VOL.1, NO.2, AUGUST 2006 ISSN 1819-6608
ARPN Journal of Engineering and Applied Sciences

www.arpnjournals.com

WATER SUPPLY AND SANITATION (WATSAN) CONDITION OF THE *CHAPTIR HAOR* WETLAND IN BANGLADESH

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ABSTRACT

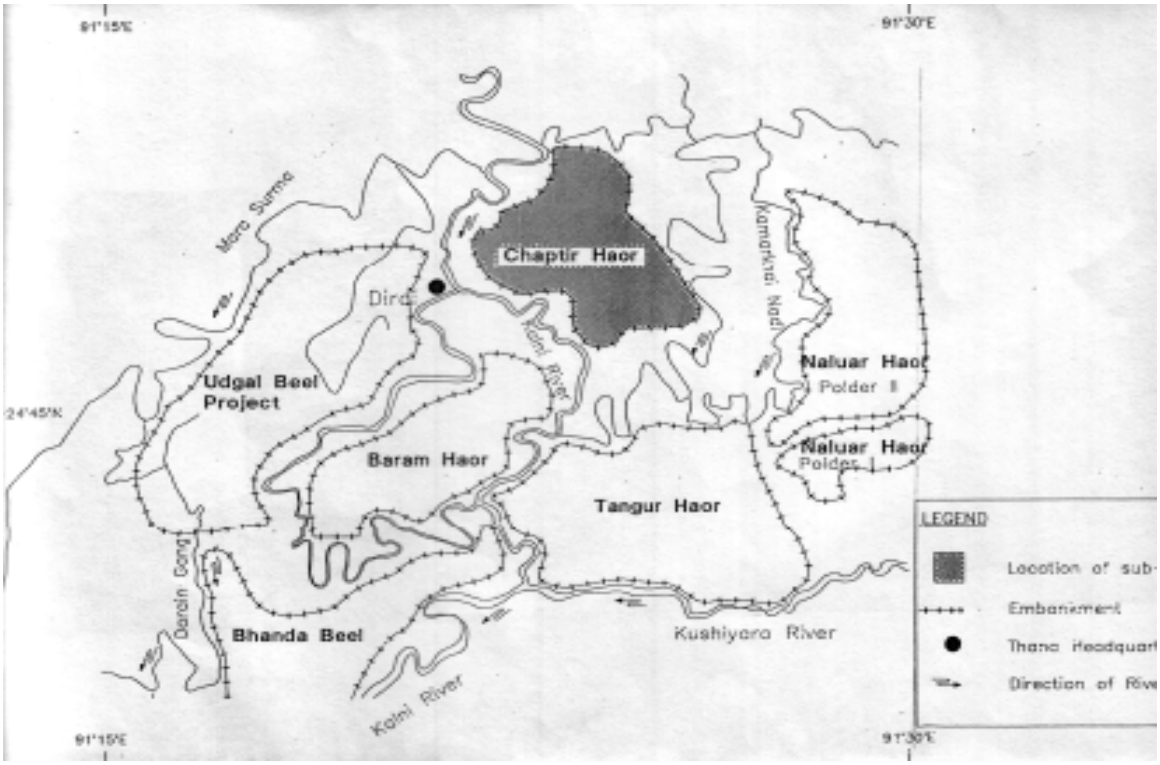
People of wetland areas in Bangladesh are very accustomed to live with various constraints. Chaptir Haor wetland, which is located at Derai Thana of Sunamganj district, has been selected for identifying water supply and sanitation conditions of wetland people. Extensive field survey was carried out during September 2005 in five selected areas of the wetland namely Chandpur, Karimpur, Srenarayanpur, Halimpur and Tarol. PRA method primarily aimed in focus group discussion has been followed in the survey work. Study reveals that 100% people use tube well water and river water respectively for drinking and domestic purposes. Commonly used defecation practices have been categorized as open defecation, hanging latrines, offset pit latrine and some sanitary latrine. About 15%, 50% and 60% people of Srinarayanpur, Tarol and Karimpur are found to use sanitary latrines respectively. This figure is only 5% for Chandpur and Halimpur.

Keywords: Chaptir Haor, wetland, water supply, sanitation, life constraint.

INTRODUCTION

Chaptir Haor wetland falls in one of the ten submersible embankment projects in the Sunamganj district of Bangladesh, which is proposed for rehabilitation under System Rehabilitation Project (SRP) of the Bangladesh Water Development Board (BWDB). The land of the wetland is below 8-meter Public Works Department (PWD) and is flooded to depths of several meters during monsoon and pre-monsoon (Farzana *et al.*, 2006). Drainage of the wetland is affected by the principal rivers of the Surma, Kangsha, Someswari, Baulai and the Kushiyara. The study area lies between longitudes 91^0 21.5' E and 91^0 27' E and latitudes 25^0 44.4' N and 25^0 50.3' N, which is about 304km north-east from the capital city of Dhaka and 114 km west from the divisional city of Sylhet. Location of the Chaptir Haor wetland is shown in Figure-1.

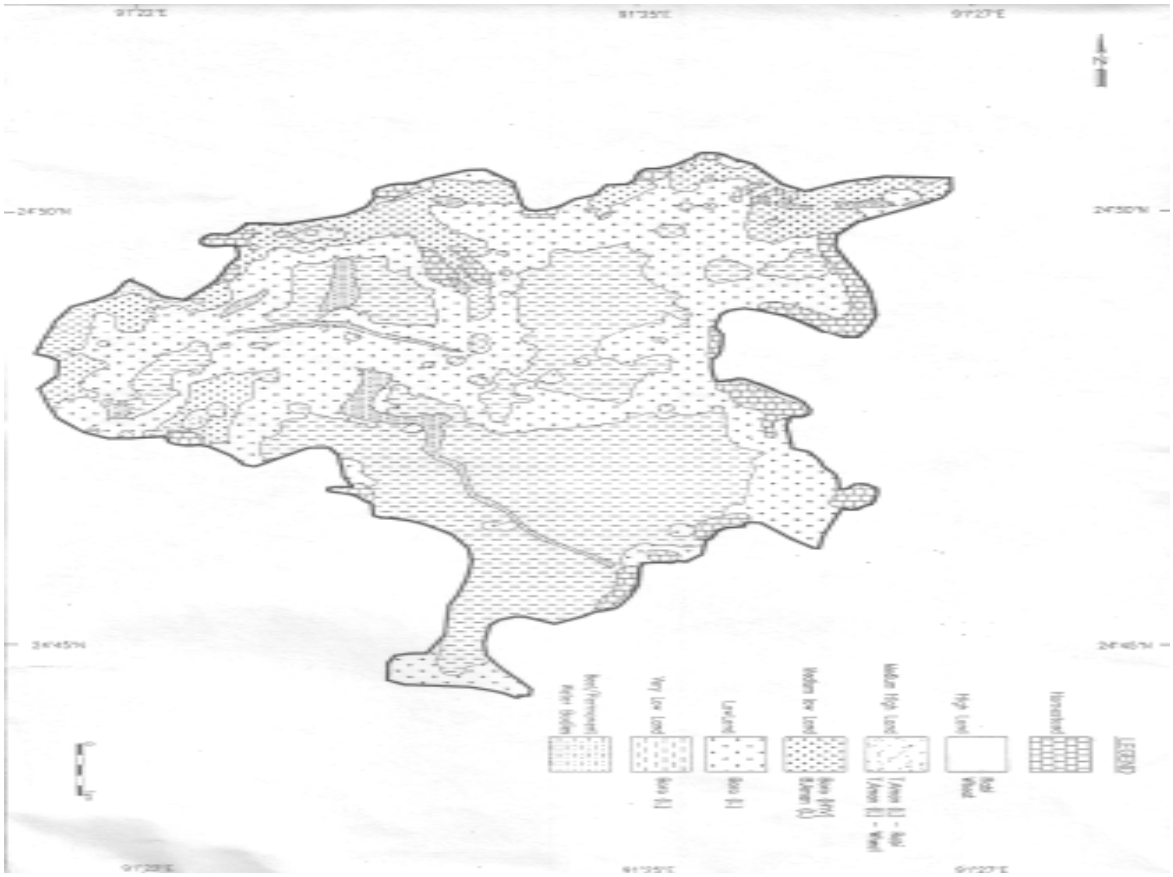
Figure-1. Location of Chaptir Haor wetland (BWDB, 1994).



The wetland Chaptir Haor is designated as a Flood Control and Drainage (FCD) project in the consultant's terms of reference. The gross area of the project is 5061 ha. The project was implemented between 1977-78 and 1978-79 under the Food for Works scheme of the government. The wetland is provided with 42.5km of the submersible embankment, 9.6 km compartmental embankment and 11 number box or pipe culverts in the periphery (BWDB, 1994).

According to the 1981 census, about 22 thousand people live in about 3525 households in the wetland area. The density of population is 558 persons per sq. km and the land man ratio is 6.8 ha of cultivable land per person. Most of the people in the wetland area are immigrants from the districts of Mymensingh, Comilla, Noakhali and Dhaka. Males constitute nearly 54% of the population and females about 46%. The average household contains 7.1% persons; large farmers have average household size of 10.5 (highest) and landless have an average of 5.7 (lowest). 31% of the working male people are engaged in farming, 15% in agricultural wage labors and 54% of the population are involved in non-farming activities including 12% as non-agricultural wage labors and 10% in religion. 58% of the male population above 15 years old are fully or adequately employed, 31% are partially or seasonally employed and 11% are sparsely and unemployed. Women are mainly engaged in domestic activities such as winnowing, drying and storing of agricultural crops, parboiling of paddy, poultry keeping, kitchen gardening and household activities (BWDB, 1994). Existing land use pattern in the wetland has been shown in Figure-2.

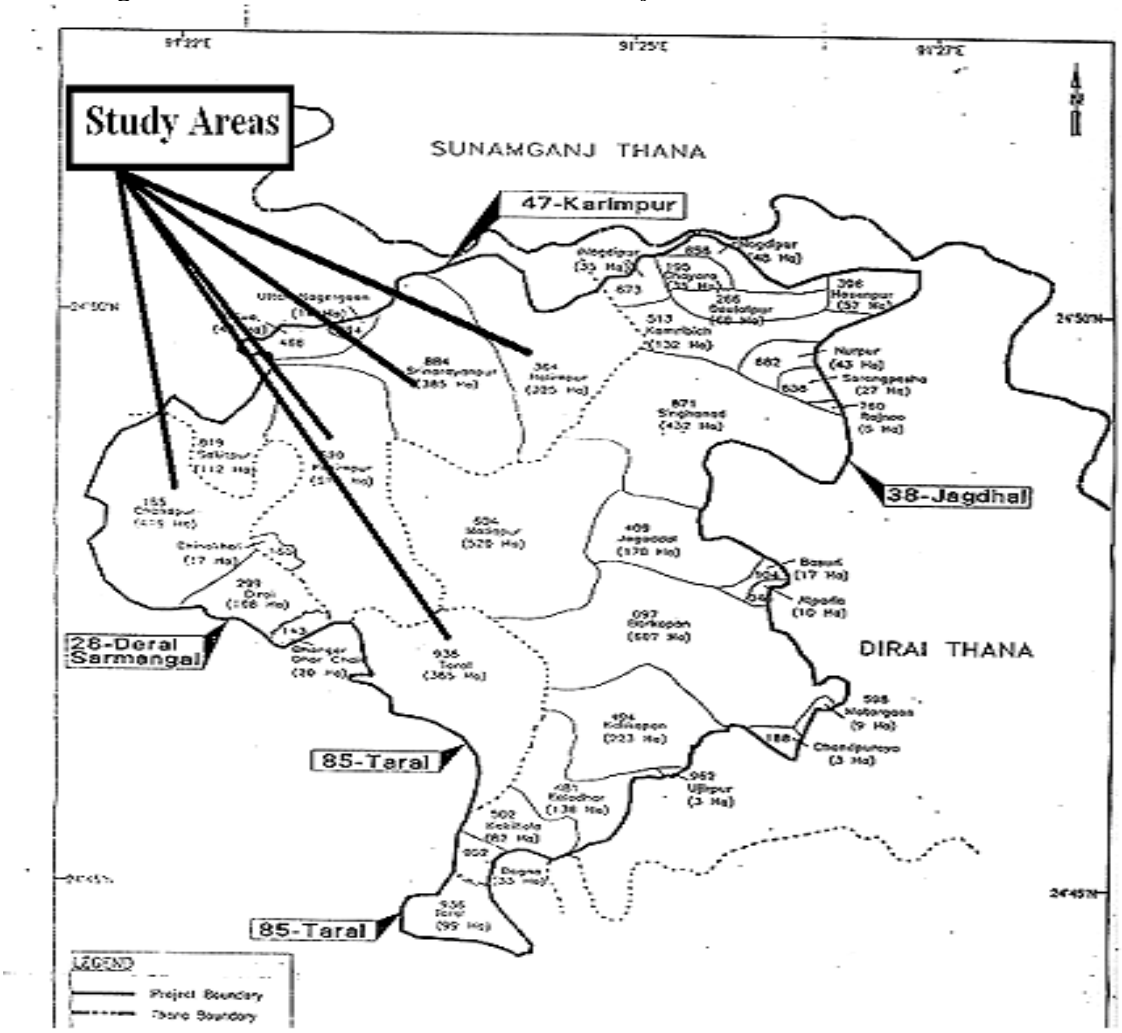
Figure-2. Land use pattern of Chaptir Haor wetland (BWDB, 1994).



MATERIALS AND METHODS

The objective of the study was identification, prediction and evaluation of Water Supply and Sanitation (WATSAN) conditions of the Chaptir Haor wetland area. Five different low-income areas were randomly selected on the basis of population density, deteriorated sanitation condition, professions and income status. These were Chandpur, Karimpur, Srenarayanpur, Halimpur and Tarol. Location of selected areas is shown in Figure-3. Participatory Rural Appraisal (PRA) method was followed in the study. The extensive survey work was done in September 2005. In each area, at least 20 persons were randomly surveyed by standard questionnaire. The method used in the study primarily depends on focus group discussion. Several meetings were organized with the stakeholders. Various problems of the wetland were discussed with the participants and make them understand the ultimate goal of the study.

Figure-3. Location of selected areas for field survey.



RESULTS AND DISCUSSION

Water using scenario:

From the survey work, it was observed that all people of the study areas were using tube well water (groundwater) for drinking purposes. For cooking and other domestic purposes, all of them were using surrounding river water. People were not concerned about disinfection practices like boiling of water, sedimentation with coagulation and filtration. Water using pattern of the five selected areas are shown in Table-1.

Table-1. Water using pattern of the selected areas in Chaptir Haor wetland.
(Farzana *et al.* 2006)

Source of water	Purpose of use	Selected areas of *Chaptir Haor* wetland				
		Srinarayanpur (% user)	**Halimpur** (% user)	**Chandpur** (% user)	**Karimpur** (% user)	**Tarol** (% user)
Tube well	Drinking	100	100	100	100	100
	Cooking	0	0	0	0	0
	Household	0	0	0	0	0
River or Pond	Drinking	0	0	0	0	0
	Cooking	100	100	100	100	100
	Household	100	100	100	100	100

Defecation type:

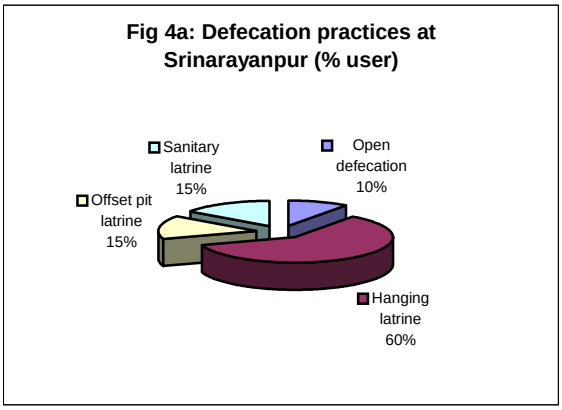
Due to poverty and lack of knowledge on sanitation, people of the study areas were not observed to use sanitary practices of defecation. The commonly observed defecation facilities were hanging latrine, offset pit latrine and some sanitary latrines. Scenario of various

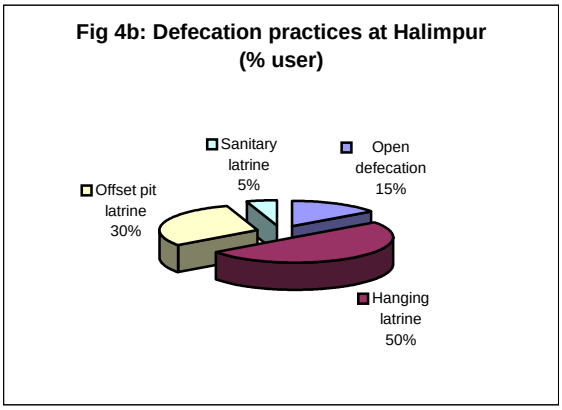
type of latrines used in different study areas are given in Table-2 and Figure-4 (a, b, c, d, e).

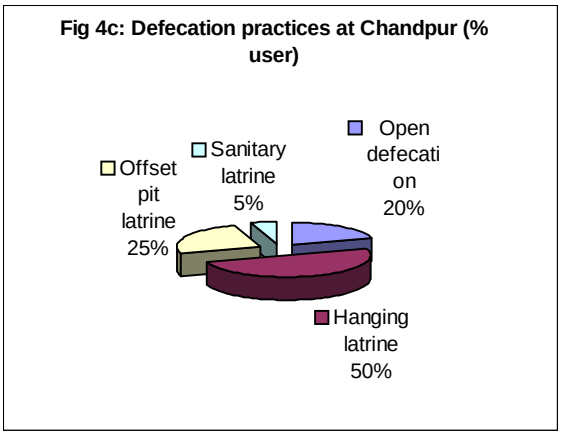
Table-2. Scenario of various type of latrines used in Chaptir Haor wetland. (Farzana *et al*. 2006)

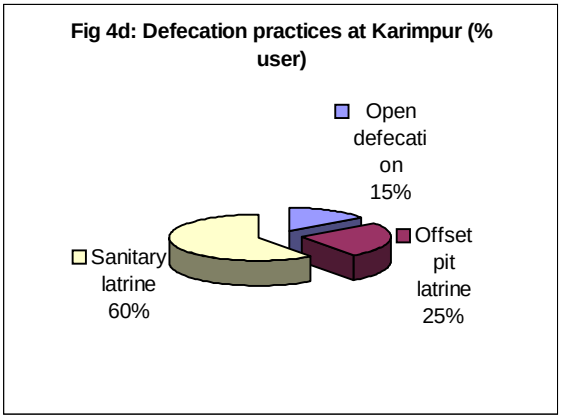
Defecation type	Selected areas of Chaptir Haor wetland				
	Srinarayanpur (% user)	**Halimpur** (% user)	**Chandpur** (% user)	**Karimpur** (% user)	**Tarol** (% user)
Open defecation	10	15	20	15	10
Hanging latrine	60	50	50	0	0
Offset pit latrine	15	30	25	25	40
Sanitary latrine	15	5	5	60	50

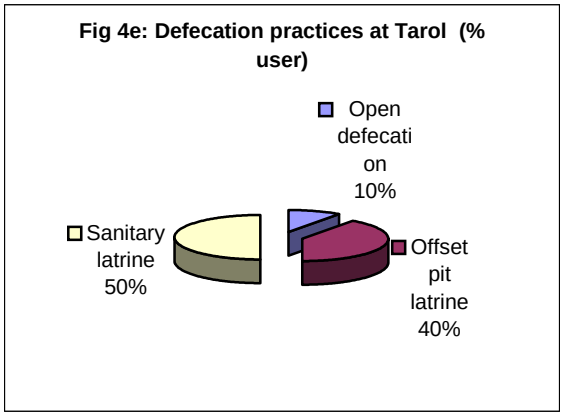
Figure-4 (a, b, c, d, e). Defecation practices of various areas in Chaptir Haor wetland. (Farzana *et al.* 2006)







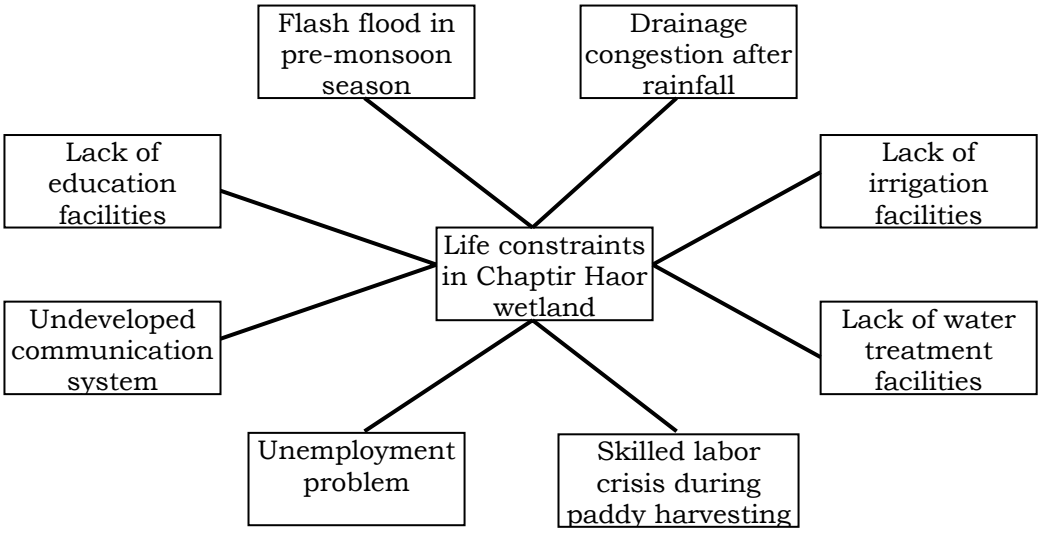




Life constraints:

From the baseline survey, various life constraints in the Chaptir Haor wetland have been identified. Life standard of the people are not well enough. Various identified life constraints are summarized in Figure-5.

Figure-5. Various identified life constraints in Chaptir Haor wetland. (Farzana *et al*. 2006)



CONCLUSION

The aim of the study was to identify WATSAN conditions of the Chaptir Haor wetland, which is partially flood-controlled area of BWDB. Such study is inevitable to have better understanding for future development of the project area. The study reveals that people are not facilitated with sanitary latrines and are not aware about proper sanitation practices. Low-cost surface water treatment facilities are not familiar to the inhabitants of the wetland.

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