



Urban Water Supply Management in Chittagong WASA, Bangladesh

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Map of Bangladesh



Introduction

- Chittagong is the 2nd largest, main port city and commercial capital of Bangladesh.
- Chittagong Water Supply & Sewerage Authority is the 2nd biggest water utility in Bangladesh.
- Water is being supplied to Chittagong City Corporation area through Pipe network.
- Water production from surface is 48% & underground is 52%.

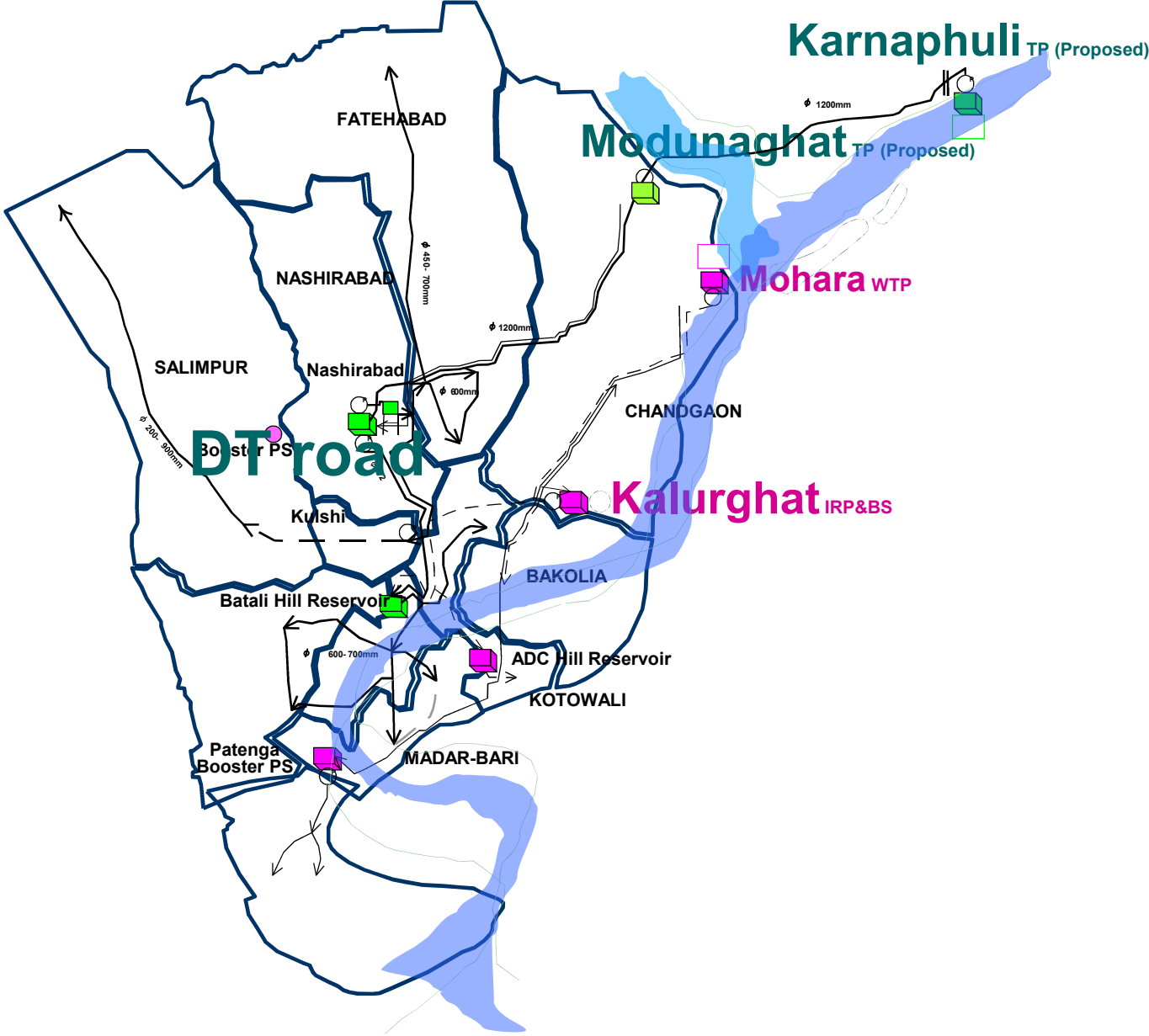


**Chittagong
City**



3D Visualization of Chittagong, Bangladesh by Sayedur R. Chowdhury is licensed under a Creative Commons Attribution 3.0 Unported License (<http://creativecommons.org/licenses/by/3.0/>).

Surface Water Source & Pipeline Network



Present Water Supply Scenario

- No Proper Sewerage System in Chittagong, now City Corporation looks after the matter.
- **WATER**
 - Total Population served = 1.38 million
 - Area of CCC = 168.21 sq. miles
 - Total water supply = 180 MLD
 - Water losses = 15- 20 %
 - Total Connection = 58,435 [June,2014]
 - Length of Distribution lines = 684 Km [June 2014]
 - Meter connection = 100% [active meter 85%]

Water Demand & Production Capacity in Chittagong City Corporation

	Year				
	2014	2015	2016	2017	2018
1.Total Population[m]	2.90	2.98	3.06	3.14	3.22
2.Served Population	1.38	1.63	1.96	2.17	2.28
3.Total Water Demand	524 MLD	540 MLD	560 MLD	578 MLD	593 MLD
4. Capacity of Supply	180 MLD	180 MLD	323 MLD	323 MLD	404 MLD
4.1 Mohara WTP	90	90	90	90	90
4.2 Klurghat IRP	46	46	46	46	42
4.3. DTW	44	44	44	44	38
4.4 KWSP-I	-	-	143	143	143
4.5 Modunaghat WTP	-	-	-	-	90
5. LPCD	80	70	98	89	110

Existing Infrastructure

- Surface Water Treatment Plant, 90 MLD = 1no.
- Underground Water treatment Plant, 68 MLD = 1no.
- Reservoir = 14no.
- Pump Boosting Station = 7no.
- Deep Tube Well = 96no.
- Water Testing Lab = 1 no.

JAB1
JAB2

Mohara WTP



On-Going Projects

Sl. No.	Project Name	Capacity (MLD)	Completion date	Remarks
1	Karnaphuli WTP, Phase-I, JICA	143	2015-16	Average 65% completed
2	Modunaghat WTP [CWSISP], WB	90	2017-18	Bid evaluation completed
3	Karnaphuli WTP, Phase –II, JICA	143	2019-20	PQ was called on 16.09.2014
4	Bandaljuri WTP, EDCF	90		EDCF loan negotiation is under process

Strategies

- Five Years Strategic Plan
- Five Years Rolling Business Plan
- Performance Agreement between CWASA & GOV.
- One Year Go Ahead Programme

Near Future Projects

Sl. No	Name	Remarks
1	Bandaljhuri Surface WTP Pre-feasibility study on going	Funding: EDCF of Korea
2	Mohara 90 MLD Surface WTP – II	Funding: Searching Donor
3	Karnaphuli WTP - III	Funding: JICA

KWSP - I

- Funded by: **JICA, GoB & CWASA**
Japanese ODA loan no. BD-P54
- Cost of the Project: BDT **1,510** Crores (1st Revision)
 - i. JICA : **991** Crores
 - ii. GoB: **504** Crores
 - iii. CWASA: **15** Crores

Contract Packages of KWSP- I

Package No.	Name of Package	Progress on August, 2014
1. KWSP-C-1	Water Intake Facilities and WTP	40%
2. KWSP-C-2	Water Transmission and Distribution Pipelines	75%
3. KWSP-C-3	Water Reservoirs	80%

On-Going Project Works



Chittagong Water Supply Improvement & Sanitation Project (CWSISP)

Main Packages & Estimated Value: Million USD

90 MLD Modunaghat WTP and Patenga Booster Station	85
Kalurghat Booster Station	6
Transmission Line	15
Construction of Distribution Network	15

Main Component
Total Estimated Value: 158.11 million USD

Component 1: Water Supply Improvement	146 million USD
Component 2: Investment Planning for Sanitation and Drainage	3.13 million USD
Component 3: Institutional Capacity Development and Project Management	9.36 million USD

KWSP-II

Total Project Cost: 44911.56 Million Bd Taka

Package – 1	Package - 2	Package - 3
Construction of 150 MLD Intake	3.6 Km Conveyance Pipe line installation	7.9 Km primary distribution pipe line
Surge Tank - 1	34.4 Km Transmission line	Sector inlet chamber-10 No.
143 MLD WTP	20Km Optical Cable	10 Km Optical Cable
Surge Tank - 2		475 Km secondary & Tertiary dist. pipeline
24800 m3 Reservoir		52.000 Service Connection
2400m3 Elevated Tank		
Cost: 5847.6 mill. taka	7461 mill. taka	11977.6 mill. taka

Business Opportunities

- ❑ Consultant service on both sanitation & water supply
- ❑ Construction works of WTP (Karnaphuli – II)
- ❑ Transmission & distribution pipe laying of KWSP-II by JICA & CWSISP by WB
- ❑ Both consultant & construction of coming EDCF loan project

Opportunities

High demand for water supply services

The demand for increased water supply services will continue to be exerted upon CWASA providing it with good business opportunities.

Government support

This is enshrined in the Performance Agreement with Government.

Customers ability and willingness to pay

The customers are able and have the willingness to pay a bit more for services. Consideration should be made to raise the tariff as an option for increasing revenues.

Surface Water sources available nearby

Two rivers Karnaphuli and Halda are very near to Chittagong City.

ARIGATO GOZAIMASU



THANK YOU