Plan and Implementation Support for Commercialization of NW-1

Summary of 4th Pilot Movement

Fatuha to Bhagalpur / ULTRATECH

HPC

Uniconsult
Universal Transport Consulting GmbH

29th June 2017

Plan and Implementation Support for Commercialization of NW-1

Summary of 4th Pilot Movement

Fatuha to Bhagalpur / ULTRATECH

This report has been prepared by:

HPC
Hamburg Port Consulting GmbH
Am Ballinkai 1
21129 Hamburg,
Germany

UNICONSULT
Universal Transport Consulting GmbH
Burchardkai 1
21129 Hamburg
Germany

JV HPC-UC
c/o UNICONSULT Universal Transport Consulting GmbH

Phone: +49-40-74008 108
Fax: +49-40-322764
E-mail: f.busse@uniconsult-hamburg.de
Web: www.uniconsult-hamburg.de

29th June 2017

Table of Contents

List of Figures

Page

List of Tables

Page

1 Introduction

In India with its large network of rivers, canals and backwaters, the National Government intends to increase the use of IWT and to exploit the potential that this mode of transport offers for the country's growing economy. During recent years, the Indian Government and the Inland Waterways Authority of India (IWAI) as the statutory authority in charge of inland waterways have therefore undertaken major efforts to enhance the navigability and boost freight movements on India's inland waterways.

Given the country's recent economic growth, India's road and rail networks are overloaded in many places and transportation of cargo and passengers suffers from heavy congestion and the presence of physical bottlenecks. Moreover increasing pollution and environmental goals require a comprehensive and coordinated approach to a national transportation policy. Recognizing its mode specific advantages, the Indian Government intends to make IWT an integral part of the country's future transport system.

In order to foster a sustainable and commercially viable future development of the sector, the competent authorities have invited external expertise for a project on Plan and Implementation Support for the Commercialization of National Waterway-1 (NW-1).

Considering the practical experiences and also building upon the interim findings of the current project's ongoing field work as well as the Consultant's profound knowledge of the Indian IWT market, this Summary of Pilot Movement provides implementation-oriented recommendations for creating the necessary conditions for a sustainable development of IWT transports on NW-1.

In the following, Chapter 2 gives an overview of the general background of this specific Pilot Movement and efforts done to initiate it. Chapter 3 presents the financial issues and chapter 4 the operational aspects. Based on the findings, crucial success factors and relevant requirements for commercially viable transport flows and their technical feasibility are discussed and recommendations on urgent need for action are derived.

The current project on Plan and Implementation Support for Commercialization of NW-1 aims to stimulate the further development of freight movements on India's longest National Waterway from Allahabad to Sagar Island. In order to improve utilization of the waterway infrastructure, facilitate actual business development and to ensure the future development of IWT in North Eastern India, the project fosters one to one interaction with relevant stakeholders, aiming at the closing of actual working contracts.

Having been awarded the contract to conduct the assignment, a Joint Venture of HPC Hamburg Port Consulting GmbH and UNICONSULT Universal Transport Consulting GmbH and its local Partner La Mer Maritime Ltd. have put together a team of experts with comprehensive and long-standing knowledge of both, international IWT markets in general and the Indian inland waterway shipping sector in particular. The group of international consultants is thereby supported by local experts under the roof of La Mer Maritime Limited with headquarters in Gurgaon/Haryana.

2 Preparation of Pilot Movement

The discussion on this pilot movement started during the first half of April 2017. As the shipper UltraTech Cement has been already known to the project team and has gained experiences during their first pilot movement, the establishment of this specific movement did not demanded a comprehensive introduction of the project and its advantages. As Fatuha was supposed being the loading point of the transport representatives of the consulting team travelled to the site in order to identify and define a suitable place to moor the barge for loading operations. The team has been accompanied on site by local representatives of IWAI.

UltraTech Cement Ltd. is India's biggest cement company and India’s largest exporter of cement clinker with its headquarters based in Mumbai. The company is part of the Aditya Birla Group and division of Grasim Industries.

On 1st May 2017 a representative of UltraTech confirmed by e-mail that a transport of 200 mt from Fatuha (Jethuli Ghat) to Bhagalpur Jetty is definitely planned. Related aspects haven been priorly discussed during a business meeting at Kolkata.

The consulting team sent this confirmation to IWAI Headquarter at Noida on the same day and received the approval from IWAI on 3rd May 2017. Although IWAI had to cross check formally availability of loading and unloading locations as well as availability of preferred barge (MV Vivi Giri) and required water depth the overall confirmation has been given very quickly within two days. In parallel IWAI Headquarter also instructed the local IWAI offices to facilitate this movement.

In order to comply with the internal accounting guidelines all transport parameters has to be recorded by the UltraTech accounting system. Shipper’s team worked with all efforts to display this movement (and its subsequent payments and bills) system-wise. As the transport covers different transport modes like road (for first and last mile) and IWT (as the main section of the movement) many different parameters has to be recorded. This took on shipper’s side up to nine days.

UltraTEch needed certain information to create a new for vendor code in their system. As this time IWAI directly operated the vessels and acted as a charterer the shipper has to ‘create’ IWAI as a vendor for their accounting.

3 Financial Aspects

For the transport of the 200 mt of bagged cement the consulting and the shipper finally agreed after two weeks discussion on a rate of INR 475 per metric ton. This rate includes from shippers view loading, unloading and inland waterway transport. In this particular case the first and last mile transport has been organized and financially covered by the shipper UltraTech. The staff for loading and unloading has been paid directly by IWAI. As loading and unloading locations both belong to the state of Bihar the financial handling of the transport has been handled by the regional IWAI office in Patna.

Table 1: Freight and Transport Charges

Position (Cost Item)	Charges (excl. Service Tax)
Vessel transport freight charges	INR 475 per ton
Alternative truck rate to Bhagalpur	INR 990 per ton

Source: Consultants 2017

IWT freight charges for the main leg transport of the cement shipment transported during this Pilot Movement summed up to a total of INR 95,000 for 200mt or INR 475 per mt. It can be assumed that this equals slightly more than half the cost of a corresponding transport by truck, thus proving the potential cost effectiveness of transport by inland waterway vessel.

The shipper has also requested to use the barge based on the agreement that two days for loading and two days for unloading are free of charge.

4 Operational Aspects

The consulting team has provided one consultant exclusively to accompany this movement. The representative submitted all necessary documents to regional IWAI office at Patna on 9th Mai 2017. The team also requested a survey vessel in order to check in advance availability of sufficient water depth. Survey vessel has been provided by IWAI.

The shipper requested the team to ensure local labour availability. Thus, possibilities of delays will be mitigated. It has been realistically expected that all loading and unloading operations are conducted manually only.

Table 2: Pilot Movement at a Glance

Route	**Fatuha – Bhagalpur**
Shipper	UltraTech Cement Ltd.
Vessel Operator	IWAI
Vessel Name	M.V. Vivi Giri
Commodity	Cement (bagged)
Cargo quantity	200 metric tonnes
Distance on NW-1	265 km
Start of loading at Fatuha	12|05|2017
Date of Departure	15|04|2017
Date of Arrival at Bhagalpur	17|04|2017
End of Unloading	21|05|2017

Source: Consultants 2017

The origin of the cargo has been the Ultratech Cement Factory, Shahjahanpur, Fatuha/Patna which belongs to the UltraTech Group and is around 35 km away from Fatuha Jethuli Ghat by road. For last mile transport the cargo has to be transported around 15 km by road to the recipient in Bhagalpur area.

4.1 Loading Procedure

The area of the town Fatuha has been chosen as loading point. Fatuha also spelled Fatwah or Fatwa, is a city in Patna Metropolitan Region. Thus, it is located in the Patna district in the state of Bihar. Fatuha lies around 25 km east of city of Patna which is also the capital of Bihar. The specific riverbank section is called Jethuli Ghat. As the MV Vivi Giri is a RoRo barge the barge moored with flapped down ramp directly on the riverbank.

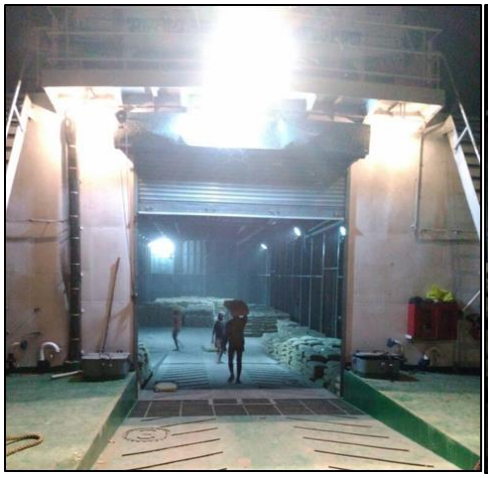
The loading procedure has been supervised by JV team member Mr Malik. Due to lack of loading equipment the bagged cement has been carried manually on board of the barge. Tractors were able to reach the barge up to a distance of 25 m. After completion of loading the shipper asked for a “Material Issuance Letter” which has to be provided by the charterer. The Material issuance Letter confirms mainly the loaded number of cement bags and if they are damaged or not.

Figure 1: Loading Location


Source: Consultants 2017

At Fatuha IWAI has managed to organize also staff to cover the night shift. Loading procedures has been executed until 3.30 a.m. The following figure shows some impressions of night shift operations.

Figure 2: Night Shift Loading Operations




Source: Consultants 2017

4.2 In-transit Procedure

UltraTech has requested an in-transit period of three days maximum. This has been accomplished accordingly.

The barge left Fatuha on 15th May 2017. On the afternoon of the 16th May crossed Munger The barge arrive on 17th May around noon. On the 16th the consultants team representative informed all relevant parties to be prepared for unloading operations on the 17th.

Due to unavailability of bunkering facilities at any place of the journey the two fuel tanks with capacity of 2,000 tons each tank have been completely filled by using a direct pumping from truck carrying fuel oil for bunker. The barge travelled in downstream directions.

There has been a crew of 7 members on board. No support by pilot has been neither required nor requested for this voyage. The master did not need any certificate or license for this single voyage operation. But the barge itself needed to get approval of condition certificate from state government for continuous operation. Due to insufficient navigational aid facilities the barge did not move during night time and anchored from 6 p.m. to 6 a.m.

The stowage pattern has to take into account the stability issues of the cargo barge. A permanent supervision of operations has been provided.

4.3 Unloading Procedure

On 17th May the barge arrived at the unloading location at Khoti Ghat at Bhagalpur.. This location has been involved in several previous Pilot Movements. The unpaved loading location is located next to an existing pontoon jetty facility has been chosen as the jetty facility has been unsuitable for RORO barge operations. The availability of a temporary access road up to the river bank thus the tractors/trucks can reach the barge directly supports the efficiency of unloading procedures distinctly. Still due to unavailability of equipment all unloading has to be conducted manually.

On 20th May the supervisor informed all involved parties that about a delay in unloading operations as a shortage of labor has occurred. Only 5 workers showed up to unload the remaining 400 bagged cements from the barge at that moment. As availability of labor has been comparatively low since arrival of barge on 17th total unloading operations took five days until 21st May.

Figure 3: Unloading Location

Source: Google Maps, Consultants 2017

Approximately 15 bags got damaged at Bhagalpur. Since damaged quantity was less than 2 % of total quantity these losses have not been regarded for accounting procedures. No discrepancy between loading and discharging tally has been documented. After unloading a cargo receipt signed by barge master has been given to the shipper.

Figure 4: Unloading Procedures

Source: Consultants 2017

5 Experiences and Findings

During conduct of 4th Pilot Movement several issues have been documented by the consulting team. These are mainly:

- As Jethuli Ghat, Fatuha has been a new location for the team it has been inspected by IWAI/Patna and UltraTech representatives together with the consultant's team to confirm as a safe loading location.
- Temporary access road constructed to reduce distance between barge and last mile transportation vehicle at Bhagalpur.
- Loading at night shift till 03:30 AM.
- Less number of labor (only 5) were employed 20th May 2017 caused slow unloading operation.
- Low river draft availability. Thus, vessel could not be fully utilized (only 200 mt instead of 400 mt)
- Lack of navigational aid lights. Thus, no night navigation = 12 hours non-operating time daily
- Actual in-transit time (excluding loading + unloading) has been 3 days.
- With a suitable night navigation aid system this travel time can be reduced to 1.5 days.
- Issue of invoice towards UltraTech Cement took longer than expected by shipper.
- No grounding of vessel throughout the voyage.
- Lack Of bunkering Facility
- 15 bags of cement got damage during voyage trip.
- IWAI has covered both stakeholder roles of barge operator and charterer.
- Thus, no submission of Request Sheet has been necessary.
- Local jetty facility conditions at Bhagalpur have been unsuitable for RORO barges. Thus, unpaved river bank stretches have been used for mooring/berthing.
- Insufficient labour availability especially at Khoti Ghat Bhagalpur led to extended unloading time.

6 Recommendations

In order to mitigate the negative impacts of specifically mentioned obstacles, circumstances and conditions the following measures are recommended:

- Implement measures to speed-up processing of release of invoices towards shipper
  - Target: response within 5 working days after completion of unloading operations
- Provide sufficient and suitable navigation aid facilities
  - Target: Enable continuously travelling of barges day and night all along the NW-1.
- Identify locally available suitable work forces for loading and unloading operations
  - Suggestion: Implementation of local work force pools of approx. 25 workers each
- Inform local authorities about loading and unloading procedures to avoid interruption or disturbance by public.
  - Suggestion: Announce commencement of operations locally at least 3 days in advance

7 Conclusion

Organizational and/or processual measures requesting low investment and could tap the potential to improve the competitiveness of IWT distinctly.

The major delay causing aspect during this specific Pilot Movement has been the unavailability of labor at loading and especially unloading location. Loading has taken four days and unloading five days. In total nine days that could be cut down by provision of sufficient labor force to 4 – 6 days (2-3 for loading and unloading each). The issue „work force“ has to be developed as currently less availability and local (authority) interest had an negative impact on duration of conduct of this specific movement.

With the facilitation of 24 hour barge operations by sufficient night navigation aid facilities the travel time could have been cut down from 3 days to 1.5 days.

Construction of most flexible jetty infrastructure and/or river bank reinforcement will increase the utilization of these facilities at Patna and Bhagalpur and reduce loading and unloading costs.

The involved shipper UltraTech has conducted its second Pilot Movement. Shipper is – despite all negative incidents – still interested in conducting further transport on several stretches of NW-1.

Publishing press releases supports the increase of awareness towards ITW distinctly.