



INCEPTION REPORT (ROWA – 1)

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1. Title of the Proposed Assignment

Understanding Technical, Economic and Political Economy Implications of Traffic Diversion from Roadways to Waterways (ROWA)

2. Objective

The overall objective of the assignment will be to collect and analyse relevant secondary and primary data to better understand technical, economic, and political economy implications of traffic diversion from Petrapole-Benapole land route to Tribeni-Kolkata/Haldia ports to the Mongla port in Bangladesh, and to Tribeni-Kolkata/Haldia ports and further to Agartala.

This will involve preparing an inventory of trade routes related information including relevant regulatory matters, gathering perceptions of exporter/importers/related businesses on such diversion, and identifying factors that can facilitate/hinder this diversion.

Table 1: Route and Mode to be studied		
Sl. No.	Name	Mode
1.	Kolkata-Petrapole-Benapole-Dhaka (Map provided in Figure 1)	Roadways
2.	Ghojadanga-Bhomra-Dhaka (Map provided in Figure 2)	Roadways
3.	Kolaghat-Kolkata/Haldia-Mongla-Dhaka (Pangaon port)/Ashuganj (Map provided in Figure 3)	Waterways
4.	Tribeni-Kolkata/Haldia-Mongla-Dhaka (Pangaon port)/Ashiganj (Map provided in Figure 4)	Waterways

Note: Since Chittagong freight movement from Haldia to Chittagong happens through the Coastal route, and World Bank will be studying the feasibility of freight movement along coastal route in a separate study, hence Chittagong will not be covered under the present assignment.

3. Locations to be surveyed

The major survey locations have been presented in Table 2

Table 2. Country-wise Locations where the survey will be undertaken	
Locations in India	Locations in Bangladesh
Land Ports: Ghojadanga, Petrapole, Hemnagar, Agartala	Land Ports: Bhomra, Benapole, and Akhaura

River Ports: Tribeni river terminal, Kolaghat river terminal, and Kolkata Port	River Ports: Ashuganj Port, and Pangaon
Sea Port: Haldia Port	Sea Port: Mongla Port

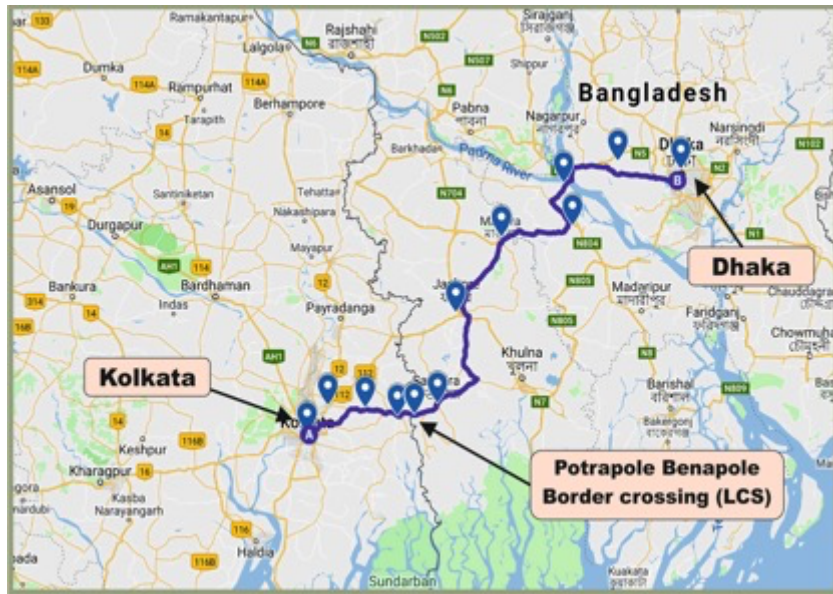


Figure 1: Kolkata-Petrapole-Benapole-Dhaka



Figure 2: Ghojadanga-Bhomra-Dhaka



Figure 3: Kolaghat-Kolkata/Haldia-Mongla-Dhaka (Pangaon port)



Figure 4: Tribeni-Kolkata/Haldia-Mongla-Dhaka (Pangaon port)

4. The Research Framework

The overall research and consultations to be organised under the project will try to answer the following three broad questions:

- 4.1 What is the average time, cost, benefits, and challenges for trading through the routes mentioned in Table 1?
- 4.2 Do a comparative analysis to understand *Whether* (or, Not) and *Why* the waterway routes are more beneficial compared to land routes
- 4.3 Understand what kind of infrastructural and/or procedural deficits need to be addressed to make waterways the more profitable and preferred mode of doing cross-border trade between India and Bangladesh as compared to roadways
- 4.4 Identify the nature of cargo that has more potential for modal shift

The overall research framework has been presented in **Figure 7**.



Figure 7: The Overall Research Plan and Framework

The research framework includes undertaking a thorough literature review which will help in understanding the overall pattern and composition of trade between India and Bangladesh, including the mode-wise commodities traded between two countries. The literature review would also provide insights into various challenges by different stakeholders while trading through the designated routes (mentioned in Table 1) and

why such challenges exist. Key findings from the literature review would help in doing a stakeholder mapping and develop stakeholder-specific questionnaires.

Once the stakeholder-specific questionnaires are in place, then a series of stakeholder-specific Focussed Group Discussions (FGDs) and one-to-one meetings will be organised. Given the travel restrictions in a post-COVID world, most of the interviews would be conducted virtually. The stakeholder interviews and the stakeholder-specific FGDs will help in identifying two specific issues – *firstly*, the nature of freight traffic that moves along the select routes and what are the challenges; and *secondly*, what needs to be done, and to what extent it is possible to divert a part of the freight traffic from roadways to waterways along the select routes. This would also include developing the probable list of commodities and/or type of cargo that has the maximum potential to undergo a modal shift.

The feedback received from target stakeholders would be reviewed in the light of the existing regulations (especially related to procedures related to Trade, procedures related to inter-modal transfers, and Regulations on the movement of Freight Traffic) governing trade between India and Bangladesh via roadways and waterways. Besides, the study would also take stock of the existing and/or planned infrastructure along the select routes. A detailed Time-Cost Analysis (Figure 2) across different modes along the select corridors would be undertaken to better understand the financial implications and feasibility of a modal shift, i.e. how much money will be saved by an exporter/importer/trader/shipping line/logistics service provider if there is a shift from trading through roadways to waterways.

Thus, three crucial outputs of the study would be – *firstly*, identifying the commodities and type of cargo which are more likely to benefit from the modal shift; *secondly*, developing a route plan along which the modal shift would be feasible; and *lastly*, what needs to be done to facilitate the modal shift.

In addition, the study would also look into how much of modal shift could be possible under two distinct scenarios as mentioned below:

- *Business As Usual Scenario* – Which will involve assessing the degree of modal shift after undertaking few soft measures viz. providing incentives, customs facilitation etc.; and
- *Changed Scenario* - Which will involve assessing the degree of modal shift after developing required infrastructure at strategic locations.

The findings of the study would be shared with various stakeholder groups through stakeholder consultations and feedback from them be used to strengthen the research report.

5. Approach and Methodology

The project involves the collection and analysis of two broad categories of data – qualitative and quantitative. While the majority of the data mentioned under Task A, C, D, and E are qualitative, the ones under Task B are more quantitative and needs to be collected from various secondary sources. This section mentions the probable sources

from which data for select parameters will be collected and what methodology will be used to capture the data.

5.1. Activities under Task A

Activities under Task A of the ToR will be collected mostly through one-to-one interviews and FGD with stakeholders.

Table 3: Parameters on which data to be collected under Task A <i>vis-à-vis</i> the probable sources			
Sl. No.	Tasks	Method of Data Collection	Relation with Interim Reports
5.1.1.	<u>For Roadways:</u> Geographical Terrain (sufficient to distinguish essential differences: e.g. mountainous, rolling, flat)	Situation Analysis, Google Maps/Google Earth, secondary information	Interim Report 01
5.1.2.	<u>For Waterways:</u> <ul style="list-style-type: none"> Average depth along specific stretches classified as deep, medium and shallow Average width along specific stretches classified as wide, medium and narrow 	Stakeholder Interviews, Information available from various secondary sources	Interim Report 01
5.1.3.	Major junctions (to identify network nodes that influence overall corridor traffic volumes and mix)	<ul style="list-style-type: none"> Situation analysis of places and discussion with stakeholders on which are the places where congestions happen Stakeholder interviews 	Interim Report 01
5.1.4.	<u>Roadside/Riverside Settlement Patterns</u> In terms of population densities per kilometre: classified in terms of high, medium and low	Situation Analysis, Google Maps/Google Earth, secondary information	Interim Report 01

5.1.5.	<p>Planned/proposed infrastructure upgrades along the selected routes</p> <p>Note: Information from this sub-task will be analysed in conjunction with key findings from Task D and Task E, to design scenarios and analyse their implications on traffic diversion.</p>	<p>Interview with relevant Government Officials, Detailed Project Reports- DPRs collected from local, state, and national level government agencies involved with road, waterways and railways transport, interview with multilateral donors, and information provided in the websites of ADB, JICA, etc.</p>	Interim Report 02, Draft Research Report
5.1.6.	<p>Undertaking a pre-feasibility Cost-benefit analysis to better understand the probable factors that can facilitate and/or hinder the modal shift.</p> <p>Overall framework of the Cost-Benefit Analysis has been presented in Box-1.</p>	<ul style="list-style-type: none"> • Situation analysis of places and discussion with stakeholders on which are the places where congestions happen • Stakeholder interviews • Literature review and studies already done by various organisations. 	Interim Report 02
5.1.7.	Preparing Route maps	<ul style="list-style-type: none"> • Route maps will be prepared for each of the four routes mentioned in Table 1. 	Interim Report 01

Box 1: An overview of the Cost-Benefit Analysis

Simply put, a Cost-Benefit Analysis is to see whether the costs of a business decision (e.g. infrastructure investment) are more or less when compared to the benefits of the intervention. If the benefits from a business decision are greater than the costs then it makes economic sense to pursue the decision.

In the context of the present study, diverting traffic from one mode of transport to another not only requires procedural streamlining and providing appropriate incentives, but those would have to be backed by appropriate infrastructure and vice versa.

In this regard, a simplistic cost benefit analysis would be undertaken under the proposed study to provide a broad understanding about the costs and benefits of undertaking select infrastructure investments.

The overall Cost-Benefit Analysis will aim at undertaking a comparative analysis of the following two scenarios:

- Cost of moving cargo from the point of origin to its destination via different modes in a *Business-As-Usual (BAU) Scenario*;

- Cost of moving cargo from the point of origin to its destination via different modes in an *Alternative Scenario (AS)*.

Three broad category of costs and benefits will be considered while undertaking the Cost-Benefit Analysis – *firstly*, Economic Cost and Benefits; *secondly*, Environmental Costs and Benefits; and *lastly*, Financial Costs and Benefits.

Economic Costs will include the cost of transporting a cargo from one point to another. Other economic costs will include the delays and illegal payments that happen while transporting cargo from one point to another.

Economic Benefits include the incremental cost savings that will be made from the modal shift in the alternative scenario. This will also take into account the incremental movement of diverted as well as new cargo freight movement in the alternative scenario. Additionally, new employment generation opportunities will also be considered while doing the Cost-Benefit Analysis.

Environmental Costs will include the cost of emission of Green House Gases (GHG) under Business-As-Usual Scenario. Other environment costs like air and noise pollution would also be considered.

Environmental Benefits would include the benefits accruing from incremental reduction in pollution and GHG emission in the Alternative Scenario.

Financial Costs will include mostly understanding the cash flows, from the point of view of investments.

Financial Benefits will aim at understanding the returns on investments from a revenue and profit point of view.

The Cost-Benefit analysis will involve comparing the total time and cost of transporting cargo via Roadways (Business as usual) vis-à-vis waterways (alternate scenario). If the time and cost of transporting a cargo via roadways is greater than the time and cost of transporting cargo via waterways then it will be considered as an “ECONOMIC COST”, otherwise, it will be considered as a “ECONOMIC BENEFIT”.

Similarly, the employment generated for transporting cargo via roadways will be considered and will be compare with the employment generated while transporting cargo via waterways. In this regard, the potential for employment generation will also be considered given the forecasted traffic flows under the Business as usual as well as under the Alternative Scenario. The number of labourers involved at different stages of cargo transportation across different modes and across different job roles will be documented and converted to monetary value depending on their wages. If the cumulative cost of manpower involvement is greater in the BAU scenario, as compared to the AS scenario, then it will be considered as an “ECONOMIC COST”, else it will be considered as an “ECONOMIC BENEFIT”.

Similarly, GHG emission will be considered both for BAU and AS scenarios. World Bank estimates for GHG emission for moving per ton of cargo across different modes will be taken into consideration for comparing the “ENVIRONMENTAL COSTS” and “ENVIRONMENTAL BENEFITS”.

With regard to the Financial Costs, the investment flows will be compared with the revenue inflows to understand what is the Internal Rate of Return, whether it is positive or negative, and whether the intervention is yielding overall positive cashflows in the long run.

In the end all the cumulative Economic, Environmental, and Financial costs and benefits will be added to see whether the aggregate COSTS are greater than or less than the aggregate Economic and Environment BENEFITS. If the costs were found to be greater the economic and environmental costs, then the traffic diversion across the select routes would be considered as feasible, else it will be concluded that the diversion would not be feasible.

The Cost Benefit Analysis will include analysis of the data to be represented using Dummy Table A1 – A6.

Table A1 helps in estimating the mode and cargo category wise traffic projections in two scenarios – Business-As-Usual (BAU); and Alternative Scenario (AS).

Table A2, will help in understanding the cost of transporting cargo from one point to another under two different scenarios.

Table A3, will help in understanding the monetary value of employment generated under the two scenarios.

Table A4 will help in understanding the amount of increase/reduction in GHG emission expressed in money terms. Conversion of GHG emission to money terms will be done based on the amount of diesel/petrol burnt/saved.

In each of the table A2 to A4, the difference in the cost in BAU and AS would be calculated and analysed cargo-wise and mode-wise.

Table A5 would be the main table that will help in calculating the cargo and mode wise cumulative Costs/Benefits. It will help understand the which cargo could be sent through which mode and the benefits/Costs thereof.

Table A6 would help in understanding whether a proposed project will be feasible or not. It will compare all Costs/Benefits, add them to the financial costs/benefits and would help in calculating the Internal Rate of Return for a particular project. If the $IRR > 0$ then the Benefits will be greater than Costs and hence the project is worth looking into.

Note:

- The Cost-Benefit Analysis would be specific to routes and associated mode;
- The analysis will focus on both commodity and cargo categories (Bulk, Break Bulk, Dry Bulk, Bagged, Ro-Ro, and container) by which the select commodities are transported.
- Commodities to be selected would depend upon the commodities identified from Task B of the assignment.
- The Cost Benefit Analysis will typically depend upon data and forecasts available from secondary studies and/or from stakeholder feedback.
- The Cost-Benefit Analysis to be carried out under the study will take into account selecting at least two infrastructure projects (one in India and one in Bangladesh) which has the potential to facilitate greater cargo movement across the two countries.
- Traffic forecast will be considered from secondary studies.

Table A1. Mode wise Traffic Projections across stretch X-Y										
Particulars			Year							
			2020		2030		2040		2050	
Mode	Cargo Type	Commodity	BAU	AS	BAU	AS	BAU	AS	BAU	AS
Road										
Rail										
Waterways										

Table A2. Mode wise Cost of Transportation																
Particulars			Year												Cargo wise Sub-Total (BAU-AS)	Mode wise Cost-Benefit CB (BAU - AS)
Mode	Cargo Type	Commodities	2020			2030			2040			2050				
			BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)		
Road																
Rail																
Inland Waterways																

Table A3. Mode wise Employment Generation																
Particulars			Year												Cargo wise Sub-Total (BAU-AS)	Mode wise Cost-Benefit CB (BAU - AS)
Mode	Cargo Type	Commodities	2020			2030			2040			2050				
			BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)		
Road																
Rail																
Inland Waterways																

Table A4. Mode wise GHG mission																
Particulars			Year												Cargo wise Sub-Total (BAU-AS)	Mode wise Cost-Benefit CB (BAU - AS)
Mode	Cargo Type	Commodities	2020			2030			2040			2050				
			BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)	BAU	AS	Difference (BAU-AS)		
Road																
Rail																
Inland Waterways																

Table A5. A Comparative Analysis across all modes						
Parameters	Cargo Type A			Cargo Type B		
	Road	Rail	Waterways	Road	Rail	Waterways
Cost of Transport						
Employment Generation						
GHG Emission						
Total						

Table A6. Calculating the Financial Cost and the Internal Rate of Return from the Project (IRR)									
Parameters	Quantity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Traffic	MMTPA	-	-	-	-	-	-	-	-
Capital Cost	Rs. '000	-	-	-	-	-	-	-	-
Total Benefit from the project									
Revenue from operation	Rs. '000	-	-	-	-	-	-	-	-
Economic Benefit	Rs. '000	-	-	-	-	-	-	-	-
Environmental Benefit	Rs. '000	-	-	-	-	-	-	-	-
Total Benefit	Rs. '000	-	-	-	-	-	-	-	-
Operating Expenses									
Maintainence cost	Rs. '000	-	-	-	-	-	-	-	-
Operating Cost (Variable)	Rs. '000	-	-	-	-	-	-	-	-
Total OPEX	Rs. '000	-	-	-	-	-	-	-	-
Net Cash Flow	Rs. '000	-	-	-	-	-	-	-	-
Economic IRR	-								

5.2. Activities under Task B

The collection of data mentioned under Task B of the ToR will be through various secondary sources and stakeholder interviews. Details of parameters *vis-à-vis* the techniques to be employed have been explained in Table 4.

Table 4: Parameters on which data to be collected under Task B viz-a-vis the probable sources			
Sl. No.	Tasks	Method of Data Collection	Relation with Interim Reports
5.2.1.	<p>The volume of trade happening between India and Bangladesh over the last three years (extracted from country border crossing data, and identifying the type of goods being exported/imported in accordance with country classifications) through various routes and via various modes (Roadways, Inland waterways, and Railways) will be studied.</p> <ul style="list-style-type: none"> • Composition and direction of trade; • Understanding the existing modal mix of international freight between the two countries; • Understanding the reason for the predominance of one mode over others through interviews with relevant stakeholders (viz. exporter/importer, custom house agents). <p>Based on the feedback received from various stakeholders, a deep dive would be undertaken to identify commodity-wise opportunities for modal shift.</p> <p>This will involve collecting data from various secondary sources mostly from DGCI&S (for roadways,</p>	<p>Secondary data were available with various agencies and Departments in India and Bangladesh. For example, Directorate General of Commercial Intelligence and Statistics, Ministry of Road Transport, Ministry of Shipping, Inland Waterways Authority of India, Bangladesh Inland Water Transport Authority, etc.</p> <p>Commodity-specific data to be also collected from the Ministry of Commerce and Industry, ComTrade, ITC Trade Map, WITS, FOIS, etc.</p>	Interim Report 01

	and seaports), Railways (FOIS, CRIS etc.) and inland waterways (from IWAI), and analysing the data to develop a comprehensive picture of country-commodity-mode wise trade information. The analysis will focus on the ports mentioned in Table 2.		
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5.3. Task C, D and E

Activities under Task C of the ToR will be collected mostly through one-to-one interviews and Focussed Group Discussion with stakeholders.

Table 5: Parameters on which data to be collected under Tasks C, D, & E vis-a-vis the probable sources			
Sl. No.	Tasks	Method of Data Collection	Relation with Interim Reports
5.3.1.	<p><u>Task C: Understanding procedures related to trade and transit</u></p> <ul style="list-style-type: none"> a) Stocktaking of procedures for sending freight by roadways (including customs procedures and intermodal transfers); b) Stocktaking of procedures for sending freight by waterways (including customs procedures and intermodal transfers); c) Total number of documents required for sending cargo via roadways and/or waterways and time required to process them; d) Identification of redundancies and the inter-country difference in procedures; e) Stocktaking and analysis of various trade agreements and regulations; and analysis of the divergence between the stated and actual practices; f) Assess if there are any route-specific or commodity-specific regulatory constraints that can be eased by 	Secondary Literature, Project DPR, Situation Analysis, Interview with stakeholders, experts, and practitioners.	Interim Report 01

	diverting traffic from roadways to waterways.		
<u>5.3.2.</u>	<p><u>Task D: Estimating time-cost for transporting freight via roadways and waterways</u></p> <ul style="list-style-type: none"> a) Average time required by trucks/vessels to reach one point to another (along specific stretches and from the starting point to the endpoint, taking into account the duration of haulage, if any) b) The average cost incurred by trucks/vessels (along specific stretches and from the starting point to the endpoint, taking into account the cost incurred in haulage, if any) c) Reason for stoppages d) Speed money is paid to different agencies for travelling from one point to another. <p>The Time-Cost Analysis has been explained in detail in Box 1. The time cost analysis will be done considering select commodities along select Origin-Destination pairs via different modes.</p>	Secondary Literature, Project DPR, Situation Analysis, Interview with stakeholders, experts, and practitioners.	Interim Report 02
<u>5.3.3.</u>	<p><u>Task E: Stakeholder survey to understand the economic and political economy aspects of traffic diversion</u></p> <ul style="list-style-type: none"> a) Mapping of relevant stakeholders who are/would be directly involved in both the existing transport system as well as in the scenario if the traffic is diverted b) Are the relevant exporters/importers willing to send their cargo by waterways? If yes, then what are the reasons and vice-versa? What needs to be done to encourage the exporters/importers to pursue waterways? c) What are the possible political economy challenges for such traffic diversion? 	Secondary Literature, Project DPR, Situation Analysis, Interview with stakeholders, experts, and practitioners	Interim Report 02

	<p>d) Which are the preferred routes that would be followed for diverting the traffic?</p> <p>e) What are the infrastructure deficits that need to be addressed to facilitate smooth traffic diversion?</p> <p>f) What procedural changes (harmonisation of customs procedures, vehicular specifications, etc.) need to be introduced to facilitate the shift in the existing modal mix?</p> <p>g) Preparing a case study on the feasibility of establishing Balagarh as an extended gateway to Kolkata and a logistic hub.</p> <p>h) Preparing a case study on the possibility of modal shift from railways to waterways.</p>		
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Note: A tentative list of Reference Materials has been provided in Annexure - II

Box 2: An overview of the Time-Cost Analysis

The movement of a good from the point of origin to its destination includes many visible and hidden processes. This includes stoppages and transshipment.

Stoppages

Apart from the road condition and traffic congestion, there are several factors which cause stoppages, leading to delay in covering the total distances for trade. In case of roadways -stoppages could be because of the presence of multiple regulatory bodies and security personnel across the corridors, multiple toll tax collection centres, sanitary and phytosanitary (SPS) related inspection, sample collection and testing, and cargo inspection. Similarly, in the case of waterways stoppages happen owing to unavailability of night navigation, tidal force, custom checks, inspection.

Transshipment

Transshipment is when cargo is moved from one vessel to another while in transit to its final destination.

For example, many trucks, to avoid long waiting times at the Petrapole border transship their cargo to smaller trucks at the Bongaon border. These smaller trucks carry the cargo up to the Petrapole-Benapole border till the cargo gets clearance from the border agencies and is allowed to enter Bangladesh. Since trade agreement between India and Bangladesh does not allow transit, so the entire cargo from the smaller truck is again transhipped to a Bangladeshi truck for an onward journey to the distribution point in Bangladesh.

Hence, in this process, there are two points where transshipment takes place. Similar is the case for waterways where smaller barges carry cargo from inland terminals to larger ships (termed as mother vessels) waiting at the points (mostly sea) with sufficiently large depths. Then in the destination port, the consignments are unloaded from barges/ships to truck to deliver to the final delivery point. In this case, also transshipment happens twice.

Now, these transshipments consume both time and cost which adds to the final consumer price. In addition, unlike road transportation, Railways and inland waterways do not have the last mile connectivity. As a result, in case if freight needs to be transported via waterways and/or railways, then the freight would have to be carried by trucks to the freight loading points from where loading on railways or barges take place. Similarly, after the freight reaches its destination, then they are unloaded from the railways and/or barges and again loaded on to trucks for onward delivery to the final destinations.

Task D intends to capture the time and cost of transporting different types of cargo from the origin point in India/Bangladesh to the destination point in Bangladesh/India along the select routes. Thus, the study will look into bilateral cargo movement between the two countries.

A pictorial presentation of the framework for Time-Cost Analysis has been presented in Figure 8.

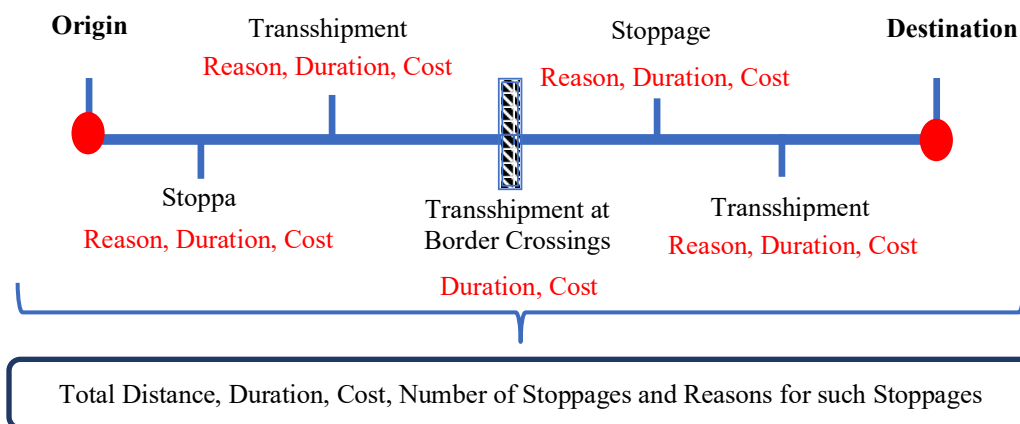


Figure 8. Pictorial presentation of the Plan for doing the Time-Cost Analysis

A comparative analysis of mode-wise time-cost analysis will be captured and represented using dummy Table 6.

Table 6. A dummy Table for comparing Time and Cost of Cargo Transportation across different Modes						
Route	Mode	Distance	Total Time Duration		Total Cost	
			Travel	Stoppages	Travel	Stoppages

Table 6, will not only help in understanding the financial feasibility of diverting freight traffic from one mode of transport to another, it will also help in understanding which route is more time-cost-efficient even if one considers the same mode of transport.

5.4. Sample Size and Composition

Stakeholder Category	Number (total number including India and Bangladesh)	Proposed Stakeholder Engagement Strategy
Exporters, Importers, and CHA	10-15	FGD organised via virtual platforms/one-to-one interview/ telephonic interviews
Shipping Lines, Freight Forwarding Agents, and Providers of Trade Logistics Services	10-15	Focussed Group Discussion organised via virtual platforms/ one-to-one interview
Business Associations	5-10	Focussed Group Discussion organised via virtual platforms/one-to-one interview/ telephonic interviews
Truck Drivers and Transport Operators	15-20	One to one interview at the border
Government Officials including representatives from Department of Roads, Railways and Shipping (including IWAI and BIWTA) in India and Bangladesh	10-15	FGD organised via virtual platforms; and/or one-to-one interview
Total	50-80	

Note:

- The detailed list of stakeholders has been provided in Annexure – III
- Stakeholder Specific Questionnaires provide in Annexures IV - IX

6. Timeline for the study

Sl. No.	Activity	Tentative Dates	
		Date of initiation	Date of Completion
4.1	Inception Report - A brief report including outlining the methodology for data collection for Tasks A to F as mentioned in this ToR along with staffing plan.	On signing of the contract	Within two days from the signing of the contract
4.2	Inception Meeting: This will be a virtual meeting with key subject experts, including stakeholders from the private sector working on international trade logistics. It will also have a dedicated session on finalising the methodology of the study. The minutes of the meeting will be submitted to the Project Team of the World Bank Group	-	August 20, 2020
4.3	Initiation of stakeholder interviews	August 24, 2020	October 31, 2020
4.4	Interim Report 01 – A comparative analysis of various procedural and infrastructural challenges involved in diverting traffic from roadways to waterways along the selected route – this will also include analysis of various stakeholder perceptions.	-	September 30, 2020
4.5	Interim Report 02: A routing plan for traffic diversion from roadways to waterways based on the findings of the stakeholder surveys	-	October 15, 2020
4.6	Draft Final Report. This will include methodology adopted and data collected and analysed under tasks A to E	-	November 01, 2020
4.7	Dissemination of Findings through a Stakeholder Consultation – Disseminating findings among the relevant stakeholders	-	November 18, 2020

4.8	Final Report - The consultant is expected to deliver a final report including all data specified under Tasks A to E to the World Bank Group and clean data files no later than 2 weeks after receipt of comments from the World Bank Group.	-	November 30, 2020
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7. Team Composition for the survey

Table 4. Personnel involved in the core project implementation team					
Name of Staff & Firm associated with	Area of Expertise Relevant to the Assignment	Designation for this Assignment	Assigned Tasks or Deliverables	Location	Number of Days
Bipul Chatterjee, Executive Director, CUTS International	Managing Multi-country Projects. Experience of working with Policymakers in the BBN Corridors	Team Leader	Project Planning, Monitoring and Evaluation	India	20
Arnab Ganguly	Trade and Connectivity	Project Manager	Project Planning, Monitoring and Evaluation, Guide the Research Team, Review Research Outputs	India	50
Sumanta Biswas	Trade and Connectivity	Project Coordinator, India	Coordination with Experts, Getting Permissions from respective Departments for the Traffic Survey, Field Survey	India	75
Bijaya Roy	Trade and Connectivity	Research Associate	Research, field survey	India	90
Shaswata Mukherjee	Trade and Connectivity	Research Associate	Research, field survey	India	90
Shaheen Ul Alam	Trade and Connectivity	Project Coordinator, Bangladesh	Coordination with Experts, Getting Permissions from respective Departments for the Traffic Survey, field survey	Bangladesh	75
Md. Mahabub Hasan	Trade and Connectivity	Research Associate, Bangladesh	Research, field survey	Bangladesh	90
Robart Shuvro Guda	Trade and Connectivity	Research Associate, Bangladesh	Research, field survey	Bangladesh	90

Annexure I: Terms of Reference (ToR)

Understanding Technical, Economic and Political Economy Implications of Traffic Diversion from Roadways to Waterways:

From Petrapole-Benapole and Ghojadanga-Bhomra Land Border Route to Tribeni-Kolkata/Haldia Port in India to Dhaka in Bangladesh via the Mongla Port

1. Background and Context

1.1 Faced with congested land transport networks, swelling carbon footprint and an increasingly imbalanced modal mix, most riverine countries in the South Asia region are placing importance on reviving Inland Waterway Transport (IWT). Inland waterways are being revived/introduced as time-tested and sustainable new highways for cargo and passenger transport. India and Bangladesh, in particular, are advancing policies and investments in developing potential waterways, both for sub-national as well as transnational transit.

1.2 India's increased emphasis on IWT is reflected in the National Waterways Act, 2016, which has added 106 new waterways to the earlier five designated National Waterways (NW). As part of this initiative, the augmentation of the Ganga river system (NW1) is being carried out in a big way. Similarly, Bangladesh is scaling up investments from about 4-7 percent in the past to around 10 percent of total transport sector funding.

1.3 Furthermore, both countries have renewed and strengthened the India-Bangladesh Protocol on Inland Water Transit and Trade (PIWTT) that outlines new measures to facilitate trade via inland waterways by reviving/developing infrastructure and improving cross-country transport and logistics facilities. In addition to the existing six ports of call, four additional ports of call and two extended ports of call on each side have been agreed recently along with a longer period of five years (as against two years validity earlier) for the renewal of this Protocol.¹

1.4 As a result, both countries stand to gain. While India's connectivity with its Northeast region, in particular, will improve, Bangladesh will more transit business with positive revenue implications.

1.5 Given this background, it is important to note that the World Bank Group is supporting the rapidly evolving waterway programmes both in India and Bangladesh, including planning its investments in the waterway sector in a coordinated manner. The Bank has also been supporting various other initiatives including the Assam Inland Water Transport Project; Capacity Augmentation of the National Waterway- 1 (JAL MARG VIKAS) Project; Bangladesh Regional Waterway Transport Project 1; and the second Rural Transport Improvement Project.

¹ The Second Addendum to the India-Bangladesh Agreement on PIWTT declares additional Ports of Call at Kolaghat, Dhulian, Maia, Sonamura and Jogighopa in India and Chilmari, Rajshahi, Sultanganj, Daukhandi and Bahadurabad in Bangladesh. In addition to them, Badarpur (Karimgunj, Assam) and Tribeni (Kolkata in West Bengal) and Ghorasal (Narayangunj near the north of Dhaka) and Muktarpur (Pangaon near the south of Dhaka) have been declared as Extended Port of Calls.

1.6 Now, encouraged by the progress on augmentation of the Ganga river system (NW1) and given its huge trade potential with Bangladesh and wider East Asia, the Government of India is firming up a plan to develop an 'Eastern Grid', comprising four key waterways and certain international routes, primarily situated in India and Bangladesh, which will be of about 5,000 kilometres of navigable waterways to boost regional integration and trade.

1.7 Seamless connectivity through NW1 (Ganges) and NW2 (Brahmaputra) will also create opportunities for developing an economic corridor of about 3,500 kilometres connecting Northeast India with the rest of the country through Bangladesh, and will also link Bhutan and Nepal with Bangladesh and India through multi-modal connections.

1.8 The broad objective of the World Bank Group, therefore, is to make on-going investments (both for infrastructure development and regulatory reforms) in the waterway sector in the two countries more productive by expanding the network that can penetrate deeper into the region. This will improve inter-connected access to different markets, allowing consumers to access wider varieties of cheaper, better-quality goods and will permit firms to access inputs at competitive prices and increase the size of their export markets. Further, implementation of an appropriate transit regime (e.g. MVA) would trigger a reduction in generalised transport costs, changing the pattern of freight flows and increasing the volume of freight. Developing a water transport corridor could usher in a sustainable and energy-efficient transport solution and would help rebalance the transport matrix, currently disproportionately reliant on road transport, resulting in congestion, crashes, and a high GHG footprint. It also involves a much lower requirement of land and physical displacement of habitations, making the initial investment requirements and the life cycle cost much lower than other transport modes like road and rail. Developing such a network would also enhance the overall climate resilience of the transport network by creating redundancies in the network during climate and natural disaster events.

1.9 It is to be noted that the bulk of cross-border trade between India and Bangladesh happens through roadways, especially through the Petrapole-Benapole land border route. The Ghojadanga-Bhomra land border is also another point that registers significant trade between India and Bangladesh, especially in perishable products. This land border is approximately from the Petrapole-Benapole land port. To divert some of that trade through the route of the waterway, it is essential to understand whether it will be economically feasible to do so. This, in turn, is to be studied by taking into account the following factors:

- Are exporters/importers willing to send their cargo by waterways? If yes, what are the reasons and vice-versa? What needs to be done to encourage them to divert their trade to waterways?
- What would be possible political economy challenges *vis-à-vis* such as traffic diversion?
- Which are the routes that would be followed for diverting trade traffic from Petrapole-Benapole and Ghojadanga-Bhomra land border route to Kolkata/Haldia port either directly or via Tribeni (about 60 kilometres north of Kolkata) in NW1?

- What are the infrastructure deficits that need to be addressed to facilitate this traffic diversion?
- What procedural changes (harmonisation of customs procedures, vehicular specifications, etc.) need to be introduced to facilitate this shift in the existing modal mix?

1.10 Now, given this Background and Context, the World Bank Group is conducting a study, which is aimed at understanding the feasibility of diverting Bangladesh bound international freight traffic via Petrapole-Benapole and Ghojadanga-Bhomra land border route to Tribeni-Kolkata/Haldia port and from there to the Mongla port in Bangladesh. The study will also aim to provide practical and innovative solutions on ‘*whether*’ and ‘*how*’ such traffic diversion strategies are to be framed, considering national and regional contexts and their political economy aspects/factors.

1.11 The study will be focused on the following three cross-border trade routes:

Table 1: Route and Mode to be studied		
Sl. No.	Name	Mode
1.	Kolkata-Petrapole-Benapole-Dhaka	Roadways
2.	Ghojadanga-Bhomra-Dhaka	Roadways
3.	Kolaghat-Kolkata/Haldia-Mongla-Dhaka	Waterways
4.	Tribeni-Kolkata/Haldia-Mongla-Dhaka	Waterways

1.12. The major survey locations would be Ghojadanga, Bhomra, Petrapole, Benapole, Tribeni River Port, Kolkata Port, Haldia Port, Hemnagar, Mongla Port, Ashuganj Port, Agartala, Akhaura, and Pangaon.

2. The objective

2.1 The overall objective of the assignment will be to collect and analyse relevant secondary and primary data to better understand technical, economic, and political economy implications of traffic diversion from Petrapole-Benapole and Ghojadanga-Bhomra land route to Tribeni-Kolkata/Haldia ports to the Mongla port in Bangladesh, and to Tribeni-Kolkata/Haldia ports and further to Agartala.

2.2 This will involve preparing an inventory of trade routes related information including relevant regulatory matters, gathering perceptions of exporter/importers/related businesses on such diversion, and identifying factors that can facilitate/hinder this initiative.

3. Scope

Task A: Route descriptions

Terrain

Roads

- Sufficient to distinguish essential differences – for example, forest, rolling, flat
 - ✓ Classified as mountainous, rolling and flat
 - ✓ Type of roads – Number of lanes
 - ✓ Quality of roads classified as good, average and poor
 - ✓ Existing routes
 - ✓ Alternate (existing/upcoming) routes

Waterways

- Average depth along specific stretches classified as deep, medium and shallow
- Average width along specific stretches classified as wide, medium and narrow

Major Junctions

- To identify the major points of stoppage, transshipment, and customs checks.

Roadside/Riverside Settlement Patterns

- In terms of population densities per kilometer: classified in terms of high, medium and low

Planned/proposed infrastructure upgrades along the selected routes

- To map the various ongoing and planned connectivity initiatives/investments for infrastructure upgrades along the select routes.

Task B: Trade pattern between India and Bangladesh

The volume of trade happening between India and Bangladesh over the last three years (extracted from country border crossing data and identifying the type of goods being exported/imported under country classifications) through various routes and via various modes will be studied.

- Composition and Direction of trade;
- Understanding the existing modal mix of international freight between the two countries;
- Understanding the reason for the predominance of one mode over others through interviews with relevant stakeholders (viz. exporter/importer, custom house agents).

Based on the feedback received from various stakeholders, a deep dive would be undertaken to identify commodity-wise opportunities for modal shift.

Task C: Understanding procedures related to trade and transit

- Stocktaking of procedures for sending freight by roadways (including customs procedures and intermodal transfers);
- Stocktaking of procedures for sending freight by waterways (including customs procedures and intermodal transfers);
- Total number of documents required for sending cargo via roadways and/or waterways and time required to process them;
- Identification of redundancies and an inter-country difference in procedures;
- Stocktaking and analysis of various trade agreements and regulations; and analysis of the divergence between the stated and actual practices;
- Assess if there are any route-specific or commodity-specific regulatory constraints that can be eased by diverting traffic from roadways to waterways.

Task D: Estimating time-cost for transporting freight via roadways and waterways

- Average time required by trucks/vessels to reach one point to another (along specific stretches and from the starting point to the endpoint, taking into account the duration of haulage, if any)
- The average cost incurred by trucks/vessels (along specific stretches and from the starting point to the endpoint, taking into account the cost incurred in haulage, if any)
- Reason and duration of stoppages and their cost implications
- Speed money paid to different agencies for travelling from one point to another

Note: The data for these components will be collected through a secondary literature review as well as from a survey of various stakeholders, viz. truck drivers, exporters/importers, customs house agents, transport operators, logistic companies.

Task E: Stakeholder survey to understand the economic and political economy aspects of traffic diversion

- Mapping of relevant stakeholders who are/would be directly involved in both the existing transport system as well as in the scenario if the traffic is diverted
- Are the relevant exporters/importers willing to send their cargo by waterways? If yes, then what are the reasons and vice-versa? What needs to be done to encourage the exporters/importers to pursue waterways?
- What are the possible political economy challenges for such traffic diversion?
- Which are the preferred routes that would be followed for diverting the traffic?
- What are the infrastructure deficits that need to be addressed to facilitate smooth traffic diversion?
- What procedural changes (harmonisation of customs procedures, vehicular specifications, etc.) need to be introduced to facilitate the shift in the existing modal mix?

Note: In the wake of COVID, if there are restrictions on movement, then the stakeholder surveys to be conducted virtually.

4. Deliverables/Specific Outputs of the Consultancy

4.1 The Consultant shall be expected to mobilise and commence the assignment within 7 days upon signature of the contract (the effective date of contract) at the very latest. It is expected that the assignment shall be carried out within a maximum of 16 weeks (4 months) after the signature of the contract. The main deliverables and payment schedule are outlined below (times are measured from the date of signature of contract).

#	Deliverables	Timeline (from commencement)
1	Inception Report - A brief report including outlining the methodology for data collection for Tasks A to E as mentioned in this ToR along with staffing plan	Week 1
2	Inception Meeting: This will be a virtual meeting with key subject experts, including stakeholders from the private sector working on international trade logistics. It will also have a dedicated session on finalising the methodology of the study. Minutes of the meeting will be submitted to the Project Team of the World Bank Group.	Week 1
3	Interim Report 01 – A comparative analysis of various procedural and infrastructural challenges involved in diverting traffic from roadways to waterways along the selected route – this will also include analysis of various stakeholder perceptions.	Week 4
4	Expert Group Meeting: A virtual meeting will be organised to discuss key findings from the literature review and primary survey on procedural and infrastructural challenges involved in diverting traffic from roadways to waterways along the selected route. Minutes of the meeting will be submitted to the Project Team of the World Bank Group.	Week 6
5	Interim Report 02: A routing plan for traffic diversion from roadways to waterways based on the findings of the survey and stakeholder surveys	Week 8
6	Draft Final Report. This will include methodology adopted and data collected and analysed under tasks A to E	Week 12
7	Dissemination of Findings through a Stakeholder Consultation – Disseminating findings among the relevant stakeholders	Week 15
8	Final Report - The consultant is expected to deliver a final report including all data specified under Tasks A to E to the World Bank Group and clean data files no later than 2 weeks after receipt of comments from the World Bank Group.	Week 16

4.2 All reports shall be prepared and submitted in English, in soft copy only, as a single Acrobat PDF file and a single Microsoft Word file. The cleaned data collected as part of this contract will be submitted in Excel.

4.3 All deliverables must be approved by the World Bank Group before any payment can be effective. The World Bank Group will verify that the work is completed in accordance with agreed-upon protocols. The World Bank Group reserves the right to adjust remaining payments if agreed upon protocols are not followed or if the quality is not as specified in this ToR.

5. Supervision

5.1 The consultant will work under the guidance and supervision of Arnab Bandyopadhyay (Lead Transport Specialist, GTI06). Support will be provided by Mitali Nikore (Consultant), and other members of Transport Specialist's team.

6. Expertise Requirements

6.1 The consultant shall have a multi-disciplinary team including experts with an expertise in freight transport and logistics, economics, and industry analysis. The consultant's core team shall have experts who have significant experience/knowledge in the fields of (i) collection/estimation of traffic data; (ii) trade data collection and analysis, (iii) expertise in logistics sector; and (iv) understanding of regulatory regime for India-Bangladesh freight movement.

6.2 The consultant's team should ideally include professionals from Bangladesh and India or the South Asia sub-region to quickly compile the data required from these countries for use in this study. Experts should have good fluency in English, Hindi, and Bengali.

7. Confidentiality Statement

7.1 All data and information received from the World Bank Group for this assignment are to be treated confidentially and are only to be used in connection with the execution of this ToR. All intellectual property rights arising from the execution of this ToR are assigned to the World Bank Group. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed advance written authorisation of the World Bank Group.

8. Ownership of Materials

8.1 Any deliverables under this assignment in any form, including data collection and any communications material developed under this assignment will be the property of the World Bank Group. All project deliverables, including reports and other creative work, called for by this ToR, in written, graphic, audio, visual, electronic, or other forms shall acknowledge the support of the World Bank Group.

8.2 The logo of the World Bank Group should be included in all documents published and distributed. All events that take place to extract information, to validate the results, or to distribute the documents, should have the logo of the World Bank Group. The World Bank Group can use the accumulated experience of this project to support other projects in any other country in the world.

Annexure II: List of References

1. Connecting Corridors beyond Borders – Enabling seamless connectivity in the BBIN sub-region Published by CUTS International, 2018 (https://cuts-citee.org/pdf/Report-Connecting_Corridors_beyond_Borders.pdf)
2. Bridging the East – Trade and Transport Connectivity in the Bay of Bengal Region, Published by CUTS International, 2018 (<https://bit.ly/3gPk1pa>)
3. Expanding Tradable Benefits of Trans-boundary Water: Promoting Navigational Usage of Inland Waterways in Ganga and Brahmaputra Basins (IW), various publications by CUTS International (<https://cuts-citee.org/iw-outputs/>)
4. India-Bangladesh Agriculture Trade – Demystifying Non-Tariff Barriers to India-Bangladesh Trade in Agricultural Products and their Linkages with Food Security and Livelihood, Published by CUTS International, 2019 (https://cuts-citee.org/pdf/project_report-ntbagr.pdf)
5. Viability of Inland Water Transport in India
<https://www.adb.org/sites/default/files/publication/30113/inrm13.pdf>
6. Inland waterways in India – Issues and Challenges <https://bit.ly/3a9fCuG>
7. Enumerate the problems and prospects of inland water transport in India.
<https://bit.ly/31F5A0N>
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<https://bit.ly/3gKu0fo>
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11. Role of multimodal connectivity in fostering value chains in the BBIN subregion. Published by CUTS International, (<http://cuts-citee.org/pdf/dp-role-multi-modal-connectivity-in-fostering-value-chains-bbin-sub-region.pdf>)

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<http://publications.apec.org/Publications/2010/06/The-Economic-Impact-of-Enhanced-Multimodal-Connectivity-in-the-APEC-Region>.
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www.worldbank.org/en/country/india/brief/developing-india-first-modern-inland-waterway)
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16. PIB (2020): Second Addendum on Protocol on Inland Water Transit and Trade between India and Bangladesh. Press Information Bureau. Government of India. Ministry of Shipping. May 20, 2020
(<https://pib.gov.in/PressReleasePage.aspx?PRID=1625342>)
17. MoU on use of Chittagong and Mongla ports for movement of goods to and from India. (<http://www.mea.gov.in/Portal/LegalTreatiesDoc/BG15B2423.pdf>)
18. India and Bangladesh sign SoP on Coastal shipping.
(<https://www.sasec.asia/index.php?page=news&nid=327&url=bangladesh-india-sign-sop-on-coastal-shipping>)
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(<https://www.mea.gov.in/Portal/LegalTreatiesDoc/BG15B2420.pdf>)
21. SOP (2015): Standard Operating Procedure on Indo-Bangladesh Coastal shipping
22. Third Party EXIM Cargo Transportation through Coastal and Protocol Routes between Bangladesh and India. Published by Bangladesh Foreign Trade Institute.
(https://bfti.org.bd/pdf/Final_Shipping%20Study.pdf)

Annexure III: List of Stakeholders

Stakeholder	India / Others	Bangladesh
Port Authority	<p>Capt. Himanshu Shekhar Traffic Manager Kolkata Port, Kolkata Ph: 033 2439-2926 Email: tm@kolkataporttrust.gov.in</p> <p>Mr. A. K. Dutta General Manager (M&S) Haldia Dock Complex Kolkata Port Trust Ph: 03224- 263171/ 26493 Mobile: 9434063171 Email: akdutta.hdc@kolkataporttrust.gov.in, amal.haldock@gmail.com</p> <p>Mr. Debasish Nandi Manager Land Port Authority of India Agartala ICP Agartala, Tripura Email: agt.icp@gmail.com Mob: 09436582693</p> <p>Ms. Rebecca Das Jt. Director Planning & Research Kolkata Port Trust Mobile : 96741-55646 Email : jt.dir.pr.kolkataporttrust.gov.in</p>	<p>Md. Zahirul Huq, Chief of Planning, Mongla Port Authority Mob: +8801973-903179 Email: zahirmpa@yahoo.com; cp@mpa.gov.bd</p> <p>Md. Abdul Jalil Deputy Director (Traffic) Benapole Land Port, Sharsha, Jessore Cell: 01818-640456 Ph: 0422875354 Email: ajbulbul75@gmail.com</p> <p>Md. Monirul Islam Deputy Director (Traffic) Bhomra Land Port, Satkhira Cell: 01717-228389 Email: islammonirul696@gmail.com</p> <p>Md. Rezaul Karim Deputy Director (Administration) Akhaura Land Port, Akhaura, B.Barua Cell: 01712-253924 Ph: 047181142 Email: bsbkrezaul@yahoo.com</p> <p>Md. Zahidul Islam Traffic Inspector, BIWTA Ashugonj River Port Ashugonj, B.Barua Cell: 01716-2239 Email: zahidulbiwta@gmail.com</p>

Stakeholder	India / Others	Bangladesh
Inland Waterways Official	<p>Mr L K Rajak Director (I/C) Inland Waterways Authority of India Kolkata Email: dirkol.iwai@nic.in, iwaical@yahoo.com, lakshmikantrajak@yahoo.co.in</p>	<p>Md. Saiful Islam Additional Director Maritime Safety and Traffic Management Department BIWTA Mob: 01819-673257 Email: saiful.1968biwta@gmail.com; kmselim.1997@gmail.com</p>
Business Associations	<p>Mr. Shantanu Bhadkamar President Association of Multimodal Transport Operators of India (AMTOI) Mobile: 9029078350/518 Email: president@amtoi.org // info@amtoi.org</p> <p>Capt. S.B. Mazumder Chairperson, Shipping Committee The Bengal Chamber of Commerce and Industry. Royal Exchange', 6 Netaji Subhas Road, Kolkata 700 001 Tel: 91-33-2230 3711 / 3733 / 3746 Fax: 91-33-2230 1289</p> <p>Mr. Subrata Chowdhury Hon. Secretary Association of Shipping Interests in Calcutta Mob: 09903937745; 9831091701 Ph: 033-4012 8999; 033-40128989 Email: info@asickolkata.com</p> <p>Mr. Tushar Kanti Chakraborty President All Tripura Merchant's Association Agartala Email: agttushar@gmail.com</p> <p>Mr. M L Debnath President Tripura Chamber of Commerce</p>	<p>Mr. Abdul Matlub Ahmad Chairman Nitol Motors Limited, and Member, Federation of Bangladesh Chambers of Commerce & Industries Dhaka, Bangladesh Mob: 01711-563577 Tel: 9887071, 9887074-6 Fax: 9883121, 9887072 E-mail: matlub52@hotmail.com, matlub52@gmail.com PS.: 01914251776 (Mehrab) Sudhir PS to Chairman: 01819252101</p> <p>Mr. Motiar Rahman Chairman Export-Import Sub-Committee India-Bangladesh Chamber of Commerce and Industry (IBCCI) And CEO of M/s. Sharothi Enterprise, C&F Agent Benapole, Bangladesh. Mob +8801711217372 Email: sharothibenapole@gmail.com</p>

Stakeholder	India / Others	Bangladesh
	<p>Email: tcciagt@gmail.com Mob: 09 43612 1023</p> <p>Mr. Anutosh Biswas Department of Economic Affairs and Policy Indian Chamber of Commerce Email: anutosh.biswas@indianchamber.net, Ph. No: 8588834248</p>	
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Stakeholder	India / Others	Bangladesh
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Stakeholder	India / Others	Bangladesh
	Chairman Haldia Port Subcommittee Calcutta Custom House Agent Association	
Shipping Lines	<p>Mr Julian Michael Bevis Senior Director South Asia Maersk Group Email: julian.michael.bevis@maersk.com</p> <p>Mr. Amlan Basu Director AVS River Line 7A, Rupchand Mukherjee Lane, Kolkata-700025, India</p>	<p>Mr. Sheikh Mahfuz Hamid Managing Director Gulf Orient Seaways Ltd Mob: 00880 1711808482 Email: mahfuz@gulfseaways.com</p> <p>Mr. Syed Yasser Haider Rizvi Addl. Managing Director Summit Alliance Port Ltd Bangladesh</p> <p><u>Syed Bashir Ahmed</u> <u>Managing Director</u> <u>Win Ship Shipping and Logistics</u> <u>Shahjalal Complex (4th Floor)</u> <u>801A, Siddheswari, Circular</u> <u>Road, Dhaka-1217</u> <u>Cell: 01711-542000</u> <u>Ph: 9338784, 8353265 (Dir)</u> <u>Email:</u> winship.bashir@gmail.com</p>
Customs Officials / Revenue	<p>Mr. Rajesh Jindal Commissioner of Customs (Preventive) Kolkata Customs Ph-2230-8658 Fax-22307630</p> <p>Assistant Commissioner Office of the Assistant Commissioner Custom Division, Agartala Department of Revenue Ministry of Revenue Govt of India Ph: 0381 237 3119 Fax: 0381 2376619</p>	<p>Mr. Abu Hena Md. Rahmatul Muneem Chairman, National Board of Revenue Rajswa Bhaban, Sengunbagicha, Dhaka-1000 +8318120-26, Ph.9348344 (PA), Email: chairman@nbr.gov.bd</p> <p>Mr. Mohammad Ehteshamul Haque First Secretary Customs Int. Affairs National Board of Revenue, Govt. of Bangladesh Segunbagicha, Dhaka-1000 Bangladesh Cell: 01819850870</p>

Stakeholder	India / Others	Bangladesh
		<p>Email: ehtesham2000@yahoo.com</p> <p>Md. Raichuddin Khan First Secretary Customs (International Trade and Agreement) National Board of Revenue Government of India Cell: 01711-935785 Email: raich.khan@gmail.com</p>
Other	<p>Mr. Swapan Saha Roy Former Traffic Manager Haldia Dock Complex Mob: 9434063719, Email: saharoyswapan3@gmail.com</p> <p>Mr. Swapna Debnath Additional Director Department of Industries and Commerce Government of Tripura Email: swapnadebnath@rediffmail.com Ph: 0381-241-5589</p> <p>Mr Gitte Kirankumar Dinkarrao, IAS Secretary Department of Industries & Commerce Directorate of Urban Development Department Government of Tripura Ph.+913812415058, Mob.+9436472275, E-mail: kirangitteias@gmail.com, secy.icdept-tr@gov.in</p> <p>Mr. K. V. Premdev Deputy Director Marine Products Export Development Authority RO Kolkata</p>	<p>Mr. Monoj Kumar Roy Former Additional Secretary (FTA) Ministry of Commerce SHAPLA, Bldg. No. NHA-08 (New), Flat: 6/L, New Colony, Lalmatia, Dhaka-1207 Cell: +8801711661523 Email: monoj112@gmail.com</p> <p>Manmohan Parkash, Country Director ADB Bangladesh Bangladesh Resident Mission (BRM) - Asian Development Bank (ADB) Plot E-31, Sher-e-Bangla Nagar Dhaka 1207, Bangladesh GPO Box No. 2100 +880 2 55667000</p>

Stakeholder	India / Others	Bangladesh
	Tel:- 91-484-2311979/ 2311803/ 2311854/ 2313415 Fax:- 91-484-2313361 Email:- mpeda@mpeda.nic.in	

Annexure IV: Questionnaire for Customs House Agents/Exporters/Importers

1. Details of Investigators (To be filled by investigator)

Name of Investigators/Team	
Country	
Place of Survey	
Organisation	
Date of Survey	_____ (DD/MM/YY)

2. Details of Respondent

Full Name (Optional)	
Gender	Male <input type="checkbox"/> Female <input type="checkbox"/> Others <input type="checkbox"/>
Contact Details (Optional)	Address: Contact Number: Email:

3. What are the key Infrastructural and Procedural Challenges in the waterway routes?

Cod e	Area	Low	Mediu m	High	Can't Decide
1.	Lack of coordination between border management agencies				
2.	Huge time is taken for physical inspection of container/ trucks				
3.	Irregular payments/bribes				
4.	Time is taken to clear inward/outward goods				
5.	Incidences of cargo theft				
6.	Waiting time for berthing and clearance				
7.	Narrow approach road				
8.	Absence of quality/ efficient roads				
9.	Unavailability of barge/vessels				
10.	Night Navigation problem				
11.	Navigation problem				
12.	Significant procedural complications				

4. What are the products you export/ Import

Particulars	Commodities	Route	Distance (KMs)	Time Duration (Days)		Reason for Delays	Ways to avoid the delays	Total Cost of Transportation		Ways to reduce the Cost
				Ideal	Actual			Ideal	Actual	
Export from India to Bangladesh										
Import from Bangladesh to India										

5. Through which Land Customs Station (LCS) you use **most** to trade with Bangladesh/India?
Please explain:
6. What are the factors that determine the trade routes?
Please explain (whether preferred by the client, less congestion, good roads, customs efficiency, Internet connectivity, etc.):
7. Do you know that there is also an alternative waterway route between India and Bangladesh which could be used to trade with Bangladesh? YES/NO
8. Has your client ever used the route of the waterway to trade? YES/NO
- 8.1. If YES,
- a) What is the route?
 - b) What commodities were traded?
 - c) Can you please elaborate on the procedures?
 - d) What are the motivations behind trade through waterways?
 - e) What is your experience of trading through waterways
 - i) Does it incur less cost compared to roadways? YES/NO
Please Explain:
 - ii) Does it incur less time compared to roadways? YES/NO
Please Explain:
 - iii) Any other issue:
- 8.2. If NO, Please Explain the reasons (Lack of awareness, Apprehensions, procedural complications, etc.).

9. Questions for specific to CHAs only

- 9.1. How difficult is to handle multimodal consignment? How far it is different from a single mode of clearance system?
- 9.2. According to you, if the trade shift from roadways to waterways, what will be the impact on the following areas?
- a) Trade – Increase/ Decrease/Unchanged
 - b) Trade cost – Increase/ Decrease/Unchanged
 - c) Livelihood Opportunities – Increase/ Decrease/Unchanged
 - d) It will impact the income of CHA – Increase/ Decrease/Unchanged
 - e) Impact on the local economies in and around the LCS – Increase/ Decrease/Unchanged
- 9.3. What according to you needs to be done to facilitate diversion of freight traffic from roadways to waterways, especially those traded through the Petrapole-Benapole and Ghojadanga-Bhomra land borders?

Aspects	Steps to be undertaken
Infrastructure	
Procedural	
Others	

Annexure V: Questionnaire for Shipping lines / Freight Forwarders / Logistic Service Providers

1. Details of Investigators (To be filled by the investigator)

Name of Investigators/Team	
Country	
Place of Survey	
Organisation	
Date of Survey	_____ (DD/MM/YY)

2. Details of Respondent

Full Name (Optional)	
Gender	Male <input type="checkbox"/> Female <input type="checkbox"/> Others <input type="checkbox"/>
Contact Details (Optional)	Address: Contact Number: Email:

3. What are the products those are mainly traded through these routes?

Sl. No.	Name	Commodities	Type of Cargo
1.	Kolaghat-Kolkata/Haldia-Mongla-Dhaka-Ashuganj		
2.	Tribeni-Kolkata/Haldia-Mongla-Dhaka-Ashuganj		

4. What are the key Infrastructural and Procedural Challenges in the waterway routes?

Cod e	Area	Low	Mediu m	High	Can't Decide
13.	Lack of coordination between border management agencies				
14.	Huge time is taken for physical inspection of container/ trucks				
15.	Irregular payments/bribes				
16.	Time is taken to clear inward/outward goods				
17.	Incidences of cargo theft				
18.	Waiting time for berthing and clearance				
19.	Narrow approach road				
20.	Absence of quality/efficient roads				
21.	Unavailability of barge/vessels				
22.	Night Navigation problem				
23.	Navigation problem				
24.	Significant procedural complications				

5. Time-Cost-Distance related information

Sl. No.	Name	Stoppages/Transshipment Points			
		Location	Duration	Reason	Cost
1.	Kolaghat-Kolkata/Haldia-Mongla-Dhaka/Ashuganj				
2.	Tribeni-Kolkata/Haldia-Mongla-Dhaka/Ashuganj				

6. Do you agree that there is scope for diverting freight traffic from roadways to waterways? YES/NO

Please Explain:

7. According to you which commodities have the highest potential for diversion from roadways to waterways.

Please Explain:

8. What according to you needs to be done to facilitate diversion of freight traffic from roadways to waterways, especially those traded through the Petrapole-Benapole and Ghojadanga-Bhomra land borders?

Aspects	Steps to be undertaken
Infrastructure	
Procedural	
Others	

Annexure VI: Questionnaire for Business Associations

1. Details of Investigators (To be filled by the investigator)

Name of Investigators/Team	
Country	
Place of Survey	
Organisation	
Date of Survey	_____ (DD/MM/YY)

2. Details of Respondent

Full Name (Optional)	
Gender	Male <input type="checkbox"/> Female <input type="checkbox"/> Others <input type="checkbox"/>
Name of the Association	
Contact Details (Optional)	Address: Contact Number: Email:

3. Do you feel there is an urgent need to increase trade between India and Bangladesh?
YES/NO
Please Explain:

4. Could you suggest at least five commodities that have significant potential for trade between India and Bangladesh?
Please Explain (Why):

5. Do you think waterways are a viable option for trade between the two countries?
YES/NO:: Please Explain (Challenges in trading through roadways):

6. What according to you, needs to be done to promote trade through waterways?
Please explain

7. Have your association approached any State/Central Government for facilitating the movement of freight cargo through waterways? What has been the response?

8. What according to you needs to be done to facilitate diversion of freight traffic from roadways to waterways, especially those traded through the Petrapole-Benapole and Ghojadanga-Bhomra land borders?

Aspects	Steps to be undertaken
Infrastructure	
Procedural	
Others	

Annexure-VII: Questionnaire for Truck/Vessel Drivers

1. Details of Investigators (To be filled by the investigator)

1. Name of the Investigator		
2. Country		
3. Place of Survey		
4. Date of Survey	_____ (DD/MM/YY)	
5. Relevant Corridor (Please put a $\sqrt{\quad}$ beside the relevant corridor(s))		
Kolkata-Petrapole-Benapole-Dhaka		
Kolkata - Ghojadanga-Bhomra-Dhaka		
Tribeni-Kolkata/Haldia-Mongla-Dhaka		

2. Details of Respondent

Full Name (Optional)	
Contact Details (Optional)	Address: Contact Number:

3. How severe are these issues in this corridor (please tick)

Cod e	Area	Low	Mediu m	High	Can't Decide
1.	Lack of coordination between border management agencies				
2.	Huge time is taken for physical inspection of container/trucks				
3.	Irregular payments/bribes				
4.	Time is taken to clear inward/outward goods				
5.	Incidences of cargo theft				
6.	Waiting time across corridors				
7.	Narrow approach road				
8.	Absence of quality/efficient roads				
9.	Unavailability of barge/vessels				
10.	Navigation problem				
11.	Security issues				
12.	Inadequate waterways infrastructure				

4. Time-Cost Analysis related information

4.1.	Point of Origin		4.2.	Point of Destination	
4.3.	Type of Cargo	a) Commodity: b) Weight:			
4.4.	Average Time required to reach the destination (in Hours):			4.5.	Total Distance (KM):
4.5.	Average Number of trips done along this route per year				
4.6.	Your average income per trip (mention a range)				

4.7. Trip Details				
Stop No.	Stop 1	Stop 2	Stop 3	Stop 4
Location				
Duration of Stop				
Reason for stop				
Cost of stoppage				
Type of Cost Incurred (Legal/Illegal)				

5. What are the major commodities that are transported along this route?
6. How many trucks ply on this route daily on average?
7. How many family members you have?
8. Are you the sole earning member of the family? YES/NO
9. What according to you, needs to be done to facilitate better cargo movement along the stretch?
Please explain (Reason) :
10. Is this route accident-prone? YES/NO
Please explain (Average Number of accidents, Reason) :
11. What will be the impact if the trade gets shifted from road to waterway? How that will impact you and your family?

12. Are you part of any association/trade union? YES/NO

Please explain (how active is the association, any major interventions undertaken by the association in the past, and are they part of any political party):

Annexure VIII: Questionnaire for IWT / Land Port Officials

1. Details of Investigators (To be filled by the investigator)

1. Name of the Investigator		
2. Country		
3. Place of Survey		
4. Date of Survey	(DD/MM/YY)	
5. Relevant Corridor (Please put a √ beside the relevant corridor(s))		
Kolkata-Petrapole-Benapole-Dhaka		
Kolkata - Ghojadanga-Bhomra-Dhaka		
Tribeni-Kolkata/Haldia-Mongla-Dhaka		
Tribeni-Kolkata/Haldia-Chittagong-Ashuganj		
Kolaghat – Haldia- Mongla – Dhaka/Chattagram		
Chattagram - Akhaura - Agartala		

2. Details of Respondent

Full Name (Optional)			
Gender	Male <input type="checkbox"/>	Female <input type="checkbox"/>	Others <input type="checkbox"/>
Contact Details (Optional)	Address: Contact Number: Email:		

3. What are the key Infrastructural and Procedural Challenges in the waterway routes?

Cod e	Area	Low	Mediu m	High	Can't Decide
1.	Lack of coordination between border management agencies				
2.	Huge time is taken for physical inspection of container/ trucks				
3.	Irregular payments/bribes				
4.	Time is taken to clear inward/outward goods				
5.	Incidences of cargo theft				
6.	Waiting time for berthing and clearance				
7.	Narrow approach road				
8.	Absence of quality/efficient roads				
9.	Unavailability of barge/vessels				
10.	Navigation problem				
11.	Unavailability of night navigation facility				
12.	Significant procedural complications				
13.	Provide Berthing time for the vessels				
14.	Transshipment Time				
15.	Availability of minimum LAD				
16.	Availability of Customs Officials 24x7				
17.	Intermodal Transfer procedures (Paperwork)				

4. Time-Cost Details

Particulars	Commodities	Route	Distance (KMs)	Time Duration (Days)		Reason for Delays	Ways to avoid the delays	Total Cost of Transportation		Ways to reduce the Cost
				Ideal	Actual			Ideal	Actual	
Export from India to Bangladesh										
Import from Bangladesh to India										

5. What are the major steps **already taken/planned** to promote trade through the port?

Initiatives Undertaken:

Initiatives in the Pipeline:

6. What are the products that are restricted to be traded through waterways?
7. What are the products that are restricted to be traded through Petrapole-Benapole and/or Ghojadanga-Bhomra border?
8. What will be the benefits to an exporter/importer trading through the Petrapole-Benapole and/or Ghojadanga-Bhomra border, if he/she starts trading through this port?

Please Explain:

9. What are products you think have the potential to be shifted from roadways to waterways?
10. What kind of cargo are more suitable to benefit from the modal shift?
11. How to motivate exporters/importers trading through the Petrapole-Benapole and/or Ghojadanga-Bhomra border, to shift to waterways from roadways.

Annexure IX: Information and Checklist for Land and River/Sea Ports

1. Name of Port

2. Infrastructure Related

Infrastructure	Present (Y/N)	Quality (Poor/Okay/Good)
Is it an Integrated Check Post		
EDI available		
24x7 internet connectivity		
24x7 electricity connectivity		
Warehouse (Please mention the numbers)		
Cold Storage		
PQ Office		
AQ Office		
Full time Customs officials		
Can handle perishable cargo		
Handles containerized cargo with ECTS lock		
Has connectivity with railways		
Has connectivity with waterways		

3. What are the major commodities traded through the port?
4. Is there any port restriction on any commodity?
5. What is the average per day cargo handling capacity of the port?
6. Is there an over-utilisation or under-utilisation of the available capacity and by what percentage? Please explain.
7. What are the procedures for intermodal transfer?
8. What are the procedures involved in trading between India and Bangladesh?
Please explain (Processes include documentation both time and volume)
9. What is the average time difference between the arrival and release of a cargo?

10. What are the major reasons for such delays?