell Mechanics	11
4.	Caretaker Family	33
5.	Thana Nirbahi Officer	1
6.	Present Chairman	2
7.	Ex-chairman	1
8.	Ex-Gram Sarkar	1
9.	Local Journalist	4
10.	NGO workers	8
11.	Different professions	7
12.	Autonomous and Govt. officer	10

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## ANNEX — C

### List of Women Tubewell Mechanics of DPHE

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SL.	NAME	THANA	DISTRICT
1.	Ms. Nasreen Akhter	Saturia	Manikgonj
2.	Mrs. Tanjina Akhter	Domar	Nilphamari
3.	Mrs. Joshoda Rani	Nowabgonj	Dinajpur
4.	Ms. Shahinur Jahan	Mohongonj	Netrokona
5.	Mrs. Rehana Akter	Fenchugonj	Sylhet
6.	Mrs. Jahura Aktery	Mohammadpur	Magura

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## ANNEX — E

### Case Studies of Six Women Tubewell Mechanics :

#### Case I : *Nasrin Akhter*

Nasrin Akhter, age 20, an unmarried girl of Manikgonj district has been at Sauria thana head quarters since her joining the job. She got the job on July 1993 with little competition. Her father was a former employee of the DPHE. Her family consists of two brothers and a widow mother. She came to this profession with full support of the family, with her one brother working in the same profession. Nasrin from the very beginning of her job was in charge of a union till 1994. Now two unions are under her charge. She attends her assignment by staying as a paying guest at the house of two of her relatives. Sometimes she visits her natal houses or some members visit her. While working in the villages, she has to cover approximately 10-12 km. either on foot or by rickshaw or by boat. She gets cooperation from her family members in matters relating to her job. But her personal and future plans are still directed by the elders of the family and she thinks that it will continue according to the tradition.

#### Case 2 : *Tanjina Akhter*

Tanjina Akhter was posted at Domar thana of Nilphari district when she started her job. She worked there for one month only. Then she was deputed to the district headquarters. Tanjina of village Mirzapur belong to Rangpur district. She has a Higher Secondary Certificate, while a college she married her cousin and joined the job. Her father formerly a mechanic, subsequently joined the LGED her mother a family planning worker, and only brother living in the district town and presently reads in the school. Born in a family of service holders, she faced no problem with her profession. Her husband now a student of B.A and a job seeker. her status. Ambitions, both Tanjina and her husband live in a hired house with one of their relatives live with them. They have no child.

**Case 3 :        *Joshoda Rani***

The only non-muslim out of six appointed women, Joshoda Rani, of Rangpur working at Nawabgonj in the district of Dinajpur. Married to a village doctor, she everyday she attends her office from the house of her husband which is 20 km. away from her office. Other members of the family include her husband, two daughters, a brother-in-law, her mother -in-law now running over 100, and a maid servant. With income of three and of five to seven bighas of land, they somehow maintain the family. Though the charge of the family lies with the maid servant, her mother- in-law and two daughters, she has to manage everything. She has to bear a lot of burden in coordinating the family and the office. Yet she likes to do the job which is necessary for looking after it. After passing the H.S.C in 1990, she tried to get a job. She first got the news of the job from her husband and he helped her in every way including bringing her to Dhaka for the interview. He still cooperates her.

**Case 4 :        *Shahinur Jahan***

Unmarried Shahinur Jahan has been working as a tubewell mechanics at Mohangonj thana of the district Netrokona since joining. Her father, a retired school teacher, is now engaged in agriculture. She is the third among five daughters of her parents. Everyday she came across the way to 7 to 8 miles either by train or by bus or by rickshawa to attend the office daily. She enjoys the cooperation of all. This year she is going to attend degree examination. One of her uncle who is worked with her as mechanic he help her most in the field work. She likes this profession very much. She has to go maximum five miles along rural roads, for which according to the law of the office, she gets no travelling allowance. She thinks, the standard of her work would increase if she would be posted at her own union.

**Case 5 :        *Rehana Akhter***

Rehana Akhter of Fenchuganj thana of Sylhet, being away from the thana concerned for undergoing training, we could not get the whereabouts of Rehana and her family background information. Among

the six women tubewell mechanics she is the only one who has got posting outside her home district. Originally hailing from Comilla, she along with her husband, two daughters and mother-in-law live in a rented government quarters of the thana complex. Her husband is a CCT of the same office.

Case 6 : *Jahura Akhter*

Jahura Akhter of Magura district, has been working at Mohammadpur thana since June, 1993. Her husband is also a tubewell mechanic posted at the same thana working with her. Living in a house built with their own income, they have to go 14 k.m. either by van or by bus to attend the office. After passing the S.S.C. in 1990, while studying in the college, she got the news of the job by her husband first. She does the job with the cooperation of all. At the beginning her father-in-law ventilated that she being a housewife, it will be shameful to do outside job. But her elder brother-in-law convinced all to allow her to do the job. Her family consists of her husband and two daughters. She enjoys the cooperation from all level.



ANNEX — F

Photographs of Women Tubewell Mechanics, DPHE Staffs and Caretaker Family.



1. Shahinur Jahan, a woman mechanic, Mohangonj.



2. Tanjina Akhter and colleagues of Domar Thana.



3. Joshoda Rani and her colleagues of Nawabganj Thana.



4. Zahura Akhtar, her husband (a male mechanic) and the CTF of Magura Thana.

**COMMENTS ON THE STUDY ON  
EVALUATION OF PERFORMANCE OF WOMEN AS TUBEWELL MACHANICS**

Md. Aowlad Hossain  
Project Officer, WHO CWS&S BAN 001

The name of the designation is Tube well mechanics it indicates that his/her main duty is concerning tube well including repair. Supervision, checking of Tube Well in addition he/she will motivate rural people about water use, sanitation & personal hygiene.

Male mechanics doesn't have easy access to rural women for motivation/social mobilization. DPHE does not have women worker in the field level. So some female grassroot level worker can fill the gape in DPHE working force for SOCMOB.

In the Evaluation of performance of women as TWMs report it is stated that it is not possible for women to pay an active role in the technical aspect, women mechanics could not perform various technical jobs & they find it difficult to work in cases of major repair work of Tube Wells. They hesitate to do it or avoid it all together because they have not much skill & experience. Secondly there is no compulsion not active close supervision & monitoring of their work by their lighter authority. But they perform their duties & manage it through other peoples. Regarding their technical expertise, a negative attitude of men towards women mechanics can be noted.

It is also mentioned that for technical job that is repair of TW is very hard job for women if it is motivational work than it suitable for women. Movement from one place to another is also trouble some for women mechanics with spare parts & wrenches.

There are some basic difference between women NGO workers & Govt. women workers, like service conditions, mentality & attitude.

So, performance of NGO workers & Govt. worker should not be compared performance of existing male TWMs is not satisfactory in many cases specially in remote farflong villages & areas which are not well communicated & during emergences.

I am not against women's out door jobs considering present conditions I will prefer women as motivator/promotor on water, sanitation & personal hygiene than Tubewell mechanic.

Following points should take under consideration :-

Out of six WTM's Father of two is former DPHE TWM, Husband of one WTM is working in same Thana as TWM, Husband of one TWM is working as CCT in the same Thana office, Uncle of one WTM is working in the same Thana as TWM. One WTM is posted in the District headquarter, after one month of work in Thana.

Each of the WTM is residing 12-20 km away from the Thana office. It means every day one has to travel 24-40 km from residence to thana office (they don't have their own mode of transport). Then how much time & energy they care spent in their duty areas.

In the report there is no comparative table of work or status of area of a Male TWM & WTWM to judge their performance.