



THE WORLD BANK

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

MINISTRY OF SHIPPING

BANGLADESH INLAND WATER TRANSPORT AUTHORITY (BIWTA)



BANGLADESH REGIONAL WATERWAY TRANSPORT PROJECT 1

Financed by the World Bank

Workshop

On

**Draft Feasibility Study on Shasanghat, Narayanganj, Chandpur and
Barishal IWT Passenger Terminals: BRWTP-S3**

DATE: 26 AUGUST 2019

Venue: CIRDAP International Conference Centre, Chameli House, 17 Topkhana Road,
Dhaka-1000, Bangladesh

Consultants:



VOYANTS **i-maritime™**
PARTNERING VISION Consultancy Private Limited





1. PROJECT BACKGROUND

Government of Bangladesh (GoB) intends to improve key multi-modal transport corridors and networks with the objective of removing current transport bottlenecks in Bangladesh. Inland Water Transportation (IWT) being one of the key transport mode (perhaps world's biggest passenger water transport system), Bangladesh Inland Water Transport Authority (BIWTA) a nodal agency under the Ministry of Shipping, with support of the World Bank, intends to develop / upgrade four selected IWT terminals in the Dhaka-Chattagram IWT corridor with associated linked routes .

Passenger IWT development is considered under package named "Bangladesh Regional Waterway Transport Project- Package-S3" wherein the focus is to develop the IWT terminals at four locations namely; Shasanghat, Narayanganj, Chandpur and Barishal.

Further, up-gradation of DEPTC (*Deck & Engine Personnel Training Center*) at Narayanganj shall also form part of the Assignment.

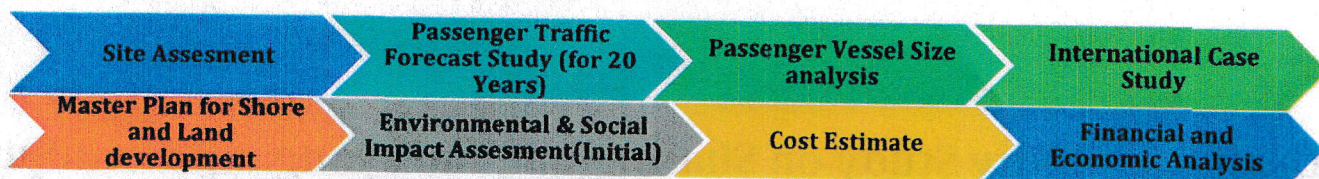


2. PROJECT CONSULTANTS

BIWTA through international competitive bidding process has selected the Consortium (consisting of Voyants Solutions Private Limited, India (VSPL), i-maritime Consultancy Private Limited, India (ICPL) and Unicom Intellect Limited, Bangladesh (UIL)) lead by VSPL for carrying out the Feasibility Study, Detailed Survey, Design and Supervision in connection with Construction of Passenger Terminals at Shasanghat, Narayanganj, Chandpur and Barishal.

1.1. TOPICS COVERED UNDER THE PROJECT

As per the Contract Agreement, Consultants has covered the following items in the Draft Feasibility Report:"



3. PURPOSE OF THE STAKEHOLDERS' WORKSHOP

As stakeholders are the ultimate beneficiaries of this project, BIWTA intends to obtain the suggestions / feedback/ comments from the stakeholders and incorporate the same to create the most efficient user-friendly facilities.

4. KEY FINDINGS OF DFSR

Based on the primary survey and extensive research, Consultants has prepared a comprehensive DFSR comprising of the items mentioned in item no-3 above. The summary of the same is presented in the following sections:

4.1. Traffic Forecast (number of passengers per day)

Consultants have done the comprehensive traffic study by conducting primary research and user-perception survey. Based on various factors of National growth scenario, the traffic has been forecasted using computerised model for a 20 years' projection (for low, base and high case scenario).

Year	2018		2032		2042	
	Location	Base Case	High Case	Base Case	High Case	High Case
Shasanghat	34.6	37.15	70.43	52.4	218.74	



Narayanganj	2.96	4.35	8.18	6.14	25.41
Chandpur	10.64	15.61	29.36	22.02	91.17
Barishal	7.38	6.68	12.73	9.43	39.55
Total Traffic	55.58	63.79	120.7	89.99	374.87

All passenger numbers are in million

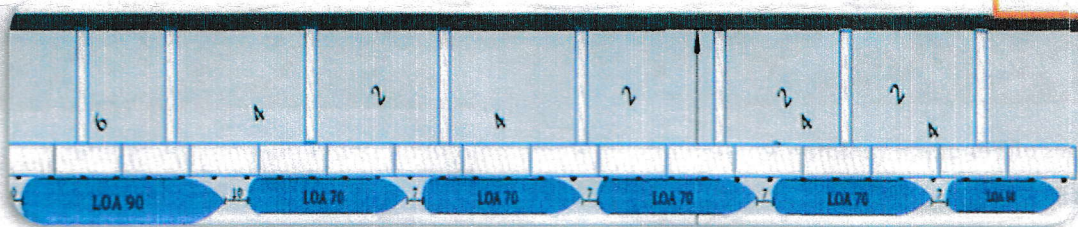
Terminal Planning has been done based on weekend peak period traffic scenario (base case scenario) and is presented below:

IWT Terminal Location	FY 2018	FY 2022	FY 2029	FY 2036	FY 2042
Shasanghat	42,694	44,427	41,339	52,595	64,652
Narayanganj	9,184	9,557	12,160	15,470	19,017
Chandpur	34,916	36,334	46,227	58,814	72,297
Barishal	22,956	23,888	22,138	28,166	34,623

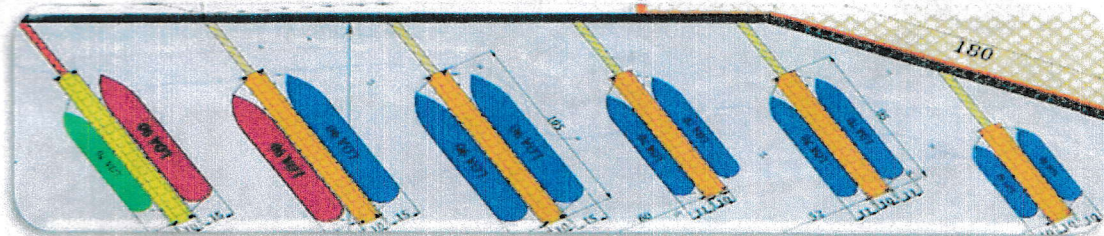
4.2. Water Side development

In-order to cater to the projected traffic (factoring the vessel size proportion), Consultants has developed various Master Plan layout options for Water side infrastructure. Further, a MCM analysis was carried out and three alternatives has been suggested. However, alternative-1 & 2 is more suitable if the scheduled vessel berthing / de-berthing is adopted. The typical concept of suggested alternative is provided below for reference:

4.2.1. Water Side development –Alternative-1- Alongside Parallel Berthing (Preferred Option)

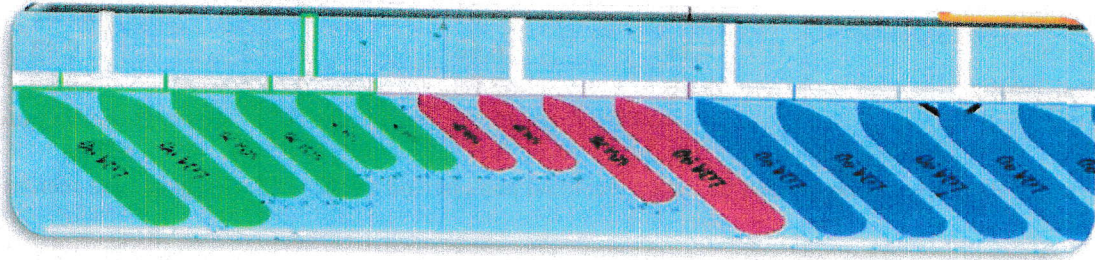


4.2.2. Water Side development –Alternative-2- Finger Pier Alongside Berthing





4.2.3. Water Side development -Alternative-3- Bow Berthing

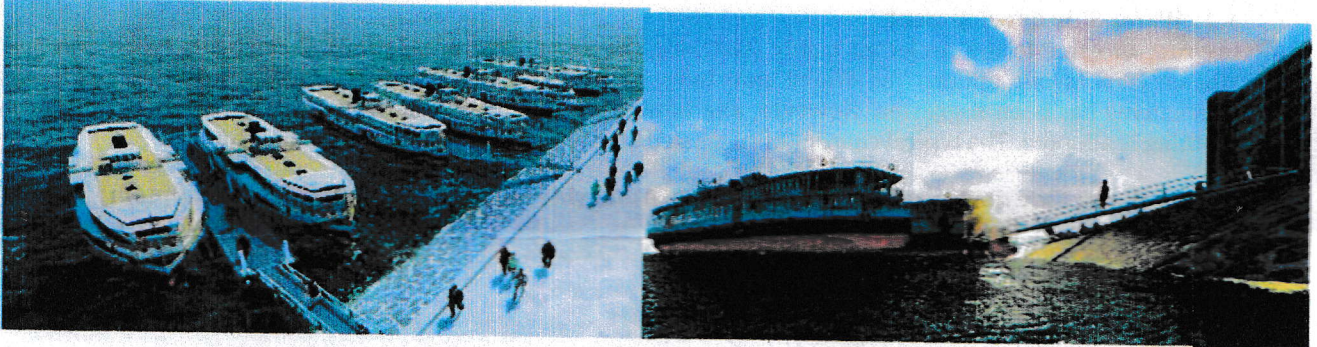


4.3. Land Side Development

Land Side facilities shall comprise of vehicle drop off, terminal building, internal roads for movement of vehicles, parking facility for various kinds of vehicles (like bus station, rikshaw stand, car parking etc.), sewage treatment plant (STP), green cover / landscaping. Typical layout is provided below:

Terminal building shall comprise of information counter, ticketing counter, arrival and departure area, seating arrangement, washrooms, prayer hall, food court, leisure area, display boards, office for BIWTA and others etc.

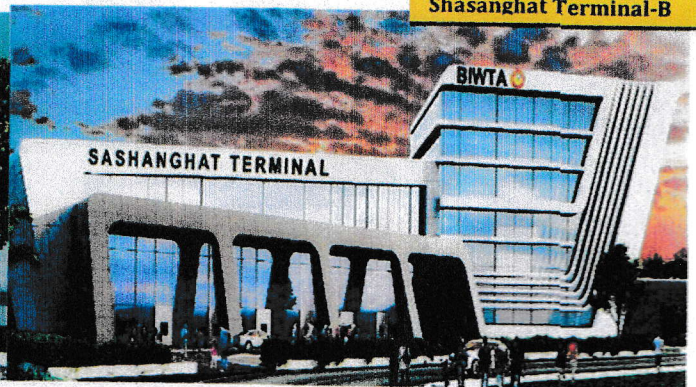
Water Side Infra



Views of Terminal Building



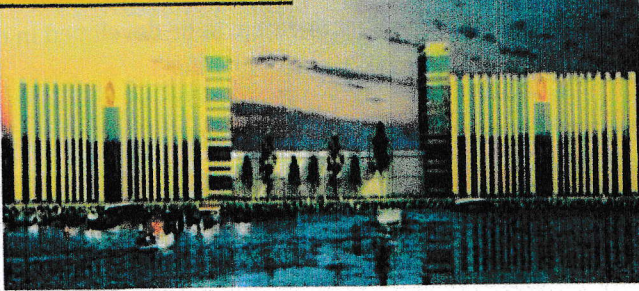
Shasanghat Terminal-A



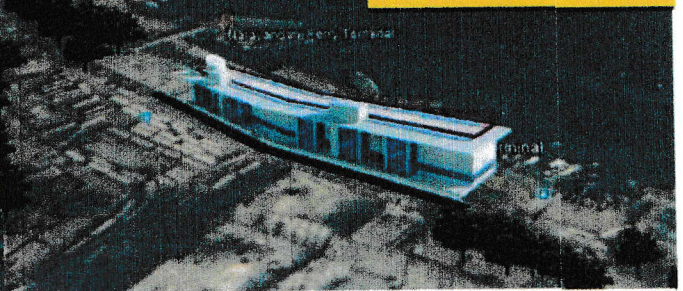
Shasanghat Terminal-B



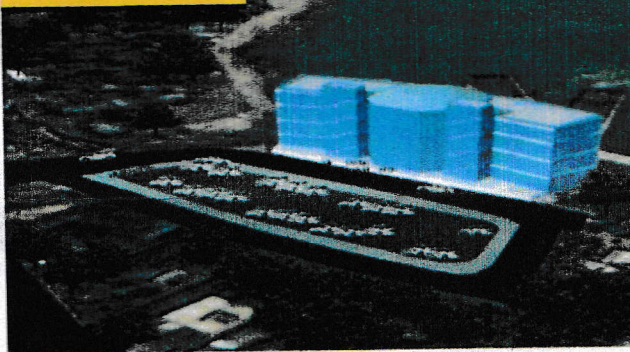
Naravanganj Terminal-A



Narayanganj Terminal-B



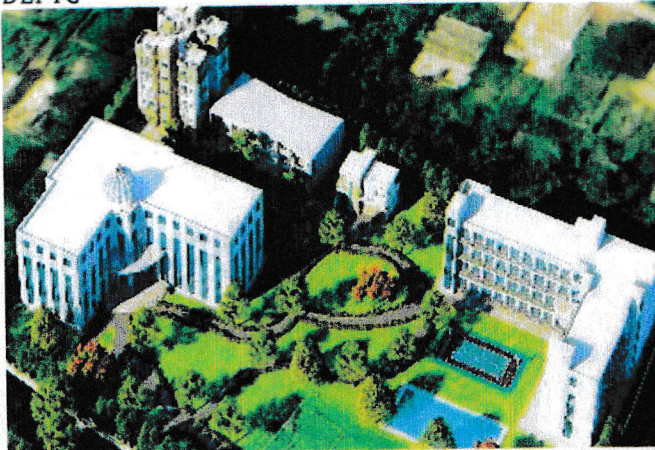
Chandpur Terminal



Barisal Terminal



DEPTC





4.4. Phasing

For ease of implementation and cost optimisation, the project Master Plan might envisage to be developed in different phases initiating by Phase-1- Year 2020 to 2023 followed by subsequent phases.

4.5. Cost Estimate (Capital Cost in Crores Taka for preferred alternative-1, Parallel Berthing)

Site Location	Phase 1	Master Plan
Shasanghat	186	275
Narayanganj	73	100
Chandpur	76	111
Barishal	89	106
DEPTC	69	89
Total Cost	493	680

4.6. Financial and Economic Analysis (FIRR & EIRR)

Location	Terminal and Scenario	FIRR (%)	FIRR*1	EIRR (%)
Shasanghat	Modern Operations Scenario	-ve	16%	22%
Narayanganj	Modern Operations Scenario	-ve	14%	-1%
Chandpur	Modern Operations Scenario	-ve	10%	29%
Barisal	Modern Operations Scenario	-ve	-ve	23%

*1 – Modifications to existing tariff schedule.

- Terminal charges recovered for both departing and arriving passengers @ 10 Taka
- Berthing charges- To be made 1 % of the ticket revenue
- Pilotage & conservancy charge- 1.5 % of ticket revenue
- Rental of leased space-18 to 35 Taka / sq.ft /month

4.7. Transit Oriented Development (TOD)

Possibilities of inclusion of TOD in the future development plans, where significant annual revenues would be available to BIWTA from rental income / PPP development model (reduced capex by utilizing the high FSI available on water front especially for Shasanghat with the planned mass rapid transport system).