STATISTICS OF INLAND WATER TRANSPORT 2016-17

सत्यमेव जयते

Government of India
Ministry of Shipping
Transport Research Wing
New Delhi

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PREFACE

Transport Research Wing (TRW) in the Ministry of Shipping is the nodal agency for providing information/data on various facets of Shipping and Inland Water Transport. The present issue **"Statistics of Inland Water Transport 2016-17"** is the **24th issue** in the series.

The present volume gives an overview of the current status of Inland Water Transport (IWT). Besides it consists of 7 sections covering navigable waterways and infrastructure, cargo movement on waterways, commodity/route wise cargo movement, IWT activities across States/UTs, IWT activities undertaken by private companies, plan outlays/expenditure for IWT sector, accidents related to inland waterways and Inland Waterways in select countries.

Though, the information contained in the volume is obtained from a large number of source agencies spread across both public and private sector, with the cooperation of the various stakeholders, we have been successful in reducing the time lag in bringing out collated data to less than a year. We hope to receive their continued cooperation in future also.

I take this opportunity to thank all who have contributed to improve and complete this issue. Suggestions from the users of information are welcome to improve quality and coverage. The officers and staff of the TRW deserve special mention for the considerable effort put in by them leading to the release of this publication.

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Inland Water Transport: An Overview

INTRODUCTION

India is endowed with a variety of navigable waterways comprising river systems, canals, back waters, creeks, and tidal inlets. However, navigation by mechanized crafts is possible only over a limited length covering about half of the reported navigable waterways. The navigable waterways are confined to a few States and location specific. The Inland Water Transport (IWT) is functionally important in regions covered by the Brahmputra and the Ganges in the North East and Eastern parts of the country, Kerala, Goa and in the deltas of the rivers of Krishna and Godavari where IWT offers natural advantages. IWT has an important role to play in many parts of the country since it offers an economic, energy efficient, employment intensive and almost pollutant free mode of transport service. In spite of the merits of IWT, its operation is constrained by several factors like shallow water, narrow width during dry weather, siltation and bank erosion, inadequate vertical and horizontal clearances in a large number of overhead structures making navigation throughout the year a daunting task.

POLICY INITIATIVES AND MILESTONES

2. Before 1950, there was no proper institutional set up for the development of IWT. A beginning was made during the First Plan when the Ganga-Brahmaputra Water Transport Board was set up as a Joint Venture of the Central Government and State Governments of Uttar Pradesh, Bihar, West Bengal and Assam. Its objective was to coordinate the efforts of the participating Governments in developing water transport on the Ganga and Brahmaputra Systems. Subsequently, the Government of India established the Inland Water Transport Directorate in the then Ministry of Shipping and Transport in 1965. In March, 1967, the Ganga-Brahmaputra Water Transport Board was merged with the IWT Directorate. Also, Central Inland Water Transport Corporation Ltd. (CIWTC) was set up at Kolkata in 1967 after taking over the assets and liabilities of the erstwhile River Steam Navigation Company Ltd.

3. In pursuance of the recommendations of the National Transport Policy Committee (NTPC), the Inland Waterways Authority of India (IWAI) was set up on October 27, 1986 by an Act of Parliament in 1985 for development, maintenance and regulation of National Waterways for shipping and navigation in the country. Three basic IWT related infrastructure for development of waterways are:

(a) Fairway or navigational channel with desired width and depth

(b) Terminals for berthing of vessels, loading/unloading of cargo and for providing interface with road and rail; and

(c) Navigational aid for safe navigation.

4. The Ministry of Shipping is entrusted with the overall responsibility of development of inland water transport in the country. Besides, assistance is being provided to States by the Central Government under Centrally Sponsored Schemes to develop waterways, terminals, navigational aids and undertake survey and studies related to IWT. The assistance under this scheme used to be upto 50% by way of loan on reimbursement basis. However, the pattern of assistance was revised in 2002-03 to 100% in the form of grant under the scheme to the North Eastern States, (including Sikkim) and 90% grant to other states for the development of Inland Water Transport. An Inland Vessel Building Subsidy Scheme was also in place since April, 2002 upto 31st March 2007. Under this scheme, subsidy up to 30% cost of Inland Vessel built in India for operation on National Waterways (NWs), Sunderbans and Indo-Bangladesh protocol routes could be availed. With a view to attract private sector participation in IWT a number of promotional measures and fiscal incentives have been provided. IWAI Act was amended in September 2001 to facilitate promotion of Joint Venture by IWAI; equity participation of Government/IWAI has been limited to a ceiling of 40% for BOT project; Tax exemptions similar to National Highways notified for IWT and customs duty concessions for specified IWT equipments were notified in 2002.

INLAND WATERWAYS AUTHORITY OF INDIA (IWAI)

5. The Inland Waterways Authority of India (IWAI), set up on 27th October 1986 under the Inland Waterways Authority of India Act, 1985 is entrusted with the regulation and development of Inland Waterways for the purpose of inland shipping and navigation. Its important functions are:

a) Carry out surveys and investigations for the development, maintenance and better utilization of the National Waterways (NWs) and the appurtenant land for shipping and navigation by:

- Providing infrastructural facilities, conservancy & river training works,
- Controlling activities of dumping / removal of bed material,

- Removing / altering any obstruction / impediment,
- Regulating traffic and structure across / under NWs,
- Disseminating navigational meteorological information,
- Coordinating with other modes of transport, providing pilotage and
- Entering into joint ventures concerning inland shipping by equity participation.

b) The Authority may also:

- Advises Central Government on IWT matters,
- Study the transport requirement in relation to other modes,
- Conduct Hydrographic Surveys & publish river charts,
- Assist State Governments for development of IWT,
- Develop & provide consultancy services,
- Conduct research for craft design, mechanization of country crafts, techniques of towage, landing & terminal facilities, port installations & survey techniques,
- Classification of Inland Waterways,
- Technical training of IWT personnel within & outside country.

c) The Authority will exercise the above functions with the prior approval of the Central Government.

Box 1: Inland Water Transport (IWT): A Historical Perspective

The commercial history of India gives a glorious account of growth of navigation on inland waterways. The location of a large number of towns on waterways, which were also centers of trade and commerce, much before railways, indicate the value of this mode in the past.

The era of mechanical propulsion in India started in 1823 when the first propelled craft-Diana-weighing 89 tonnes, sailed with passengers from Kulpi road to Calcutta, a distance of 80 kms on the Hooghly. In 1834, a regular monthly steamer service was established between Calcutta and stations upstream on the Ganga for carrying the East India Company's officials and stores. In 1842, a regular fortnightly service grew up between Calcutta and Agra on the river Yamuna. By 1863, a regular steam service commenced between Calcutta and Assam. A network of steamer services soon developed extending as far as Garh-Mukteshwar on the river Ganga in Uttar Pradesh, about 645 kms from Allahabad, and Ayodhya on the river Ghagra, about 325 kms at its confluence with the Ganga.

In the 19th century navigation by power crafts and country boats played a dominant role in development of trade and commerce along river banks and catchment areas of the navigable river and canal system. Bulk of traffic was, however, carried in country boats plying from Delhi and Nepal border to Assam. At its peak in 1876-77 country boat traffic registered at Calcutta were about 180,000 cargo boats, at Hooghly 124,000 cargo boats, and at Patna about 62,000 cargo boats.

The advent of railways and extension of its network marked a turning point for water-transport in India. To start with, construction of main railway lines gave a spurt to river traffic as the two modes supplemented each other, with waterways providing feeder service to railways. This complementarily between IWT and railways was, however, short-lived. The decline of navigation started by about 1860. By that time extension of East Indian Railways had begun to make itself felt. With an increase in rail network new centers of economic activity away from waterways developed. Gradually, IWT lost its superiority.

Source: Chapter 15, Inland Water Transport, Report of the National Transport Policy Committee, Government of India, Planning Commission, May 1980

NAVIGABLE WATERWAYS & INFRASTRUCTURE

6. Length of waterways along with its navigable length is an indicator of inland water potential of a state. Table 1 gives Total and Navigable length of Waterways reported across States/UTs. It is observed that the maximum length of waterways is in the State of West Bengal with 4741 kms followed by Assam with 4267 kms. However, the ratio of the navigable length to the total length of the river/canal better reflects the potential for IWT.

As per the available data presented in Table 1, it is observed that the ratio of navigable length to the total length is about 96.88% in the State of West Bengal; by contrast, in case of Tamil Nadu the ratio of navigable length to total length is a mere 6.09%. Other States with good inland water transport prospects are Goa, Maharashtra and Kerala where waterways navigable length is 90.88%, 73.22% and 53.52% respectively of the total length of rivers/lands/lakes reported by these states. Fourteen states have reported river length as well as navigable length for 175 rivers. These 131 rivers have total length of 33113 Km of which 46.22% is navigable length.

Table 1 : Total and Navigable Length of Waterways in different States –2016-17 (In kms)

S. No.	State	Total Length of the Rivers/ Canals/ Lakes in State (Km.)	Navigable Length (Km.)	Percentage of Navigable Length to Total Length
1	Andhra Pradesh	3762	1160	30.83
2	Assam	4267	1938	45.42
3	Bihar	3763	1391	36.97
4	Goa	274	249	90.88
5	Gujarat	653	102	15.62
6	Karnataka	2902	1215	41.87
7	Kerala	3311	1772	53.52
8	Maharashtra	631	462	73.22
9	Orissa	1378	508	36.87
10	Nagaland	0	276	0.00
11	Mizoram#	790	155	19.62
12	Tamil Nadu	197	12	6.09
13	Uttar Pradesh$	2345	425	18.12
14	West Bengal	4741	4593	96.88

Pertains to 2015-16,

$ Navigable length pertains to NW1 for Allahabad-Buxar stretch in Uttar Pradesh.

* The information for each State has been compiled for only those rivers for which both Total length & Navigable length have been reported by the State.

CARGO MOVEMENT ON MAJOR WATERWAYS

7. Table 2 provides a snap view of cargo moved on the three national waterways, waterways of Goa and Maharashtra which carry most of the cargo traffic on India's Inland Waterways. The total cargo movement on India's waterways comprising the three national waterways and waterways in the State of Goa and Maharashtra was 587.87 Lakhs tonnes in 2016-17 as against 437.06 lakhs tonnes in 2015-16, reflecting an increase of 34.5 %. In terms of tonnage, Goa and Maharashtra accounted for 26.8 % and 59.4 % respectively of the total cargo volume in 2016-17 with balance 13.8 % being accounted by the 3 National Waterways.

In terms of tonne km (movement of one tonne of cargo over a distance of one km) there was an increase of 14.2 % in 2016-17 over 2015-16. On an average, cargo carried on Indian Waterways is 67 Kms. Maharashtra and Goa waterways, though accounted 86.2% of the total cargo movement on inland waterways across India in terms of tone Kilometer and their share was 36.2% only. In case of Goa and Maharashtra, high volume of cargo movement was carried over relatively short average distances of about 50 Kms and 18.4 Kms respectively leading to their intensive use. However, in the three National Waterways, although the volume of cargo traffic was relatively much small is 13.8%, the average distance is 310.12 Kms. In case of National Waterway II (The Brahmaputra) and National Waterway III (Champakara canal, Udyogmandal canal and West Coast canal) the distance traversed by cargo was on an average of 19.4 Kms and 10.55 Kms respectively in 2016-17. In case of National Waterway I (Ganga-Bhagirathi-Hooghly) the average distance over which cargo moved was relatively much longer at 546 Kms.

Table 2: Cargo Movement on Waterways

S. No.	Details of Waterway	Cargo Moved (lakh tonnes)			Tonne Kms (in lakh)		
		2014-15	2015-16	2016-17	2014-15	2015-16	2016-17
1	National Waterway No. I	50.50 (13.8)	62.37 (14.3)	45.05 (7.7)	22636 (79.5)	26995 (78.0)	24598 (62.2)
2	National Waterway No. II	24.92 (6.8)	25.84 (5.9)	25.91 (4.4)	508 (1.8)	505 (1.5)	503 (1.3)
3	National Waterway No. III	8.44 (2.3)	10.61 (2.4)	10.33 (1.8)	92 (0.3)	105 (0.3)	109 (0.3)
	Sub Total NWs	83.86 (23.0)	98.82 (22.6)	81.29 (13.8)	23236 (81.6)	27605 (79.8)	25210 (63.8)
4	Goa Waterways	7.94 (2.2)	49.75 (11.4)	157.68 (26.8)	340 (1.2)	1987 (5.7)	7884 (19.9)
5	Maharashtra Waterways	273.57 (74.9)	288.49 (66.0)	348.90 (59.4)	4892 (17.2)	5005 (14.5)	6428 (16.3)
	Grand Total	**365.37 (100.0)**	**437.06 (100.0)**	**587.87 (100.0)**	**28468 (100.0)**	**34597 (100.0)**	**39522 (100.0)**

Source : (i) Inland Waterways Authority of India for National Waterways
(ii) Data for Goa Waterways include the data received from Ports department, Govt of Goa and the data received from the Mormugao Port Trust (MPT).
(iii) Maharashtra Maritime Board for Maharashtra Waterways.

Note

1. Cargo handled in Kolkata-Bangladesh-Kolkata route is included in the traffic on National Waterway No. I. The route is a link between NW-I & NW-II through Bangladesh
2. Figure within brackets indicates percentage to the total.

NATIONAL WATERWAYS (NW)

Box 2: Criteria for declaration of National Waterway

- It should possess capability of navigation by mechanically propelled vessels of minimum 300 tonnes (DWT) capacity (45m x 8m x1.2m);
- It should have a fairway of minimum 40m wide channel with 1.4m depth in case of rivers and minimum 30m wide channel with 1.8m depth in case of canals. Exception may be given in case of irrigation-cum-navigation canals based on request of the concerned State Govt in order to safeguard the interest of irrigation;
- It should be a continuous stretch of minimum 50 kms; the only exception to be made to waterway length is for urban conglomerations and intra-port traffic; and
- It should pass through and serve the interest of more than one States or connect a vast and prosperous hinterland and major port, or either pass through or connect a strategic region where development of navigations is considered necessary to provide logistic support for economic development or national security, or connect place not served by any other mode of transport.

8. To promote Inland Water Transport (IWT) in the country, earlier five waterways had been declared as National Waterways till the enactment of National Waterways Act, 2016 (March, 2016) are:

(a) Allahabad-Haldia stretch (1620 kms) of Ganga-Bhagirathi-Hooghly river system was declared National Waterway- 1 in 1982 and effective in October, 1986.

(b) Sadiya-Dhubri stretch (891 kms) of the Brahmaputra river was declared National Waterways- 2 in September, 1988.

(c) Kottapuram-Kollam stretch (168 kms) of the West Coast Canal along with Champakara canal (14 kms) and Udyogmandal canal (23 kms) was declared National Waterways- 3 in February, 1993. (Total 205 kms)

(d) Kakinada- Pondicherry canals along with Godavari and Krishna rivers (1078 km) –as National Waterways-4 in 2008 and

(e) East Coast Canal integrated with Brahmani river and Mahanadi delta rivers (588 km) as National Waterways -5 in 2008.

9. Out of these five NWs, first three waterways have already been developed substantially with fairway of required depth & width, navigational aids & terminal facilities for loading/unloading of cargo & ingress/ egress of the passengers and cargo & passenger vessels

are moving on these NWs. Details of developmental activities in respect of NW-4 & NW-5 are placed in the later part of this report.

10. A major boost to IWT Sector has been provided by the Government through enactment of the National Waterways Act, 2016 (No. 17 of 2016) dated 26th March 2016 which come into force w. e. f. 12th April 2016. This Act repealed previous five nos. **National Waterway Acts of existing five National Waterways No. 1,2,3,4 & 5 and further included new 106 Inland Waterways thus totalling 111 nos. waterways declared as National Waterways which cover a total length of 20,375 kms spread across 24 States in the country**. National Waterways of India are well in line to become the lifeline of the country. Inland Water Transport (IWT) has a potential to supplement the overburdened Railways and congested Roadways. In addition to cargo movement, National Waterways may provide a convenient function in related activities such as carriage of vehicles (in Roll-on-Roll-off mode of cross-ferry) and Tourism including stay and entertainment. The details of 111 National Waterways are placed at **Annex-I**.

11. The Infrastructure facilities provided by IWAI in the existing National Waterway No. 1 (Ganga, Bhagirathi-Hooghly river system), National Waterway No -2 (River Brahmaputra) & National Waterway No -3 (West Coast Canal, Champakara Canal & Udyogmandal Canal in Kerala) are detailed at **Annex-II**.

DEVELOPMENT OF 106 NEW NATIONAL WATERWAYS

12. National Waterways Act, 2016 (No. 17 of 2016) was published in the Gazette of India, Extraordinary, part II, and Section I dated 26th March, 2016 (which came into effect from 12th April, 2016) along with the list of 106 new National Waterways in addition to existing 5 National Waterways (NWs) No. 1,2,3,4 & 5, thus totaling 111 NWs in the country. A list of all the NWs with their approx. length is given in Annex-1. Efforts initiated towards undertaking the developmental activities for providing safe fairway channel and creating infrastructures, on phased manner in the identified new National Waterways during 2016-17.

13.1 Status of 106 new National Waterways

1. As part of the preparatory works to undertake development on 106 new National Waterways, IWAI has grouped them under 3 categories as under:

(A) **<u>Category – I:</u>** Eight Waterways which are considered to be the most viable and can be taken up for development in Phase-I.

1. River Barak (NW-16),
2. River Gandak (NW-37),
3. Sunderbans (Protocol Route) Waterways (NW -97),

3 NWs of Goa:

4. Cumberjua River (NW-27),
5. Mandovi River (NW-68),
6. Zuari River (NW-111),
7. Alappuzha – Kottayam –Athirampuzha Canal (NW -9) and
8. Rupnarayan River (West Bengal) (NW -86)

Accordingly, consultancy assignments for preparing EPC tender documents contract and environmental studies for these waterways are being undertaken in phased manner. Fairway development works in river Barak has been awarded.

(B) **<u>Category – II:</u>** Forty six (46) NWs - Those waterways which are in the coastal regions and have some tidal stretches are being considered for development in this category. The number of such coastal rivers and canals is 60 (14 rivers of Sunderbans have been considered as one waterway and extension of West Coast Canal has been considered in NW-3, thus making a total of 46 new waterways). These 60 rivers have been divided into 8 clusters based on their geographical locations.

Two stage DPR studies (stage I feasibility study and based on viability, stage II DPR study) for all the rivers have already been awarded. Based on the outcome of Stage-I feasibility reports of 46 NWs, preparation of Detailed Project Reports (DPRs) for 24 NWs have been awarded by IWAI. DPRs are expected to be finalized by November 2017 and accordingly development works would be initiated. Preparations of DPR of 2 NWs have been taken up by Thane Municipal Corporation and Government of Nagaland.

(C) **<u>Category – III</u>:** Fifty two (52) NWs - The remaining waterways which are in remote, inaccessible and hilly regions have been grouped in this category. These 52 rivers/canals (Krishna and Godavari rivers have been included as extension of NW-4, hence effectively 52 new waterways in the list of 106 waterways) have also been sub-divided into various clusters and initially only feasibility studies for all these waterways have been awarded. Field survey in 46 NWs have been completed and are in progress in 2 NWs. Security clearance of 4 NWs awaited. Feasibility study reports of 40 NWs have

been received. Based on the outcome of feasibility studies, further studies like TEF/DPR will be taken up subsequently.

National Waterways-I (The Ganga-Bhagirathi-Hooghly)

14. The Ganga - Bhagirathi - Hooghly river system between Haldia (Sagar) and Allahabad (1620 km) was declared as National Waterway-1 (NW-1) in 1986. Since then IWAI is carrying out various developmental works on the waterway for improvement of its navigability and also development and maintenance of other infrastructure such as navigation aids and terminal facilities as laid down in the IWAI Act, 1985 (82 of 1985). During 2016-17, the important works carried out for development and maintenance of fairway, navigational aids and terminal facilities on NW-1 for maintenance of the following Least Available Depth (LAD):

(a)	Haldia – Farakka stretch	(560 km)	–	2.6 m to 3.0 m
(b)	Farakka – Barh stretch	(400 km)	–	2.1 m to 2.5 m
(c)	Barh – Ghazipur stretch	(290 km)	–	1.6 m to 2.0 m
(d)	Ghazipur – Chunar/Allahabad	(370 km)	–	1.1 m to 1.5 m

15. The volume of freight movement on National Waterways-I was 45.05 lakh tonnes in 2016-17 as against 62.37 lakh tonnes in 2015-16 reflecting a decrease of 27.77 % due to lesser coal movement. The volume of cargo movement by VIVADA IWL vessels increased to 2.84 lakh tonnes in 2016-17 from 2.74 lakh tonnes in 2015-16, the volume of cargo moved by other private operators decrease slightly during 2016-17 as compared to 2015-16. Other private operators moved 29.56 lakh tonnes of cargo on NW-I in 2016-17 as against 30.01 lakh tonnes cargo on NW-I in 2015-16. However, no operations were reported to be carried out by CIWTC during 2016-17.

16. The composition of cargo movement on National Waterway I over the years is shown in Table 3 below. Building materials accounted for 60.0% of total cargo movement along the NW-I during 2016-17, followed by fertilisers (16.1%) and Coal (14.8%). These three items together accounted for about 91% of the total cargo moved on NWI during 2016-17.

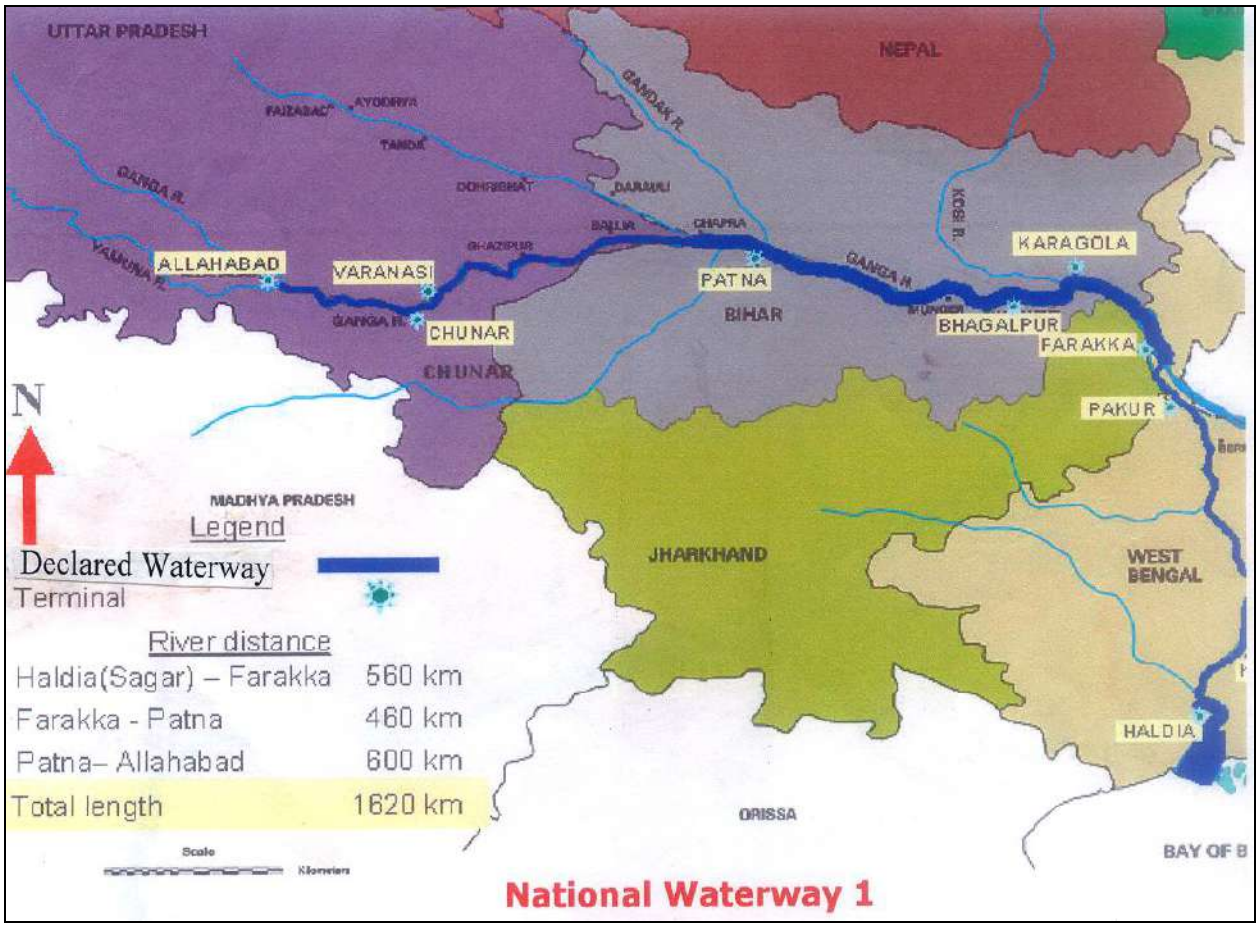


Table 3 : Composition of Cargo Moved on National Waterway- I (In Tonnes)						
Name of the Commodity	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Building Material	1529401 (46.2)	1727685 (63.6)	1997301 (59.6)	2044784 (40.5)	2393416 (38.4)	2704742 (60.0)
Fertilizers	-	52000 (1.9)	36800 (1.1)	132299 (2.6)	124000 (2.0)	726260 (16.1)
Food items	15000 (0.5)	345179 (12.7)	394935 (11.8)	527048 (10.4)	499024 (8.0)	137730 (3.1)
Miscellaneous	22509 (0.7)	13842 (0.5)	11476 (0.3)	17690 (0.4)	8010 (0.1)	59478 (1.3)
Mix	1459428 (44.1)	21800 (0.8)	8250 (0.2)	65312 (1.3)	0 (0.0)	0 (0.0)
Ore/Minerals	550 (neg.)	229000 (8.4)	112000 (3.3)	242000 (4.8)	31000 (0.5)	16761 (0.4)
POL/POL products	281954 (8.5)	247341 (9.1)	212063 (6.3)	250418 (5.0)	273684 (4.4)	162520 (3.6)
Coal	1205 (neg.)	79590 (2.9)	561456 (16.8)	1736492 (34.4)	2843001 (45.6)	668740 (14.8)
Iron steel	-	-	14857 (0.4)	34166 (0.7)	64989 (1.0)	29146 (0.6)
Total NW I	**3310047 (100.0)**	**2716437 (100.0)**	**3349138 (100.0)**	**5050209 (100.0)**	**6237124 (100.0)**	**4505377 (100.0)**
Note: Figure within brackets indicates percentage to the total **Neg.** - negligible						

Jal Marg Vikas Project:

17. The Jal Marg Vikas Project (JMVP) envisages to improve navigability of National Waterway-1 (NW-1) on the Haldia-Varanasi stretch of Ganga-Bhagirathi-Hooghly River System by (i) fairway development to provide an assured depth of 2.2 to 3.0 meters and a bottom channel width of 45 meters for at least 330 days in a year to make it navigable for vessels of up to 2000 Dead Weight Tonnage (DWT); (ii) civil, structural, logistics and communications interventions required for this project that includes construction of five multimodal/intermodal terminals, five pairs of Ro-Ro terminals, one new navigational lock at Farakka, channel marking systems, integrated vessel repair & maintenance facilities, automated information techniques of DGPS and river information system (RIS), day and night navigation aids, slipways, bunkering facilities, river training and river conservancy works; and (iii) creation/improvement of integration opportunities with other surface transport modes, viz. road and rail, so as to improve the overall efficiency of the logistics chain in the Eastern Transport Corridor of India.

18. Detailed Feasibility Study on NW-1; Engineering Studies on multimodal terminals at Varanasi, Sahibganj& Haldia, new navigational lock at Farakka and Performance based Dredging on various stretches of NW-1; ESIA studies; and IWT Sector Development Strategy and Market Development Study on NW-1 were completed. Feasibility Studies and Engineering Studies for the Bank Protection Works; Intermodal terminals at Kalughat and Ghazipur; Ro-Ro terminals; and Integrated Vessel Repair and Maintenance Complexes were also taken up. In addition, Consultancies on support services for Design of Inland Vessels; Consultancy Services for planning and implementation of commercialization on NW-1; Project Preparatory and definition Study for Development of Ferry Services on NW-1; and Communication Needs Assessment Study for Jal Marg Vikas Project were commissioned. The process of award of Consultancy for Ship Model Testing; Designing of JMVP website; Consultancy Study on the Effect of Navigational Activities on Dolphins; and Risk Assessment and Disaster Management Plan for NW-1 were initiated and progressed.

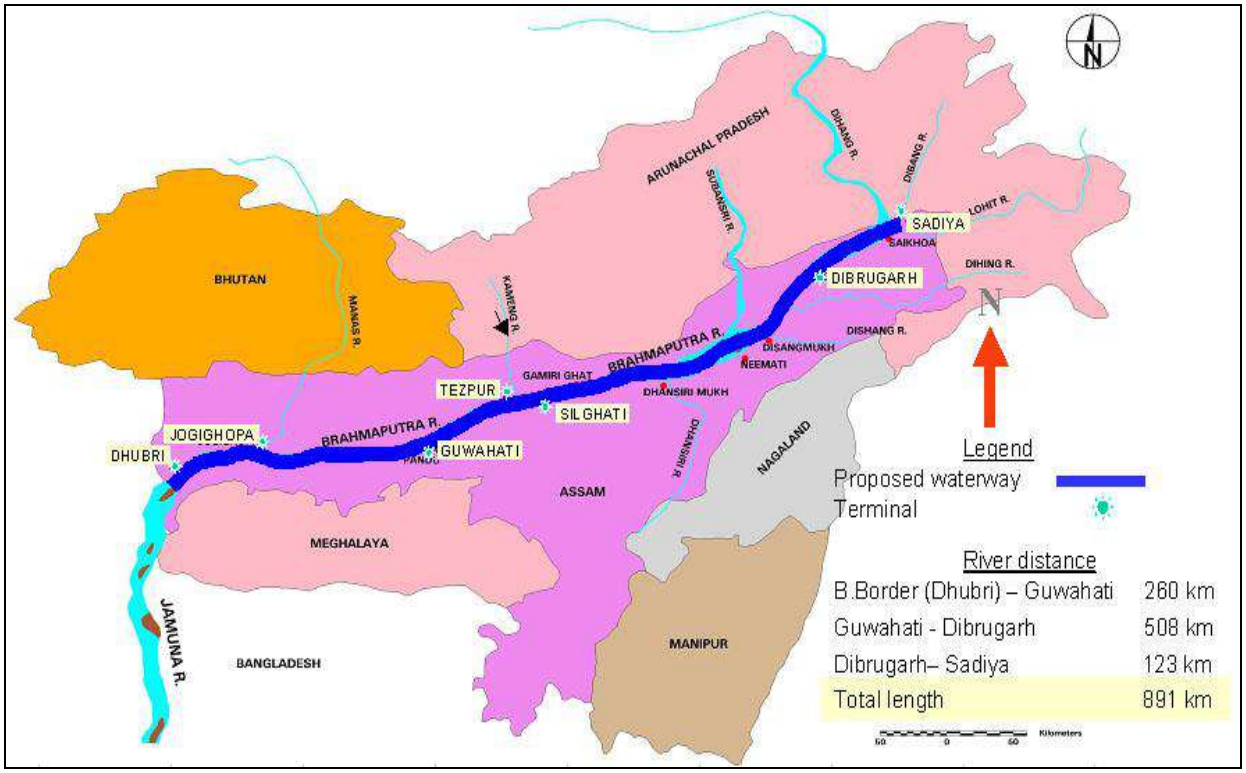
19. The project was appraised by the Public Investment Board with an investment outlay of Rs. 5,369.18 crore and recommended for obtaining the approval of the Cabinet. The funding of the project is: Government of India counterpart funds- Rs.2,556.00 crore; International Board for Reconstruction and Development (IBRD) loan- Rs.2,512.00 crore; and private sector participation- Rs. 301 crore. Negotiations for the IBRD loan between the World Bank and

Government of India were completed and the proposal sent to the Executive Board of IBRD for approval.

20. In the meantime, advance preparation for priority sub-projects, i.e., construction of multimodal terminals at Varanasi, Sahibganj and Haldia; construction of new navigational lock at Farakka; and performance based dredging contracts were taken up for implementation and work contracts for the terminals at Varanasi (cost: Rs. 169. 70 cr.) and Sahibganj (cost: Rs.280.90 cr.); and the new navigational lock at Farakka (cost: Rs.359.19 cr.) were awarded during the period under report, while the tendering process for the multimodal terminal at Haldia and that for the performance based dredging contracts were taken to advanced stages.

National Waterways No. II (The Brahmaputra)

21. National Waterway II comprises of Dhubri to Sadiya of 891 Km in the state of Assam. A navigable fairway of minimum 45 m width and 2.5 m Least Available Depth (LAD) was maintained in Dhubri-Pandu (255 km) and Pandu-Neamati (374 km) stretch. In Neamati-Dibrugarh stretch, 2.0 m LAD was maintained for 350 days. In Dibrugarh-Sadiya (Oriumghat) stretch, LAD of 1.5 m was maintained for 365 days.



Apart from the channel maintenance the projects for construction of Ro-Ro terminals at Dhubri and Hatsingimari is being implemented. The floating terminals provided at 10 locations can also

be shifted to any other place based on demand. Night navigation facilities provided between Dhubri and Silghat can be extended in a short period of time depending upon demand. Setting up of one more DGPS station is under progress at Dhubri which will extend the coverage of DGPS signals uptoChilmari (including no man's land) in the Protocol route in Bangladesh. A ship repairing facilities at Guwahati on NW-2 is under implementation.

22. The total cargo traffic on NW II was 25.91 lakh tonnes during 2016-17 as against 25.84 lakh tonnes during 2015-16 reflected an increase of (0.27%) 0.07 lakh tonnes. Commodity-wise composition of cargo movement over the years indicates that the cargo moved on this waterway is of miscellaneous nature.

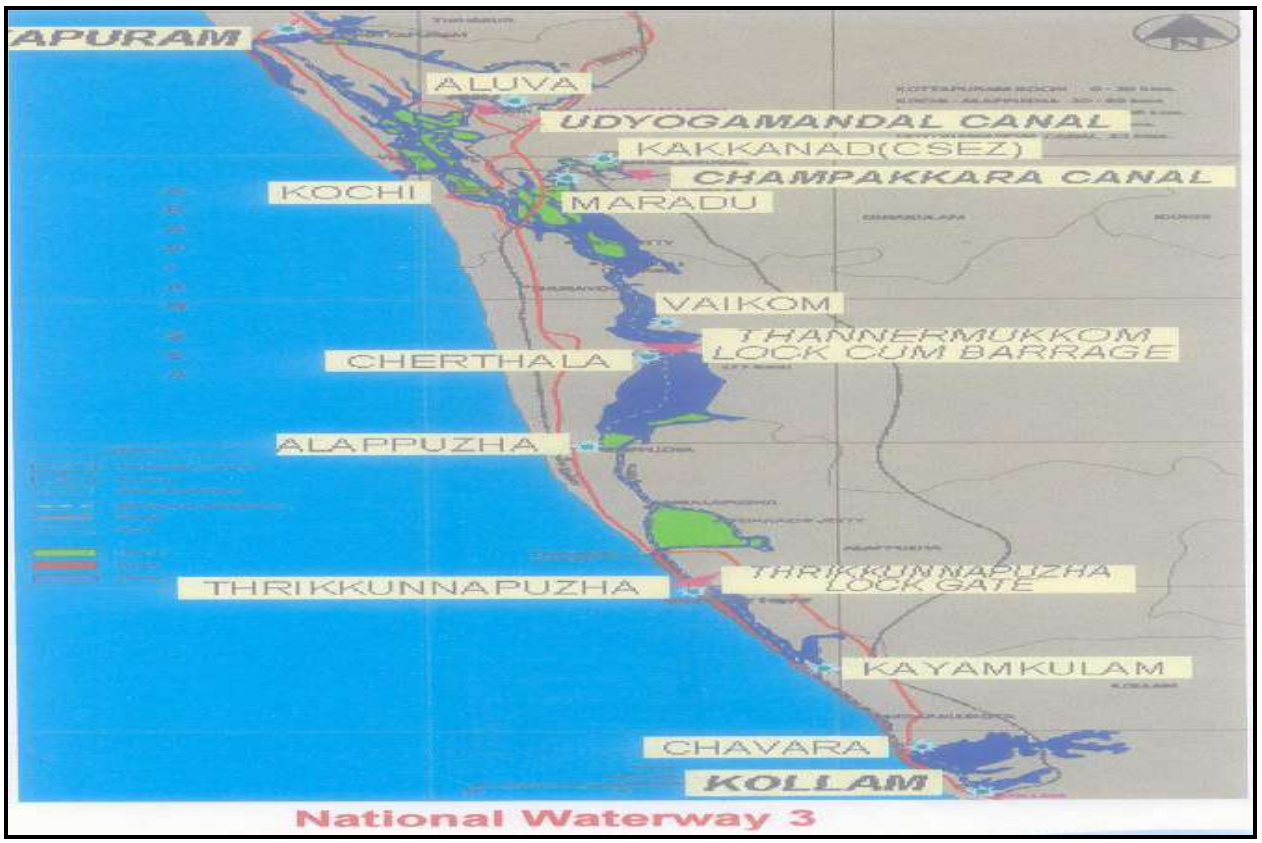
Table 4 : Composition of Cargo Moved on National Waterway - II (In Tonnes)

Commodity	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16***	**2016-17**
Building Material	-	-	-	-	-	-
Food items	-	-	-	-	-	-
Miscellaneous	2406448 (100.0)	2426805 (100.0)	2475349 (100.0)	2491720 (100.0)	2584306 (100.0)	2590754 (100.0)
Mix	-	-	-	-	-	-
Ore/Minerals	-	-	-	-	-	-
POL/POL Products	-	-	-	-	-	-
Total NW II	**2406448 (100.0)**	**2426805 (100.0)**	**2475349 (100.0)**	**2491720 (100.0)**	**2584306 (100.0)**	**2590754 (100.0)**

Note: *Provisional data has been considered in absence of cargo data received from IWTD, Government of Assam for National Waterways-II for the year 2016-17.
Figure within bracket indicates percentage to the total
Neg. – negligible

National Waterway No. III (West Coast Canal)

23. The National Waterway No. III consists of three main stretches viz. Champakara Canal, Udyogmandal canal and West Coast canal. It runs parallel to the coastline Fairway maintenance works including maintenance, dredging, channel marking are taken up on a year to year basis. Capital dredging for widening and deepening of canal has been completed between Kochi and Thakazhi jetty and large parts of Kochi-Kottapuram stretch is under progress. The NW-3 which comprised of the West Coast Canal between Kottappuram& Kollam (168 km), Udyogmandal canal (23 km) and Champakkara canal (14 km) [total 205 km] was extended by another 165 km towards North from Kottapuram till Kozhikode during in April 2016. Preparation of two stages DPR for the development of the extended stretch progressed substantially during 2016-17.



24. The total volume of cargo moved on National Waterway III has been fluctuating over the past few years. The volume of cargo moved is increased to 10.33 lakh tonnes in 2016-17 compared to 8.44 lakh tonnes in 2014-15 recording a growth of 22.39%. The cargo composition of freight traffic shows that Mix items (58.9%), Fertilisers (21.8%) and chemicals (19.0%) were the major commodities moved through NW-III during 2016-17.

Table 5 : Composition of Cargo Moved on National Waterway - III (In Tonnes)

Commodity	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Chemicals	61005 (4.5)	89074 (7.2)	124782 (11.7)	96773 (11.5)	155567 (14.7)	195809 (19.0)
Fertilisers	308807 (23.0)	306034 (24.8)	262974 (24.7)	231951 (27.5)	216648 (20.4)	224903 (21.8)
Food items	131720 (9.8)	141000 (11.4)	18000 (1.7)	-	-	-
Mix	687946 (51.2)	538670 (43.6)	606760 (56.9)	512490 (60.7)	686350 (64.7)	608670 (58.9)
Ore/Minerals	15063 (1.1)	72163 (5.8)	28542 (2.7)	262 (neg)	-	-
POL/POL products	139229 (10.4)	89462 (7.2)	24948 (2.3)	2221 (0.3)	2477 (0.2)	3457 (0.3)
Total NW III	**1343770 (100.0)**	**1236403 (100.0)**	**1066006 (100.0)**	**843697 (100.0)**	**1061042 (100.0)**	**1032839 (100.0)**
Note: Figure within brackets indicate percentage to the total						

25. The total cargo moved through all the three National Waterways (NW) increased by 17.8% to 98.82 lakh tonnes during 2015-16 from 83.86 lakh tonnes during 2014-15. However, it has gone down to 81.29 lakh tones in 2016-17. In 2016-17, share of cargo moved in volume terms across the three national waterways i.e NW I, (The Ganga- Bhagirathi- Hooghly) NW II (The Brahmaputra) and NW III (Champakara canal, Udyogmandal canal and west Cost canal) has been 55.4%, 31.9%, and 12.7% respectively of the total cargo moved in national waterways. In terms of tonne kilometers, the share of NW I, NW II and NW III is 97.6%, 2.0% and 0.4% of the total tonne kilometers moved. The highest share of NW I in tonne kilometers reflect long average distance traversed by cargo of 546 kms compared with an average distance of 19 kms for NW II and average distance of 11 kms for NW III in the year 2016-17. Table 6 gives cargo movement of National Waterways in Tonnage and Tonne Kilometers.

Table 6 : Cargo Movement on National Waterways

Sl. No	Details of Waterway	Cargo Moved (lakh Tonnes)				Tonne Kms (in lakh)			
		2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
1	**National Waterway No. I**	33.49 (48.6)	50.50 (60.2)	62.37 (63.1)	45.05 (55.4)	18512 (96.3)	22636 (97.4)	26995 (97.8)	24598 (97.6)
2	**National Waterway No. II**	24.75 (35.9)	24.92 (29.7)	25.84 (26.2)	25.91 (31.9)	594 (3.1)	508 (2.2)	505 (1.8)	503 (2.0)
3	**National Waterway No. III**	10.66 (15.5)	8.44 (10.1)	10.61 (10.7)	10.33 (12.7)	116 (0.6)	92 (0.4)	105 (0.4)	109 (0.4)
	Total NWs	**68.90 (100.0)**	**83.86 (100.0)**	**98.82 (100.0)**	**81.29 (100.0)**	**19222 (100.0)**	**23236 (100.0)**	**27605 (100.0)**	**25210 (100.0)**

Source: Inland Waterways Authority of India for National Waterways.
Cargo handled in Kolkata-Bangladesh-Kolkata route is included in the traffic on National Waterway No. I. The route is a link between NW-I & NW-II through Bangladesh.
Note : Figure within brackets indicate percentage to the total

26. The details of the commodity composition of the cargo moved on the National Waterways I, II and III taken together are given in Table 7. It may be seen there from that the cargo movement of building material and fertiliser has shown significant increase while food items & Coal have shown sharp decrease in volume terms on the National Waterways in 2016-2017. The highest percentage of cargo moved in 2016-17 was building material (33.3%) followed by miscellaneous items (32.6%), fertilizer (11.7%), Coal (8.2%) and mix items (7.5%).

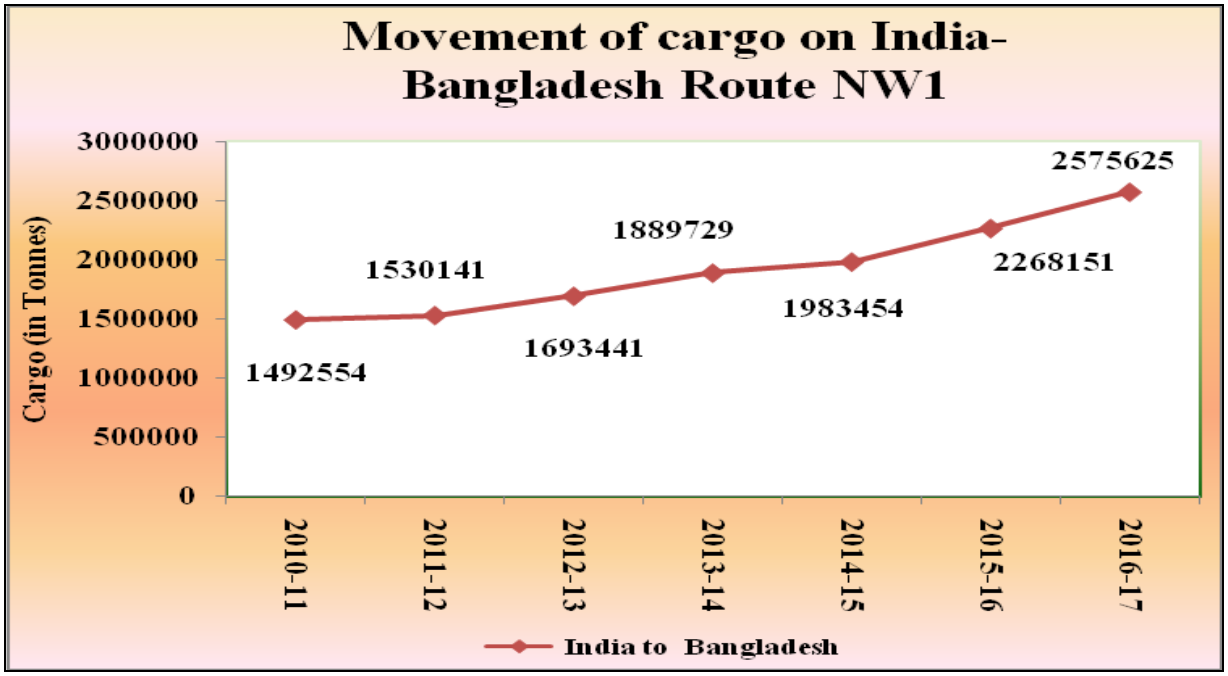
Table 7: Composition of Cargo Moved on national waterways (In tonnes)						
Commodity	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Building Material	1529401 (21.7)	1727685 (27.1)	1997301 (29)	2044784 (24.4)	2393416 (24.2)	2704742 (33.3)
Chemicals	61005 (0.9)	89074 (1.4)	124782 (1.8)	96773 (1.2)	155567 (1.6)	195809 (2.4)
Fertilisers	308807 (4.4)	358034 (5.6)	299774 (4.4)	364250 (4.3)	340648 (3.4)	951163 (11.7)
Food items	146720 (2.1)	486179 (7.6)	412935 (6.0)	527048 (6.3)	499024 (5.0)	137730 (1.7)
Miscellaneous	2428957 (34.4)	2440647 (38.3)	2486825 (36.1)	2509410 (29.9)	2592316 (26.2)	2650232 (32.6)
Mix	2147374 (30.4)	560470 (8.8)	615010 (8.9)	577802 (6.9)	686350 (6.9)	608670 (7.5)
Ore/Minerals	15613 (0.2)	301163 (4.7)	140542 (2.0)	242262 (2.9)	31000 (0.3)	16761 (0.2)
POL/POL Products	421183 (6.0)	336803 (5.3)	237011 (3.4)	252639 (3.0)	276161 (2.8)	165977 (2.0)
Coal	1205 (0.0)	79590 (1.2)	561456 (8.1)	1736492 (20.7)	2843001 (28.8)	668740 (8.2)
Iron & Steel	-	-	14857 (0.2)	34166 (0.4)	64989 (0.7)	29146 (0.4)
Total	**7060265 (100.0)**	**6379645 (100.0)**	**6890493 (100.0)**	**8385626 (100.0)**	**9882472 (100.0)**	**8128970 (100.0)**
Note : Figure within brackets indicate percentage to the total						

Box: 3- Indo-Bangladesh Protocol for Inland Water Transport

An Inland Water Transit and Trade Protocol exist between India and Bangladesh under which inland vessels of one country can transit through the specified routes of the other country. The existing protocol routes are (i) Kolkata-Pandu-Kolkata, (ii) Kolkata-Karimganj-Kolkata, (iii) Rajshahi-Dhulian-Rajshahi and (iv) Pandu-Karimganj-Pandu. For inter-country trade, four ports of call have been designated in each country. These are: Haldia, Kolkata, Pandu and Karimganj in India and Narayanganj, Khulna, Mongla and Sirajganj in Bangladesh. Under the protocol, 50:50; cargo sharing by India and Bangladesh vessels is permitted both for transit and inter country trade. While the protocol permits vessels of either country to carry Indo- Bangladesh trade cargo and prohibits one country's vessels carrying intra- country traffic of the other, Bangladesh vessels are permitted to carry Indian domestic cargo transiting Bangladesh.

Cargo carried on Indo -Bangladesh Waterway Route

27. Movement of cargo along India Bangladesh route of National Waterways I by Indian registered vessels have shown growth of 13.6% in year 2016-17 over that in 2015-16. The cargo moved over this route has increased to 2575625 tonnes in 2016-17 against 2268151 tonnes in 2015-16. The graph inserted below depicts trend in cargo movement on India-Bangladesh route National Waterway-I during the years 2010-11 to 2016-17.



28. The table 8 shows the cargo and the main commodities carried on India-Bangladesh route on National Waterway-I during the years 2011-12 to 2016-17.

Table 8: Movement of Cargo (in Tonnes) on India- Bangladesh route of NW I*(Tonnes)

Route	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Commodities
India to Bangladesh	1530141	1693441	1889729	1983454	2268151	2575625	Flyash, Salt in bulk, Rice, Wheat POL, Coal, Slag Gypsum, HSD, Edible Oil, Iron Ingots, Cement, Bone crushed, Cement Clinker, Dolomite Powder
Total	**1530141**	**1693441**	**1889729**	**1983454**	**2268151**	**2575625**	

*Data pertains to cargo carried on Indian registered vessels only.

NATIONAL WATERWAYS 4 & 5

29. These waterways were declared as National Waterways in November 2008. Thereafter, Detailed Project Reports (DPR) for development of both NWs was prepared. Subsequently, on the advice of Planning Commission, development of commercially viable stretches through PPP mode was explored by appointing a transaction adviser (consultant) with the financial assistance of Department of Economic Affairs (DEA) and Asian Development Bank (ADB). However, both the waterways were not found to be viable for development in PPP Mode. Hence, it was decided to develop both the waterways through Gross Budgetary Support (GBS) and/or external aid through multilateral resources like ADB or World Bank.

NATIONAL WATERWAY 4 (KAKINADA-PUDUCHERRY CANALS WITH GODAVARI AND KRISHNA RIVERS)

- National Waterway No.4 (declared) : November'2008
- Total Length : 1078 KM
  a) River Godavari (Bhadrachalam to Rajahmundry) = 171 km
  b) River Krishna (Wazirabad to Vijayawada) = 157 km
  c) Kakinada Canal (Kakinada to Rajahmundry) = 50 km
  d) Eluru Canal (Rajahmundry to Vijayawada) = 139 Km
  e) Commamur Canal (Vijayawada to Pedaganjam) = 113 km
  f) North Buckingham Canal (Pedaganjam to Chennai) = 316 km
  g) South Buckingham Canal (Chennai to Merkanam) = 110 km
  h) Kaluvelly Tank (Markanam to Puducherry) = 22 km

  Total =1078 km

- NW-4 extended by NWs Act-2016:
  - **Revised length 2890KM**
  - Additional Reaches :
    a. River Krishna from Wazirabad to Galagali (628 Km)
    b. River Godavari from Bhadrachalam to Nasik (1184Km)
- MoU signed with Govt. of Andhra Pradesh for development of NW-4 in Andhra Pradesh on 14th April'2016.
- NW-4 is proposed to be developed in the following phases.

  Phase-I:- Muktyala to Vijayawada (Krishna River) (82 Km)

  Phase-II:- Vijayawada to Kakinada (Eluru canal & Kakinada canal) and

Rajahmundry to Polavaram stretch of Godavari (233 Km)

Subsequent phases:- Commamur Canal, Buckingham canal and balance

Stretches of Krishna & Godavari Rivers (573km)

Progress:

Phase I: Muktyala – Vijayawada stretch (Sanctioned):

- Dredging to develop and maintain fairway is in progress.
- Floating terminals (4 nos.) at DurgaGhat, Bhavani Island, Amaravati and Vedadri.
- Fixed terminals (3 nos.) at Ibrahimpatnam, Harischandrapuram and Muktyala.

Phase-II (Proposed): Vijayawada – Kakinada & Rajahmundry to Polavaram stretches:

- Land acquisition(Govt. & Private)
- Dredging/Excavation for deepening and widening.
- Fixed Terminals (4 nos.) at Kakinada, Rajahmundry, Tadepalligudem and Eluru.
- Modification/ reconstruction of structures
- Retaining walls / Slope protection works
- Navigation aids & office establishments

- Special Purpose Vehicle:
  - Development of NW-4 in Andhra Pradesh is proposed to be executed through SPV
  - Equity participation IWAI : 51%
    Govt. of AP. : 49%

Proposal for formation of SPV submitted to Govt. of India.

NATIONAL WATERWAYY-5 (EAST COAST CANAL ALONG WITH BRAHMANI AND MAHANADI DELTA RIVER SYSTEM)

30. The Phase-wise break-up for the development of NW-5 are given below:-

i)	Paradip /Dhamra to Pankapal (via Kani River)	-	212 km
ii)	Pankapal to Talcher (River Brahmani)	-	120 km
iii)	East Coast Canal (Charbatia to Geonkhali) & Matai River (Charbatia to Dhamra)	-	256 km
	Total	-	**588 km**

31. To start the development works in National Waterways-5, a Memorandum of Understanding (MoU) has been signed by Inland Waterways Authority of India (IWAI) a statutory body under the Ministry of Shipping, Govt. of India with Govt. of Odisha, Paradip Port Trust (PPT) and Dhamra Port Company Limited (DPCL) on 30.6.2014 for developing the commercially viable stretch of 332 km under two phases. During Phase-1, it is proposed to take up the development of 212 km stretches from Paradip / Dhamra to Pankapal. The 120 km stretch between Pankapal and Talcher will be taken up in the Phase - II.

32. The work for carrying out the dredging operation in the non-tidal stretch between Erada and Padanipal is underway. Lease agreement has been signed for 6.79 acres of land for setting up of the temporary terminal facility at Erada. MoU between IWAI and Paradip Port Trust (PPT) was signed on 28.9.2016 for development of Phase – I from Paradip / Dhamra to Pankapal. The main components of the project are:-

- Fairway i.e. development of navigation channel for facilitating the movement of Cargo Vessels of above 1500 tonnes capacity with required depth & width.
- Navigational aids
- Terminal facilities at Pankapal, Paradip and Dhamra for facilitating the loading & unloading of Cargo.
- Cargo Vessels of suitable capacity & types

33. In order to provide the desired fairway, a Consultant for preparation of Detailed Project Report (DPR) followed by Front End Engineering Design (FEED) for construction of 4 Nos. of Weir / Barrages with 3 Nos. of Navigational lock, 1 Nos. Rubber dam with Navigational lock & 2 Nos. Check dam (Phase – I) was selected and work was awarded on 14.2.2017. Action has also been initiated for providing multi modal terminal facilities at Pankapal, Dhamra & Paradip. The state-of-art navigational aid shall also be provided for safe movement of the vessels.

IWT ACTIVITIES – STATE GOVERNMENT

34. The number of vessels deployed and volume of cargo carried on Inland Waterways across the reporting States & UTs is given in Table 9.

Table 9: Number of Inland Water Vessels and Cargo Carried – State wise

State/UT	Number of Vessels				Volume of Cargo Carried (thousand tonnes)			
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
Andhra Pradesh	…	…	…	…	…	…	…	…
Assam	182	182	182	187	338.53	178.73	178.73	3871.07
Bihar	138	138	138	138	2.40	2.40	2.40	2.40
Goa	159	225	159	311	284.17	190.01	429966.0	116600.8
Karnataka	66	66	66	66	58.72	50.50	50.5	29.98
Kerala	13689	13819	13819	5556	2831.87	2912.06	2912.06	326.64
Maharashtra	588	743	678	384	24774	27357	28849	34890
Orissa	…	409	199	557	…	…	…	…
West Bengal	2042	2032	2106	2155	11452	14728	16730	22654
Tamil Nadu	…	2	2	2	…	…	…	…
TOTAL (reporting states)	**16864**	**17616**	**17349**	**9356**	**39741.69**	**45418.70**	**478688.7**	**178374.9**

… Not Available,

The total number of vessels in the States during 2016-17 was 9356 which is lesser as compared to 17349 vessels in the year 2015-16. Kerala has reported the highest number of vessels 5556 followed by West Bengal (2155), Odisha (557), Maharashtra (384) and Goa (311). However, the volume of cargo handled through these vessels in the year 2016-17 was 178374.9 thousand tones. Goa has reported the highest cargo handled through waterways which was 116600.8 thousand tones foillowed by Maharashtra State 34890 thousand tones.

PERFOMANCE OF COMPANIES ENGAGED IN IWT

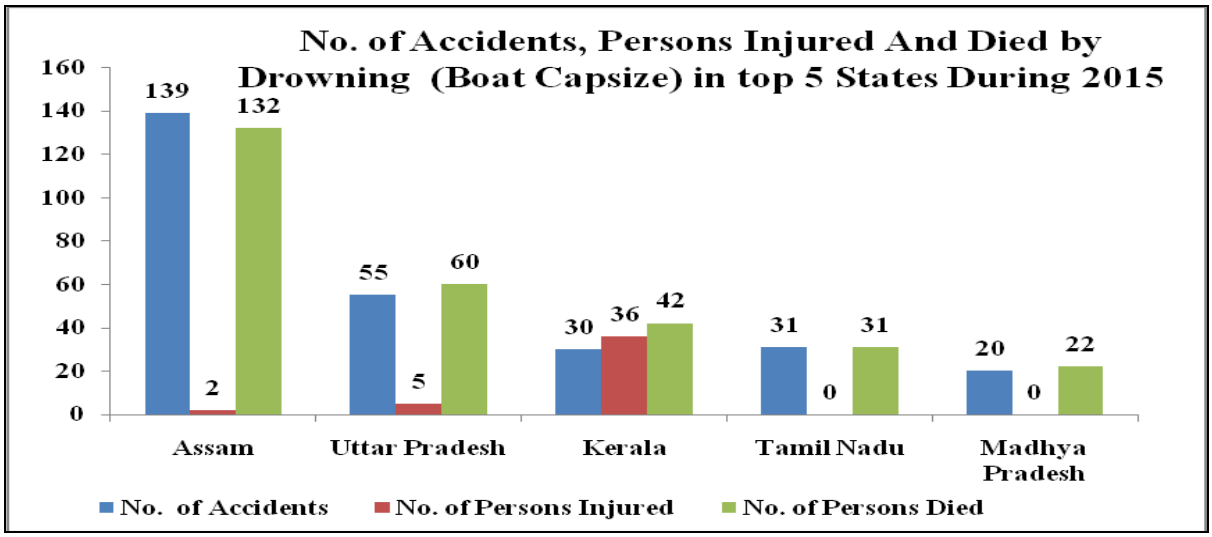
35. The data received from 25 IWT companies shows that amongst the private companies the maximum number of powered vessels was held by West Bengal Surface Transport Corporation followed by Sesa Sterlite Ltd, Goa, Jindal ITF Ltd and Eastern Navigation Pvt. Ltd, Kolkata. The Maximum cargo of 6554.27 thousand tonnes was carried by Sesa Sterlite Ltd, Goa followed by S. V. Salgaocar, Goa (684.00 thousand tones), D. V. Salgaocar, Goa (681.60 thousand tones) and VIVADA Inland Waterways Ltd, Kolkata (595.26 thousand tones).

36. Cargo moved by top 10 private companies in decreasing order of cargo moved along with the number of powered vessels employed in 2015-16 is given below in Table 10.

Table 10 : Top Fifteen Private Companies - Cargo moved and Vessels Operated 2016-17		
Name of the Company	**No. of Vessels**	**Cargo moved ('000 tonnes)**
1. Sesa Sterlite Ltd. Goa.	32	6554.27
2. S. V. Salgaocar, Goa	3	684.00
3. D. V. Salgaocar, Goa	3	681.60
4. VIVADA Inland Waterways Ltd, Kolkata	14	595.26
5. V. M. Salgaocar, Goa	2	453.60
6. Sesa Resources Ltd Goa	2	417.91
7. Jindal ITF Ltd.	28	325.27
8. Eastern Navigation Pvt. Ltd, Kolkata	23	256.34
9. Goa Ore Carriers	1	124.46
10. Maharshi Shipping	3	84.56
11. Soham Shipping Private Ltd.	3	84.21
12. West Bengal Surface Transport Corporation	36	33.58
13. Jain Navigation	2	9.86
14. K.S. Singhi	1	4.15
15. Pradeep Boating Co. , Kolkata	2	0.78

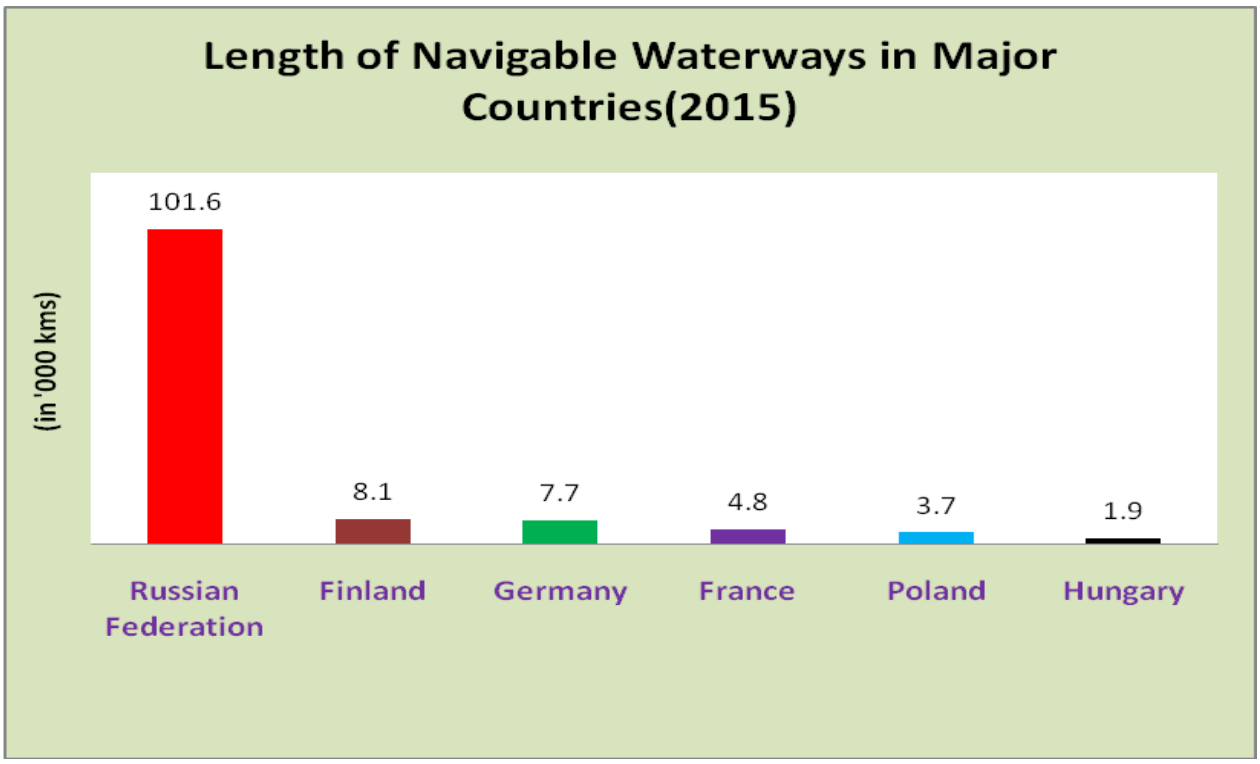
INLAND WATERWAYS TRANSPORT ACCIDENTS

37. The total number of accidents on inland waterways during the year 2015 was 315 out of which 139 were reported in Assam followed by Uttar Pradesh and Tamil Nadu with 55 and 31 accidents respectively. The number of deaths during the year due to boat mishaps was highest in Assam at 132 followed by Uttar Pradesh and Kerala with 60 and 42 respectively. A striking feature observed in all the States (Table No. 7.1) is that the number of persons died due to boat mishaps is more than the number of persons injured on waterways unlike in the road accidents. Number of Accidents, persons injured and persons died by drowning (boat capsize) during 2015 is presented in the graph.



INLAND WATERWAYS IN SELECT COUNTRIES

38. The maximum length of Navigable Inland Waterways in European and North America belongs to Russian Federation with 101,662 Kms followed by Finland with 8,127 Kms, Germany with 7,675 Kms., France with 4,822 Kms. and Poland with 3,655 Kms. in the year 2015. However, the maximum quantity of Goods carried was in Germany at 221 million tonnes, followed by Belgium at 188 million tonnes and Russian Federation at 119 million tonnes.



Source: Annual Bulletin of Transport Statistics for Europe & North America, 2017 (UN Publication).

SECTION – 1

NAVIGABLE WATERWAYS AND INFRASTRUCTURE

Table No. 1.1 **Navigable Waterways in India**

(In Kms.)

Sl. No.		State/Rivers/Canals/Lakes	2016-17	
			Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1		2	3	4
1	**ANDHRA PRADESH**			
	(i)	Godavari	1530	171
	(ii)	Krishna	1400	157
	(iii)	Others **	832	832
		Total	**3762**	**1160**
2.	**ASSAM**			
	(i)	Brahmaputra	2800	891
	(ii)	Barak	900	121
	(iii)	Subansiri		111
	(iv)	Dhansiri	135	110
	(v)	Dehing	120	114
	(vi)	Aai	85	71
	(vii)	Beki	85	73
	(viii)	Doyang		61
	(ix)	Puthimari	…	72
	(x)	Gangadhar		62
	(xi)	Kopili	50	46
	(xii)	Dikhw	92	63
	(xiii)	Jinjiram		43
	(xiv)	Lohit		100
		Total	**4267**	**1938**
3.	**BIHAR**			
	(i)	Ganga	510	510
	(ii)	Gandak	300	300
	(iii)	Koshi	233	160
	(iv)	Ghaghra	100	100
	(v)	Sone	226	31
	(vi)	Mahananda	140	...
	(vii)	Burhi Gandak	400	...
	(viii)	Punpun	200	...
	(ix)	Phalgu Harihar	300	...
	(x)	Kiul	100	...
	(xi)	Kari Koshi	150	...
	(xii)	Chandan	100	...
	(xiii)	Karamnasha	144	...
	(xiv)	Others	860	290
		Total	**3763**	**1391**

Table No. 1.1 (Contd...) **Navigable Waterways in India**

(In Kms.)

Sl. No.		State/Rivers/Canals/Lakes	2016-17	
			Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1		2	3	4
4		**GOA**		
	(i)	Mandovi	78	66
	(ii)	Zuari	68	68
	(iii)	Mapusa	27	27
	(iv)	Chapora	34	32
	(v)	Tiracol	29	23
	(vi)	Sal	20	15
	(vii)	Others	18	18
		Total	**274**	**249**
5		**GUJARAT ***		
	(i)	Narmada	161	50
	(ii)	Tapti	140	15
	(iii)	Ambica	136	20
	(iv)	Auranga	75	4
	(v)	Purna	141	13
		Total	**653**	**102**
6		**KARNATAKA**		
	(i)	Sharavathi	80	27
	(ii)	Tungabhadra	375	375
	(iii)	Malaprabha	270	230
	(iv)	Ghataprabha	160	160
	(v)	Krishna	325	125
	(vi)	Cauvery	270	34
	(vii)	Kabini	117	30
	(viii)	Gurupur	80	20
	(ix)	Gangolli	48	20
	(x)	Bheema	860	125
	(xi)	Udyavara	37	14
	(xii)	Netravathi	96	26
	(xiii)	Kali	184	29
		Total	**2902**	**1215**
7		**KERALA**		
	(i)	Kallada	121	10
	(ii)	Ithikkara	54	
	(iii)	Muvattupuzha	241	200
	(iv)	Menachil	93	45
	(v)	Kariyar	70	30
	(vi)	Manimala	5	5
	(vii)	Kodoor	15	4
	(viii)	Periyar	80	80
	(ix)	Kodungallur	6	6
	(x)	Ponnai Kochi	35.5	35.5
	(xi)	Chalakudy Kundoor	5	5
	(xii)	Chaliyar	174	13.4
	(xiii)	Kadalundi	130	43.2
	(xiv)	Bharathapuzha	209	40
	(xv)	Tirurpuzha	48	9.6
	(xvi)	Poorapuzha	5.6	4
	(xvii)	Keeranallur	3.3	2.3
	(xviii)	Kanjiramukku	8	8

Table No. 1.1 (Contd...) **Navigable Waterways in India**

(In Kms.)

Sl. No.		State/Rivers/Canals/Lakes	2016-17	
			Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1		2	3	4
	(xix)	Vadakkumpad	7.8	7.8
	(xx)	Kallai	2	2
	(xxi)	Korappuzha	30.4	25
	(xxii)	Perumbra	51	14
	(xxiii)	Ramapuram	19	8
	(xxiv)	Kuppam	82	35
	(xxv)	Valapattanam	110	35
	(xxvi)	Anjarakandy	48	15
	(xxvii)	Thalassery	28	10
	(xxviii)	Mahe	54	18
	(xxix)	Kuttiyadi	74	29
	(xxx)	Kavvayi	31	4
	(xxxi)	Kariyankode	64	12
	(xxxii)	Nileswaram	40	4
	(xxxiii)	Chittari	25	**3**
	(xxxiv)	Chandragiri	105	10
	(xxxv)	Mogzhal	34	5
	(xxxvi)	Shiriya	67	5
	(xxxvii)	Uppala	50	5
	(xxxviii)	Manjeswaram	16	3
	(xxxix)	Others	1069.39	980.87
		Total	**3310.99**	**1771.67**
8	**MAHARASHTRA**			
	(i)	Dande River	2	1
	(ii)	Pangere River	2	1
	(iii)	Girye River	3	1
	(iv)	Kajali River	35	5
	(v)	Kalbadevi River	10	2
	(vi)	Are River	6	1
	(vii)	Jog River	10	5
	(viii)	Kelshi River	10	3
	(ix)	Savitri River(Bankot to Mahad)	45	40
	(x)	Kal River	6	4
	(xi)	Vaitarna River	24	9
	(xii)	Ulhas River	32.5	28
	(xiii)	Mahim River(Bay)	1.5	1
	(xiv)	Amba River	23	20
	(xv)	Patalganga River/Creek (Aware to Kharpada)	11	6.5
	(xvi)	Kundalika River	16	16
	(xvii)	Mandad River(Rajpuri to Mandad)	14	10
	(xviii)	Mhasla River(Turmad to Mhasla)	9	5
	(xix)	Vashisti River(Dabhol to Govalkot)	45	38
	(xx)	Jagbudi River(Karambavne to Khed)	20	20
	(xxi)	Shastri River/Jaigad Creek(Jaigad to Kurudunda)	45	40
	(xxii)	Rajapur River(Musakazi to Rajapur)	30	30
	(xxiii)	Vagothan River/Vijaydurg Creek(Vijaydurg to Kharepatan)	38	22
	(xxiv)	Gad River(Kalaval Creek)	13	7
	(xxv)	Terekhol River/Creek(Terekhol to Banda)	28	28
	(xxvi)	Karli River(Malva)	23	13
	(xxvii)	Others	129	105
		Total	**631**	**462**

Table No. 1.1 (Contd...)

Navigable Waterways in India

(In Kms.)

Sl. No.		State/Rivers/Canals/Lakes	2016-17	
			Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1		2	3	4
9	**ORISSA**			
	(i)	Mahanadi	493	199
	(ii)	Brahmani	541	277
	(iii)	Baitarani	344	32
	(iv)	Subarnarekha	…	50
	(v)	Budha Balanga	…	35
	(vi)	Dhamara	…	20
	(vii)	Salandi	…	17
	(viii)	Panchputra	…	21
	(ix)	Parnei	…	45
	(x)	Hatel	…	30
	(xi)	Bansagadal	…	32
	(xii)	Hansua	…	37
	(xiii)	Tirkota	…	18
	(xiv)	Jamboo	…	6
	(xv)	Gobari	…	16
	(xvi)	Ramchandi	…	16
	(xvii)	Kharansi	…	14
	(xviii)	Batigharia	…	14
	(xix)	Birupa	…	110
	(xx)	Genguti	…	45
	(xxi)	Luna	…	37
	(xxii)	Devi	…	20
	(xxiii)	Pradhi	…	15
	(xxiv)	Kadha	…	30
	(xxv)	Kusavadra	…	25
	(xxvi)	Daya	…	9
	(xxvii)	Rajua	…	7
	(xxviii)	Makara	…	11
	(xxix)	Others **	…	367
		Total $	**1378**	**1555**
10	**TAMIL NADU**			
	(i)	Anantha Victoria Marthandavarna	27	12
	(ii)	North Buckingam Canal	58	…
	(iii)	Central Buckingam Canal	7	…
	(iv)	South Buckingam Canal	105	…
		Total	**197**	**12**
11	**UTTAR PRADESH**			…
	(i)	Gomti	960	…
	(ii)	Rapti	778	…
	(iii)	Ghaghra	1116	…
	(iv)	Ganga	2345	425
	(v)	Sai	760	…
	(vi)	Tons	485	…
		Total	**6444**	**425**
12	**WEST BENGAL**			
	(i)	Hooghly	580	580
	(ii)	Mahananda	206	58
	(iii)	Ajoy	174	174
	(iv)	Jalangi	232	232

Table No. 1.1 (Contd...) **Navigable Waterways in India**

(In Kms.)

Sl. No.		State/Rivers/Canals/Lakes	2016-17	
			Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1		2	3	4
	(v)	Dwarka	129	129
	(vi)	Bakreswar	102	102
	(vii)	Damodar	437	437
	(viii)	Dwarekeswar	103	103
	(ix)	Silabati	135	135
	(x)	Kumari	347	347
	(xi)	Ichamati	232	232
	(xii)	Others@	2064	2064
		Total	**4741**	**4593**
13	**NAGALAND**			
	(i)	Tizu/Zungki	-	42
	(ii)	Dhansiri/Chathe	-	110
	(iii)	Dikhu	-	63
	(iv)	Doyang	-	61
		Total	**0**	**276**
14	**MIZORAM*** **			
	(i)	R. Tlawng (Dhaleswari)	238	81
	(ii)	R. Kolodyne (Chhimtuipui)	196	22
	(iii)	Khawthlang Tuipui	134	17
	(iv)	R. Tuichawrg	167	19
	(v)	Tul River	55	16
	(vi)	Others	...	...
			790	**155**

* Relates to 2012-13

** Including Canals.

*** Information for 2017 has not received. Last Year data has been Repeated.

@ Includes 268 Kms. each of Total Length and Navigable Length pertaining to canals.

… : Not available

$ Total length is less than navigable length as length of canals is not provided whereas navigable length of canals is provided.

Source: IWT Directorate of states & IWAI.

Table No. 1.2 Infrastructure Facilities Available on National Waterways (As on 31-3-2017)

Place	Size of Vessels that can be accomodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available	Remarks
1	2	3	4	5	6
National Waterway No.1					
1. Haldia - Farakka : (560 Km), Depth - 2.6 to 3.0					
(i) Haldia	1500	Two(Floating)	...	One godown of size 12x30m and open storage area.	Being used for loading of fly ash to Bangladesh, and also embark/disembark of tourists and logistic support.
ii) Budge Budge - kolkata	1500	One(Floating)	Crane Pontoon	...	A floating Jetty has been placed and being used for transportation of food grains by FCI from Kolkata to Northeast region through Indo- Bangladesh protocol route.
(iii) a) BISN/G.R. Jetty-1,Kolkata	1500	One(Floating)	...	Open storage- 15 sqm.	Being used for loading of fly ash to Bangladesh, and also embark/disembark of tourists and logistic support.
(iii) b) G.R. Jetty-2,Kolkata	3000	Fixed RCC Jetty 70 m berth		Transit shed of size 25m x 46m and open storage (4000 sqm)	A permanent RCC jetty has been constructed and operational since November ,2013 for handling of General cargo.
(iv) Botanical garden, Kolkata	1500	One(Floating)	...	...	Being used for embark/disembark tourists & logistics support.
(v) Shantipur	600	One(Floating)	...	...	Being used for embark/disembark tourists & logistics support.
(vi) Swaroopganj	600	One(Floating)	-	-	Being used for embark/disembark tourists & logistics support. One DGPS station is operational.
(vii) Katwa	600	One(Floating)	...	...	Being used for embark/disembark & logistics support.
(viii) Hazardwari	600	One (floating)	...	...	Being used for embark/disembark & logistics support.
(ix) Pakur (Putimari)	1500	One(fixed)	...	...	Owned by Farakka Barrage project, may be used for loading/unloading and logistics support.
(x) Farakka					
(a) Owned by Farakka Barrage Project	1500	One(fixed)	...	...	Owned by Farakka Barrage project, may be used for loading/unloading and logistics support.
(b) Owned by Jindal ITF	2500 (two vessels at a time)	Jetty with conveyor	Two EoT	...	Being used for unloading NTPC coal.
(c) IWAI's Floating jetties	600	Two(Floating)	...	...	Being used for embark/disembark of tourists & logistics support.
2. Farakka - Barh : (400 km), Depth- 2.1 to 2.5					
(xi)Rajmahal (Manglaghat)	600	One(Floating)	...	-	Being used for embark/disembark of tourists and logistics support.
(xii) Sahibganj	600	One(Floating)	...	-	Being used for loading of stone chips and embark/disembark facility. Construction of permanent IWT multi model terminal is in progress under Jal Marg Vikas Project.

Table No. 1.2 (Contd...) Infrastructure Facilities Available on National Waterways (As on 31-3-2017)

Place	Size of Vessels that can be accomodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available	Remarks
1	2	3	4	5	6
(xiii) Bateshwarsthan	600	One (Floating)	...	-	Being used for embark/disembark of tourists and logistic support.
(xiv) Bhagalpur	600	One(floating)	...	Total land area 3.86 acres. Open storage - 1000 sqm.	Being used for stationing of IWT vessels, embark/disembark of tourists and logistic support. One DGPS station is operational .
(xv) Munger	600	One (Floating)	...	Total land area 3.40 acres. Open storage - 1000 sqm.	Being used for embark/disembark of tourists and logistic support.
3. Barh-Ghazipur : (290 km), Depth - 1.6 to 2.0					
(xvi) Semaria	600	One(floating)	...		Being used for embark/disembark of tourists.
(xvii) a) Patna	600	Fixed RCC (Low & High) Jetties of 50m & 70m berth	2 Shore cranes 1 Container crane	Open storage and Transit Shed of size 45 x 15m and sufficient storage space.	Low and high level permanent Jetties are operational since 2008 & 2012 respectively and capable for handling of containers & general cargo. Besides bunkering facility is also available. One DGPS station is operational.
(xvii) b) Patna	600	One (Floating)	Crane Pontoon	...	Being used for embark/disembark of tourists and logistic support during leanest period.
(xviii) Buxar	600	One (Floating)	...	...	Being used for embark/disembark of tourists and logistic support.
4. Ghazipur-Allahabad : (370 km), Depth -1.2 to 1.5					
*** In Chunar- Allahabad stretch (198 km) no RC works was undertaken.Except day channel marking.**					
(xviii) Ghazipur/ Rajghat	300	One(floating)	...	...	Being used for embark/disembark of tourists and logistic support.
(xix) Varanasi/ Ramnagar	300	One(floating)	...	Total land area 5.586 hectare .Open storage- 3000 sqm.	Being used for loading of stone chips and embark/disembark facility. Construction of permanent IWT multi model terminal is in progress under Jal Marg Vikas Project.
(xx) Allahabad	300	One (floating)	...	Total Land area- 8.759 hectare . Open storage -3000 sqm.	Being used for embark/disembark of tourists and logistic support.

Note :

1) Floating berth with pontoon/barge can be shifted and provided at any location along waterway on need basis.

2) A jetty with conveyor facility has been developed by M/s Jindal ITF Ltd. At NTPC Farakka under the tripartite MoU signed between NTPC, Jindal and IWAI for transportation of 3 MMTPA imported coal and being used for unloading of the coal.

3) RIS station between Haldia-Farakka has been commenced and construction of RIS station between Farakka-Patnais completed and will be operational shortly. Phase-III establishment of RIS stations between Patna- Varanasi is in progress.

4) DGPS stations at Swaroopganj, Bhagalpur and Patna have been commissioned. Another DGPS Station at Varanasi is constructed and will be operational shortly.

5) River notices are issued on fortnightly basis during lean season and monthly basis during flood season.

6) 24 hours navigation aids being provided in Haldia-Balia sector (1140 km) only. Day channel marking being provided in entire of NW-1.

Table No. 1.2 (Contd...) Infrastructure Facilities Available on National Waterways (As on 31-3-2017)

Place	Size of Vessels that can be accomodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available	Remarks
1	2	3	4	5	6
National Waterways No. 2					
1. Bangladesh Border-Pandu: (255 km), Depth - 2.5					
(a) Hatsingimari	600	One(floating)	Crane pontoon		Ro-Ro Jetty is operational
(b) Dhubri	600	One(floating)	Crane pontoon	-	(i) Storage facility is being developed (ii) DGPS station is commissioned
(c) Jogighopa	600	One(floating)	Pontoon	Open storage facility available	(i) DGPS station is commissioned
(d) Pandu	600	One(low level RCC jetty) + One High level RCC jetty	One Container crane of 75 T capacity, two tyre mounted crane of 20 T capacity, three crane pontoon and one pontoon.	(i)2 transit sheds of 75 x 21 m each (ii) open storage facility also available	(i) BG siding is completed. Approach road is available (ii)
2. Pandu-Neamati : (374 km), Depth - 2.5					
(e) Tezpur	600	One(floating)	pontoon	-	
(f) Silghat	600	One(floating)	pontoon	Open storage facility available	
(g) Biswanath	600	One (floating)	pontoon	Open storage facility available	DGPS station is commissioned.
(h) Neamati	600	One (floating)	pontoon		
3. Neamati-Dibrugarh : (123 km), Depth- 1.5					
(i) Bogibeel	600	One (floating)	Pontoon	-	
(j) Sengajan/Panbari	600	One (floating)		-	
4. Dibrugarh-Sadiya (Oriumghat) : (139 km), Depth - 1.5					
(k) Oakland/ Dibrugarh	600	One(floating)	Pontoon	-	DGPS station is commissioned.
(l) Oriumghat	600	One (floating)	Pontoon	-	1.77 hectare land acquired for development of terminal.

Note:

1) Floating pontoons can be provided at any location along waterway on demand.

2) Night navigation facilities are available between Bangladesh Border and Silghat (440km).

3) River notices issued on regular monthly/fortnightly basis.

4) Different Global Positioning System(DGPS) Stations to cover entire waterway are provided at Dhubri, Jogighopa,Biswanath and Dibrugarh.

Table No. 1.2 (Contd...) Infrastructure Facilities Available on National Waterways (As on 31-3-2017)

Place	Size of Vessels that can be accomodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available	Remarks
1	2	3	4	5	6
National Waterways No. 3					
1. Kochi-Kottapuram : (30 km), Depth-2.0					
(a) Kottapuram	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	Terminal has a road connectivity.
2. Udyogmandal Canal : (23 km), Depth -2.0					
(b) Aluva	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	Terminal has a road connectivity.
3. Champakara Canal : (14 km), Depth - 2.0					
(c) Ernakulam GC (Maradu)	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	(i) Terminal has a road connectivity.
(d) Kakkanad (CSEZ)					(ii) Only Land for terminal acquired.
4. Kochi - Chavara : (107 km) , Depth - 2.0					
(e) Vaikkom	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	Terminal has road connectivity.
(f) Chertala (Thanneermukkom)	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	(i) Terminal has road connectivity.
(g) Alapuzha					(ii) Construction of Terminal is nearing completion.
(h)Trikunnapuzha	350.0	One fixed	One 18 T crane & 3 T Fork lift	400 Sqm Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	Terminal has road connectivity.
(I)Kayamkulam	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	(i) Terminal has road connectivity.
(j) Chavara					(ii) Only land for terminal acquired.

Table No. 1.2 (Contd...) Infrastructure Facilities Available on National Waterways (As on 31-3-2017)

Place	Size of Vessels that can be accomodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available	Remarks
1	2	3	4	5	6
5. Chavara- Kollam : (31 Km), Depth -2.0					
(k) Kollam	350.0	One fixed	One 18 T crane & 3 T Fork lift	Covered storage (20m x 20m) and open storage (approx. 1500-2000 Sqm)	Terminal has road connectivity.
6. CPT Area : Depth -2.2					
(l) Willingdon island	12 TEU	One berth for container vessels	5 T Crane through agency/ Operator	-	These terminals have been constructed for container movement to ICTT, Vallarpadam. Operation commenced w.e.f. 23.02.2011. The Ro-Ro service has been terminated due to contractual dispute between operator & Cochin Port Trust w.e.f. June 2017.
(m) Bolgatty island	16 TEU	One berth for container vessels	40 T Crane through agency/ Operator	3000 sqm open storgae	

Note :-

1) Channel marks for 24 hrs navigation provided on the entire waterway.
2) River notices issued on regular fortnightly basis.
3) Depth is in meters and about 330 days in a year.

Table No. 1.3

Infrastructure Facilities Available on State Waterways (As on 31-3-2017)

Sl. No.	Navigational Channel	Depth (Meters)	Availability and Capacity of Terminals					
			Place	Size of vessels that can be accomodated (DWT)/dimension	No. of berths	Cargo handling equip. and their capacity	Type and extent of storage facility available	Remarks
1	2	3	4	5	6	7	8	9
1	**ANDHRA PRADESH*** **							
	Godavari River							
	Kakinada Canal	2.98/1.98	Z-Medaoadu to Kovvur	--	--	--	--	
	Samarlakota Canal	2.17/1.95	Dowlaiswaram- Kakinada	--	--	--	--	
	G.E. Banak Canal	2.86/2.13	Vemagiri- Tallarevu	--	--	--	--	
	Amalapuram Canal	2.225/1.890	Bobbarlanka-Challapalli Lock	--	--	--	--	
	Krishna River							
	Eluru Canal	--	--	--	--	--	--	
	Ryves Canal	--	--	--	--	--	--	
	Polraj Canal	--	--	--	--	--	--	Through the canals noted in Col.(1) are designed for Navigation Canal long back i.e. 100 to 150 years. At present no Inland Water Facility is being utilized.
	Campbell Canal	--	--	--	--	--	--	
	Bantumilli Canal	--	--	--	--	--	--	
	Bandar Canal	--	--	--	--	--	--	
	K.E.B. Canal	--	--	--	--	--	--	
2	**BIHAR**							
	Ganga River	2 metres	(I) (a) Sahebganj- Manihari	134'x31'	2 Nos.	Nil	Nil	-
				80'x15'x7'	1 Nos.	Nil	Nil	-
				55'x13'3"x4'8"	1 Nos.	Nil	Nil	-
			(II) Kahalgaon-Tintanga	60'x16'x6'	2 Nos.	Nil	Nil	-
			(III) Sultanganj - Agwani	70'x18'x6'	2 Nos.	Nil	Nil	-
			(IV) (a) Munghyr- Raighat	56'3"x14'2"x5'9"	1 Nos.	Shore crane-2	Godown	-
				58'3"x16'4"x5'8"	1 Nos.	Pontoon crane-2		
				47'2"x12'6"x5'8"	1 Nos.	Container		
				59'5"x15'6"x5'6"	1 Nos.			
			(V) Buxar-Ujiyarghat	-	2 Nos.	-	-	At IWAI terminal
3	**GOA**							
	Panaji Port (River Mandovi)	3.30 metres	Panaji	75 Mtrs Length	1 Nos.	-	-	Ports jetty being used by vessels calling in the Ports

Table No. 1.3 (Contd...)

Infrastructure Facilities Available on State Waterways (As on 31.3.2017)

Sl. No.	Navigational Channel	Depth (Meters)	Availability and Capacity of Terminals					
			Place	Size of vessels that can be accomodated (DWT)/dimension	No. of berths	Cargo handling equip. and their capacity	Type and extent of storage facility available	Remarks
1	2	3	4	5	6	7	8	9
4	**ORISSA**							
	Balugaon Sector							
	Balugaon-Krishnaprasad	Varies between 2 to 10 meters	Lake Chilka	30 ft and above	2	-	NA	Passenger jetty & waiting hall are available at Balugaon & Krishna Prasad garh.
	Balugaon-Kalijai	Varies between 2 to 10 meters	Lake Chilka	40 ft and above	2	-	-do-	Passenger Jetty & waiting hall are available at Balugaon & Kalijai.
	Balugaon-Nuapada	Varies between 2 to 4 meters	Lake Chilka	30 ft	2	-	-do-	Passenger Jetty & waiting hall is available at Balugaon.
	Balugaon-Satapada	Varies between 2 to 4 meters	Lake Chilka	30 ft	2	-	-do-	Passenger waiting hall & Jetty are available at Balugaon & Satapada.
	Astarang Sector							
	Nuagarh-Sribantpur	Varies between 2 to 10 meters	River Devi	26 ft	3	-	-do-	Passenger waiting hall & Jetty are available at Balugaon & Naugarh.
	Chandabali Sector							Jetty & waiting hall are available at Chandbali, Nalitapatia, Chardia & Raj Nagar.
	Chandbali-Rajnagar	Varies between 7 to 10 metres	River Baitarani/ Brahmani	52 ft	13	-	-do-	Jetty & waiting hall are available at Chandbali, Nalitapatia & Raj Nagar.
	Chandbali-Talucha	Varies between 7 to 20 metres	Baitarani/Kharastrota/ Brahmani	50 ft	10	-	-do-	Jetty & waiting hall are available at Chandbali, Dhamara, Nalitapatia & Chardia.
	Chandbali-Aradi	Varies between 7 to 18 meters	Brahmani	35'	3		-do-	Jetty and waiting hall are available at Chandabali & Aradi.
5	**TAMILNADU*** Periyar Lake in Kerala (Under lease in T.N.)**	41.46	Thekkady	Vessel 1 (kannagi) Length-8.5m Breadth-3m Depth-1.4m Vessel 2(Jairatna) Length-11.5m Breadth-2.4m Depth-1.6m	- -			-
	Anantha Victoria Marthandavarma Canal (AVM)	4 m (Average)	Kanyakumari District of Tamil Nadu	3.5 m	-	-	-	-
6	**MIZORAM *** **							
	1. R. Tlawng	3.0	(a) Hortoki	15	1	20 T	Available	
			(b) Bairabi	10	2	15 T	Available	

***Information for the year 2017 has not been received. Hence last year data has been repeated.

Source : State Govts.

SECTION – 2

CARGO MOVED ON VARIOUS WATERWAYS

Table No. 2.1

Cargo Movement on National Waterways, Goa & Maharashtra Waterways

Sl.No.	Details of Waterway	Distance (Kms)	Cargo Moved (lakh Tonnes)			Tonne Kms (in lakh)		
			2014-15	2015-16	2016-17	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9
1	National Waterway No. I (Allahabad-Haldia stretch of Ganga – Bhagirathi – Hooghly river system)	1620	50.50	62.37	45.05	22636	26995	24598
2	National Waterway No. II* (Sadiya-Dhubri stretch of Brahmaputra River system)	891	24.92	25.84	25.91	508	505	503
3	National Waterway No. III (Kollam-Kottapuram stretch of West Coast Canal along with Champakara Canal and Udyogmandal Canal)	205	8.44	10.61	10.33	92	105	109
	Sub Total NWs	2716	83.86	98.82	81.29	23236	27605	25210
4	Goa Waterways	202	7.94	49.75	157.68	340	1987	7884
5	Maharashtra Waterways	453	273.57	288.49	348.90	4892	5005	6428
	Grand Total	**3371**	**365.37**	**437.06**	**587.87**	**28468**	**34597**	**39522**

Source: Inland Waterways Authority of India for National Waterways

Data for Goa Waterways include the data received from Ports department, Govt of Goa and the data from the Mormugao Port Trust (MPT).

*Provisional data has been considered in absence of cargo data received from IWTD, Government of Assam for National Waterways-II for the year 2015-16 and 2016-17.

Table No. 2.2

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
A.	**CIWTC(^)**						
1	(I)Saugar-Diamond Harbour/Haldia /Kolkatta/ Kolkatta Internal	144/80	…	…	…	…	Pulses,Logs,Salt,Iron Ore,Steel, Fly Ash,Aluminium block, Fertilizer, Container, ODC,Sand Clips
2	Haldir-Internal	2.00	…	…	…	…	Sand, Clips
3	Kolkata- Ichamati River at Basirhat	2.00	8250	...	…	…	Sand, Clips
	Sub Total (A)		**8250**	**0**	**0**	**0**	
B.	**VIVADA IWL**						
1	Haldia-Sagar	35	…	4410	2098	2697	HSD/FO/LDO
2	Haldia-Budge-Budge	78/84	66607	71309	59793	57141	FO, LDO, HSD, Lube
3	Haldia-NSD	106	54595	...	46615	47570	LO,HSD, Lube Oil, FO
4	Haldia-Diamond Harbour	29	…	535	1565	4070	FO, HSD
5	Budge-Budge-NSD	21/19	…	1533	2183	40	MSD, HF,FO
6	Halida- J'Ham	10	…	20637	17419	12565	FO, HSD
7	Budge-Budge-KPD	21	…	758	2824	865	FO, HSD
8	Haldia-Namkhana	46	305	1625	2626	2870	HF, HSD
9	Budge-Budge-Pujali	5	434	...	0	...	LDO
10	Haldia-Haldia Oil Barge	3	16948	66420	84196	81164	FO, HSD
11	Haldia-Haldia Oil Jetty	3	70724	40838	50525	57563	FO, HSD
12	Surninam-KPD	2	140	0	0	356	FO
13	Surninam-NSD	1	…	206	1461	156	HSD, HF
14	Haldia-HOB	3	…	…	…	…	
15	Haldia-KPD	105	…	42122	…	16522	
16	Haldia- Noorpur	43	…	24	0	0	
17	Haldia-Ramnagar				2379	896	LUBE
18	Budge Budge - Kolkatta	21	2310	...		0	HF, HSD
	Sub Total (B)		**212063**	**250418**	**273684**	**284475**	

^ : Data for the year 2013-14 is taken from monthly returns.

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
C.	**OTHER PRIVATE OPERATORS**						
1	**TIRUPATI VESSEL (P) LTD.**						
1	Budge- Budge(Kol)- Khulna	497	104484	69648	60498	42012	Flyash
2	Budge- Budge Narayanganj	884	308004	313023	277590	275025	Flyash
3	Budge- Budge- Mongla	484	…	970	…	…	Flyash
4	IWAI Haldia Jetty-Khulna	426			30781	36692	Flyash
5	IWAI Haldia Jetty-Narayanganj				17538	26408	Flyash
2	**RELIANCE EXPORT CORPORATION**						
1	T.T.Shed-Narayanganj	910	…	…	…	…	Flyash
2	Budge- Budge Narayanganj	884	2646	…	…	…	Flyash
3	IWAI BISN Jetty-Narayanganj	909	1374	1401	…	…	Flyash
3	**Maitrayee Shipping & Logistics**						
1	IWAI BISN Jetty-Narayanganj	909	7494	21899	20102	10010	Flyash
2	IWAI BISN Jetty-Khulna	522	636	660	…	…	Flyash
3	T.T.Shed-Narayanganj	910	11184	2464	8234	7897	Flyash
4	T.T.Shed-Mongla	510	…	…	…	…	Flyash
5	Budge Budge- Naryanganj	884	33923	14933	28140	31196	Flyash
6	Budge Budge- Khulna	497	…	…	…	…	Flyash
7	Sri Ram Jetty - Narayanganj	905	2790	665	2145	2839	Flyash
8	Budge Budge - Karimganj	1332	642	...	715	…	Flyash
9	IWAI BISN Jetty - Karimganj	1357	-	1185	1858	…	Flyash
10	Karimganj-T. T. Shed	1358			53	…	Iron Fabricated
4	**P K Shipping**						
1	Orient Jute Mill- Ashuganj	1015	…	1931	8024	…	Rice
2	Budge- Budge Narayanganj	884	20130	6003	…	…	Flyash
3	Narayanganj- T.T.Shed	910	…	…	…	…	Cement
4	K.P.Dock-Narayanganj	910	3836	1979	1030	…	Prime mild steel billets, Steel Coils & Plates
5	Haldia H.D.C.-Karimganj	1274	…	…	…	…	Coal
6	KP Dock- Ashuganj	1038				3339	Steel Materials/ GC Sheet Rice

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
7	Kolkatta-Karimganj	1358	…	…	…	…	ODC Kargo
8	Diamond Harbour-Ashuganj	962	…	4848	…	…	Food Grain (Rice)
9	Sri Ram Jetty-Narayanganj	905	24073	6575	…	…	Flyash
10	K.P.Dock-Khulna	523	1622	…	495	…	Dolomite Powder, Steel Sheet
11	T.T.Shed - Narayanganj	910	…	36236	…	…	Flyash
12	IWAI BISN Jetty - Narayangunj	909	…	1110	…	…	Flyash
13	K.P.Dock-Mongla	510	…	3526	…	…	Steel Plate,Prime Hot Rolled Non Alloy Steel Coils & Plates, Prime Quality Hot Roll Steel
14	G.R. Jetty-II-Khulna	1357			695	…	Project Cargo
5	**SOHAM COMMERCIAL**						
1	Sri Ram Jetty-Narayanganj	905	…	729	..	…	Flyash
2	Kolkatta(Sri Ram Jetty)-Narayanganj	905	…	…	…	…	Flyash
3	T.T.Shed-Narayanganj	910	81267	122966	97014	97668	Flyash
4	T.T.Shed-Khulna	523	745	…	…	…	Flyash
5	Khulna - FSEZ Jetty(Falta), Kolkatta, India	472	291	…	…	…	Jute Carpet, Baking Cloth
6	KPD - Narayanganj	910	1329	…	…	…	Steel Coil
7	IWAI BISN Jetty - Narayanganj	909	…	2435	3362	…	Flyash
8	IWAI BISN Jetty - Khulna	522	…	890	…	…	Flyash
6	**RENAISSANCE IMPEX Pvt Ltd**						
1	IWAI BISN Jetty-Narayanganj	909	44463	16637	5136	5925	Flyash
2	IWAI BISN Jetty-Karimganj Assam	1357	…	…	…	…	Flyash, HDPE Bags, Coal
3	Sri Ram Jetty-Narayanganj	905	992	…	…	…	Flyash
4	Karimganj Assam-IWAI BISN Jetty	1357	…	…	…	…	Coal
5	IWAI Haldia Jetty- Narayanganj	826	2805	3537	6523	…	Flyash
6	Shri Ram Jetty- Mongla	505	…	…	…	…	Flyash
7	TT Shed-Narayanganj	910	12469	21955	12050	10839	Flyash
8	Budge Budge Naryanganj	884	52074	8827	6066	9140	Flyash
9	Budge Budge Karimganj	1332	…	…	…	…	Flyash
10	KPD - Mongla	510	1184	339	…	…	Prime Hot Roll Non Alloy Steel Coils
11	TT Shed-Khulna	523	…	879	…	…	Flyash
12	GR Jetty II- Narayanganj	909				1880	

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
7	**Rivering Shipping & Logistics**						
1	IWAI Haldia Jetty-Khulna	439	…	5088	2520	796	Flyash
2	Budge- Budge (Kol)- Khulna	497	2666	…	4102	5199	Flyash
3	Budge Budge Naryanganj	884	26210	18277	19121	14554	Flyash
4	TT Shed-Narayanganj	910	5812	16729	46354	42034	Flyash
5	K P Dock- Khulna	523	…		…	…	Wheat
6	Sri Ram Jetty-Khulna	518	…	…	793	…	Flyash
7	Sri Ram Jetty-Narayanganj	905	10484	10609	5777	5608	Flyash
8	IWAI Haldia Jetty-Narayanganj	826	10852	11968	13033	9069	Flyash
9	K P Dock- Mongla	510	1157	…	…	…	Maize
10	NSD - Mongla	508	850	…	…	…	Maize
11	IWAI BISN Jetty-Khulna	522			3470	2970	Flyash
12	IWAI BISN Jetty-Narayanganj	523				2901	
13	GR Jetty II- Khulna	522				1045	
14	HDC Fly Ash Jetty Haldia-Narayanganj	826				9924	
15	T.T.Shed-Khulna	523			1026	1100	Flyash
16	Kolaghat-GR Jetty II	97				192	Cement
8	**GLOBAL SHIPPING & Forwarding**						
1	Budge Budge-Narayanganj	884	1466	...	820	1429	Flyash
2	Budge Budge-Khulna	497	5494	703	815	3059	Flyash
3	IWAI BISN Jetty-Khulna	522	813	1654	1571	5155	Flyash
4	IWAI BISN Jetty-Narayanganj	909	…	7751	…	1458	Flyash
5	T.T.Shed-Khulna	523	570	...	…	…	Flyash
6	IWAI Haldia Jetty - Khulna	439	2193	4397	6930	…	Flyash
7	T.T.Shed-Narayanganj	910	1688	4525	1930	750	Flyash
8	IWAI Haldia Jetty - Narayanganj	826	-	1404	5338	…	Flyash
9	Sri Ram Jetty-Narayanganj	905		1782	…	…	Flyash
10	HDC Fly Ash Jetty Haldia-Khulna	439				14338	
11	HDC Fly Ash Jetty Haldia-Narayanganj	826				1500	
12	Sri Ram Jetty-Narayanganj	905				2349	
13	Sri Ram Jetty-Khulna	518				3114	
9	**COASTAL CONNEXIONS**						
1	Budge Budge-Narayanganj	884	…	…	…	7989	Flyash
2	Budge Budge-Karimganj	1332	400	…	…	…	Flyash
3	Budge Budge-Khulna	497	3698	2504	831	9058	Flyash
4	IWAI BISN Jetty-Narayanganj	909	5443	1698	…	…	Flyash
5	BISN Jetty-Narayanganj	1357	…	…	…	…	Flyash
6	IWAI BISN Jetty-Karimganj	1357	…	…	…	…	Flyash

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
7	BISN Jetty-Karimganj	1357	…	…	…	…	Coal
8	IWAI BISN Jetty-Khulna	532	…	2938	16074	7330	Flyash
9	IWAI Haldia Jetty-Khulna	439	3372	6204	5646	3608	Flyash
10	IWAI Haldia Jetty-Narayanganj	826	2078	3397	1055	2625	Flyash
11	Karimganj(Badarpur, Assam) - Narayanganj	478	455	…	…	…	Cement Clinker
10	**KANISHKA SHIPPING LINES**						
1	Budge Budge-Narayanganj	884	63636	36730	23420	23023	Flyash
2	IWAI Haldia Jetty-Narayanganj	826	99999	134227	142072	180532	Flyash
3	Sri Ram Jetty-Khulna	518	…	848	2039	1996	Flyash
4	T.T.Shed-Narayanganj	910	15294	20551	25944	54542	Flyash
5	Sri Ram Jetty-Narayanganj	905	1277	21158	16848	6107	Flyash
6	IWAI BISN Jetty-Khulna	522	…	…	…	10384	Flyash
7	IWAI BISN Jetty-Narayanganj	895/909	2850	7486	9216	13876	Flyash
8	T.T. Shed - Mongla	510	2113	…	…	…	Flyash
9	IWAI Haldia Jetty-Khulna	439	-	1606	…	14354	Flyash
10	IWAI Haldia Jetty-Mongla	426	-	1570	848	1608	Flyash
11	Diamond Harbour - Ashuganj	962	-	5314	…	…	Foodgrain(Rice)
12	HDC Fly Ash Jetty-Narayanganj	826	…	…	11699	6289	Flyash
13	T. T.Shed-Khulna	523	…	…	1032	14534	Flyash
14	KPD-Mongla	510	…	…	1028	642	Machinery
15	Budge Budge-Khulna	497	…	…	…	9360	
16	GR Jetty 2- Narayanganj	909	…	…	…	3570	
17	HDC Fly Ash Jetty-Khulna	439	…	…	…	1791	
11	**Eastern Navigation Pvt Ltd., Kolkatta**						
1	Kolkatta-Zamania	1065	…	…	…	…	ODC Cargo
2	Kolkatta-Silghatghat	1748	…	…	…	…	ODC Cargo
3	Haldia-Silghatghat	1664	…	…	…	…	ODC Cargo
4	T.T. Shed - Pandu	1573	…	150	…	…	Control & Protection Equipments for HVDC
5	Kolkata-Jogigopa, Assam	1432				310	
12	**A.K.Navigation**		…	…			
1	T.T.Shed-Narayanganj	910	…	5798	21553	25322	Flyash
2	T.T.Shed-Khulna	523	…	…	…	…	Wheat

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
13	**Desha International**						
1	Budge Budge-Narayanganj	884	201933	113396	108031	98890	Flyash
2	IWAI Haldia Jetty-Khulna	439	9936	11216	21998	22156	Flyash
3	IWAI Haldia Jetty-Mongla	426	3548	2826	6375		Flyash
4	Budge Budge-Khulna	497	4759	23330	14909	36121	Flyash
5	IWAI BISN Jetty-Narayanganj	909	1216	20946	21148	30420	Flyash
6	IWAI BISN Jetty-Karimganj	1357	…	748	…		Flyash
7	BISN Jetty-Karimganj(Badarpur)	1357	…	…	…		Coal
8	Sri Ram Jetty-Mongla	505	…	…	…		Flyash
9	Sri Ram Jetty-Khulna	518	5568	11211	10479	10800	Flyash
10	Sri Ram Jetty-Narayanganj	905	84687	58943	35915	41543	Flyash
11	T.T.Shed-Mongla	510	531	6302	…	760	Wheat,Soyabean Extraction, Maize
12	T.T.Shed-Khulna	523	…	2389	2714	4665	Maize
13	T.T.Shed-Narayanganj	910	44291	65312	121599	130564	Flyash,Maize
14	K.P.Dock-Mongla	510	2658	...	2006		Wheat,Maize
15	K.P.Dock-Khulna	523	…	…	…		Wheat
16	IWAI Haldia Jetty-Narayanganj	826	244897	235687	255415	411400	Flyash
17	IWAI BISN Jetty-Khulna	532/522	606	8570	2651	705	Flyash
18	Budge Budge- Mongla	484	1438	...	…	…	Flyash
19	IWAI BISN Jetty (kol)- Mongla	509	1407	...	1410	…	Flyash
20	K.P.Dock-Narayanganj	910	1450	1056	…	…	Maize, Steel coils
21	NSD - Narayanganj	908	2942	...	…	…	Soyabean Extraction, Maize
22	NSD- Mongla	508	1347	...	…	…	Maize
23	Gr. Jetty II - Mongla	509	-	973	…	…	Rice
24	IWAI Haldia Jetty-Karimganj	1274			779	…	Flyash
25	HDC-Mongla	426			1168	3674	Steel Plates
26	HDC Fly Ash Jetty-Narayanganj	826			17751	37458	Flyash
27	GR Jetty II- Narayanganj	909				7289	
28	GR Jetty II- Khulna	522				630	
29	HDC Fly Ash Jetty-Khulna	439				4695	
14	**Reliance Enterprise**						
1	Budge Budge-Narayanganj	884	12367	694	…	2132	Flyash
2	Budge Budge-Khulna	497	…	…	…	…	Flyash
3	Sri Ram Jetty-Khulna	518	…	…	…	…	Flyash
4	IWAI BISN Jetty-Narayanganj	909	699	2731	…	…	Flyash
5	T.T.Shed-Narayanganj	910	12425	51391	41934	18431	Flyash
7	IWAI Haldia Jetty-Narayanganj	826	1358	…	…	851	Flyash
8	IWAI Haldia Jetty-Khulna	439	2131	…	…	…	Flyash
9	Sri Ram Jetty-Narayanganj	905	4779	3300	…	…	Flyash

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
15	**Saha Oversees Corporation**						
1	Budge Budge-Narayanganj	884	…	…	…	…	Flyash
2	Sri Ram Jetty-Khulna	518	…	…	…	…	Flyash
3	T.T.Shed-Narayanganj	910	…	…	…	…	Flyash
16	**C. Day & Brothers**						
1	Budge Budge-Narayanganj	884	52610	18863	19594	24651	Flyash
2	Budge Budge-Khulna	497	600	7043	2174	3512	Flyash
3	Sri Ram Jetty-Khulna	518	…	798	…		Flyash
4	Sri Ram Jetty-Narayanganj	905	5782	5216	…	1887	Flyash
5	IWAI Haldia Jetty-Mongla	426	…	654	…		Flyash
6	IWAI Haldia Jetty-Khulna	439	4919	3593	11207	2244	Flyash
7	IWAI BISN Jetty-Narayanganj	909	…	14847	7229	5560	Flyash
8	IWAI Haldia Jetty-Narayanganj	826	5886	24591	23246	2664	Flyash
9	T.T.Shed-Khulna	523	…	812	…		Flyash
10	T.T.Shed-Narayanganj	910	4736	1708	17172	5707	flyash, Ironfines
11	IWAI BISN Jetty - Khulna	522	905	5216	1683	1921	Flyash
12	HDC Fly Ash Jetty-Narayanganj	826	…	…	3385	682	Flyash
13	HDC Fly Ash Jetty-Khulna	…	…	…	…	650	
14	GR Jetty II- Narayanganj	…	…	…	…	2322	
17	**Fortune Cargo (India Pvt Ltd)**						
1	Budge Budge-Narayanganj	894/884	29765	11734	15934	23503	Flyash
2	IWAI Haldia Jetty-Narayanganj	826	780	8218	9579	2063	Flyash
3	T.T.Shed-Narayanganj	910	2167	907	872	1652	Flyash
4	IWAI BISN Jetty-Khulna	522	633	...	…	…	
5	IWAI BISN Jetty-Narayanganj	909	…	13687	9737	13149	Flyash
6	T.T.Shed-Khulna	523	…	602	…	…	Flyash
7	Sri Ram Jetty - Narayanganj	905	…	650	…	670	Flyash
8	Sri Ram Jetty - Khulna	518	…	…	933	…	Flyash
9	IWAI Haldia Jetty-Khulna	439	…	…	1090	…	Flyash
10	Budge Budge-Khulna	497	…	…	…	624	
18	**Sea Water Transport Co. Pvt Ltd**						
1	T.T.Shed-Khulna	523	…	…		…	Wheat
2	K.P. Dock-Mongla	510	…	2947		…	Steel Coils, Steel Plates, Steel items
3	IWAI Haldia Jetty-Mongla	426	1140	…		…	Flyash
4	IWAI BISN Jetty-Khulna	522	1080	…		…	Flyash

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
19	**Krishna Shipping & Logistics**						
1	Budge Budge- Narayanganj	884	…	…		…	Flyash
2	Budge Budge- Karimganj	1332	…	…		…	Flyash
3	TT Shed- Narayanganj	910	…	…		…	Flyash
4	Kolkatta- Pandu	1432	…	…		…	ODC Cargo
5	G.R. Jetty-II-Ashuganj	1037			4285	1364	Steel Bridge Girder
20	**Neli**						
1	Budge Budge-Narayanganj	884	19337	3798	8745	12409	Flyash
2	IWAI Haldia Jetty-Narayanganj	826	…	1964	…		Flyash
3	IWAI BISN Jetty-Narayanganj	909	6147	15678	9415	9262	Flyash
4	T.T. Shed - Narayanganj	910	834	27632	11978	11607	Flyash
5	T.T. Shed - Khulna	523	…	1819	…	…	Flyash
6	Budge Budge-Khulna	497	...	...	…	…	Flyash
7	Sri Ram Jetty- Mongla	505	...	...	…	…	Flyash
8	Sri Ram Jetty- Khulna	518	...	...	…	…	Flyash
9	Budge Budge- Karimganj	1332	...	...	…	…	Flyash
10	Kolkatta- Narayanganj	894	...	...	…	…	Flyash
11	IWAI BISN Jetty-Karimganj	1357	...	...	…	…	Flyash
12	T.T. Shed-Mongla	510	...	...	2120	855	Flyash
13	GR Jetty II- Narayanganj	909	...	...	...	2370	Flyash
14	Sri Ram Jetty- Narayanganj	905	...	...	...	866	Flyash
21	**Ajbela Navigation**						
1	Sri Ram Jetty-Khulna	518	…	…	1608	…	Flyash
2	Sri Ram Jetty-Narayanganj	905	15712	9835	6328	3852	Flyash
3	K.P.Dock-Khulna	523	…	…	…	…	Wheat
4	T.T.Shed-Narayanganj	910	5752	8676	33313	29804	Flyash
5	T.T.Shed-Mongla	510	…	1293	…	840	Maize
6	T.T.Shed-Khulna	523	…	…	895	901	Wheat
7	HDC Fly Ash Jetty-Narayanganj	826				14324	Flyash
8	Budge Budge-Narayanganj	884	11268	10415	35311	21604	Flyash
			21				

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
9	Budge Budge-Khulna	497	…	…	690	3579	Flyash
10	IWAI Haldia Jetty-Mongla	426	…	…	…	…	Flyash
11	IWAI Haldia Jetty-Khulna	439	…	…	…	1680	Flyash
12	IWAI Haldia Jetty-Narayanganj	836/826	3456	18566	35877	19814	Flyash
13	IWAI BISN Jetty - Narayanganj	909	703	730	2032	4708	Flyash
14	IWAI Haldia Jetty-Karimganj	1274			678	…	Flyash
22	**Reach Asia**						
1	Kolkatta-Jogighopa, Assam	1392	...	...	...	...	ODC Cargo
23	**Neticon**						
1	KP Dock- Khulna	510	…	…	…	…	Wheat
24	**Duttson**						
1	T.T.Shed-Narayanganj	910	…	3815	756	…	Flyash
2	IWAI BISN Jetty-Narayanganj	909	7917	3695	2216	9239	Flyash
3	Budge Budge-Narayanganj	884	9659	5131	2253	5419	Flyash
4	IWAI Haldia Jetty - Mongla	426	740	...	…	621	Flyash
5	IWAI Haldia Jetty - Narayanganj	826	10942	5760	11340	13452	Flyash
6	IWAI Haldia Jetty - Khulna	439	3721	644	…	…	Flyash
7	IWAI BISN Jetty-Khulna	522	2010	1281	…	…	Flyash
8	IWAI BISN Jetty-Karimganj	1357	2337	1680	…	…	Flyash, Spare parts
9	Budge Budge-Karimganj	1332	507	...	…	…	Flyash
10	Karimganj(Badarpur) - Narayanganj	478	1200	...	…	…	Cement Clinker
11	Sri Ram Jetty - Narayanganj	905	-	686	795	484	Flyash
12	IWAI Haldia Jetty-Karimganj	1274			640	…	Flyash
13	Budge Budge-Khulna	497				730	Flyash
14	GR Jetty II- Narayanganj	909				3740	Flyash
15	HDC Fly Ash Jetty-Narayanganj	826				564	Flyash
25	**Seaways Shipping & Logistics Ltd.**						
1	KP Dock - Mongla	510	...	1375		…	Steel Plates, Steel coils, Steel items
26	**J.D.Shipping**						
1	Budge Budge-Narayanganj	884	6550	1782	18464	35160	Flyash
2	Sri Ram Jetty(Kol) - Narayanganj	905	3828	1828	8387	8119	Flyash
3	Sri Ram Jetty(Kol) - Khulna	518	512	...	…		Flyash
4	Sri Ram Jetty(Kol) - Mongla	505	642	...	…		Flyash
5	IWAI Haldia Jetty - Narayanganj	826	996	1966	4464	2268	Flyash
6	KP Dock - Mongla	510	931	1997	…		Steel plate, Steel items
7	KP Dock - Narayanganj	910	2221	...	…		Machinery
8	KP Dock - Khulna	523	-	1000	…		Steel plate
9	T.T. Shed - Narayanganj	910	-	2351	5485	23342	Flyash
10	IWAI BISN Jetty - Narayanganj	909	-	2738	1984	12854	Flyash
11	HDC Fly Ash Jetty-Narayanganj	826			3378	6160	Flyash

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
27	**Ganga Water Transport**						
1	K.P.Dock-Mongla	510	…	…	…	…	Wheat
2	K.P.Dock-Narayanganj	910	2733	…	…	…	Non Alloyed Hot Rolled Steel Coil
3	Budge Budge - Khulna	497	683	…	…	…	Flyash
28	**Bertling Logistic India Pvt.Ltd.**						
1	Haldia-Balia	1028	…	…	…	…	ODC Cargo
2	Kolkata - Balia	923	…	675	…	…	ODC Cargo
29	**Venketesh Logistics**						
1	Haldia-Bhaktiyarpur	885	…	…	…	…	ODC Cargo
30	**All Cargo Logistics Ltd.**						
1	Haldia-Zamania	1170	…	…	…		ODC Cargo
2	Haldia - Biswanath Chareli, Assam(NW2)	1730/1694	2223	620	…		ODC Cargo
3	T.T. Shed - Biswanath Charlie	1778	…	1000	870		ODC Cargo
4	Haldia-Jogigopa	1348	…	642	…		ODC Cargo
5	Kolkata - Jogigopa	1432	…	1060	…	361	ODC Cargo
6	T.T. Shed - Jogigopa	1432	…	350	250	…	ODC Cargo
7	T.T. Shed - Pandu	1573	…	…	560	…	ODC Cargo
8	T.T. Shed - Silghat	1721	…	…	500	…	ODC Cargo
9	NSD, Kolkata-Pandu	1573	…	…	0	…	ODC Cargo
10	Haldia-Bhaktiyarpur	885	…	…	…	361	ODC Cargo
11	Kolkatta- Bhaktiyarpur	780	…	…	…	750	ODC Cargo
31	**Prism Logistics Pvt.Ltd.**						
1	Haldia-Allahabad	1512	599	…	…	…	ODC Cargo
32	**Safehand Logistics**						
1	IWAI BISN Jetty - Karimganj (Badarpur)	1357	1150	…	…	…	Flyash
2	Budge Budge - Narayanganj	884	1753	2988	5675	1512	Flyash
3	IWAI Haldia Jetty - Narayanganj	826	582	1752	18292	3094	Flyash
4	IWAI Haldia Jetty -Khulna	439	…	640	…	…	Flyash
5	IWAI BISN Jetty - Narayanganj	909			516	750	Flyash
6	Sri Ram Jetty-Narayanganj	905			845	…	Flyash
7	T. T. Shed-Narayanganj	910			6266	…	Flyash
8	IWAI Haldia Jetty -Karimganj	1274			606	…	Flyash
9	KPD-Khulna	523			786	…	Steel Plates
10	Budge Budge - khulna	497				650	
33	**Shun Shing India Private Ltd.**						
1	Budge Budge - Narayanganj	884	15604	72316	42578	34187	Flyash
2	Budge Budge - khulna	497	…	19478	60144	58537	Flyash
3	IWAI BISN Jetty- Narayanganj	909	…	3042	1311	2122	Flyash
4	IWAI BISN Jetty- Khulna	522	…	2036	…	3909	Flyash
5	Sri Ram Jetty - Khulna	518	…	745	9110		Flyash
6	T.T.Shed-Khulna	523	…	…	690		Flyash
7	GR Jetty II- Khulna	522				2000	Flyash
8	GR Jetty II- Narayanganj	909				4358	Flyash
9	Sri Ram Jetty-Narayanganj	905				2006	Flyash
10	T. T. Shed-Narayanganj	910				4859	Flyash
34	**Jindal ITF Ltd.**						
1	Sagar - Farakka	540	197456	506492	716116	370740	Coal

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(in tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
35	**AFS Logistics Pvt. Ltd.**						
1	AWAI Haldia Jetty - Fatuha	910	1400	1200			Fertilizers
2	Fatuha - Kolkatta	805	1400	1099			Fertilizers
36	**Lee & Muirhead Pvt. Ltd.**						
1	Haldia - Sirsa	1471	343	343			ODC Cargo
37	**Boxco India Pvt. Ltd.**						
1	Haldia - Geonkhali	43	642	…			ODC Cargo
38	**K K Shipping**						
1	T.T. Shed - Narayanganj	910	…	9756	62283	39745	Flyash
2	Budge Budge - Narayanganj	884			1164		Flyash
3	IWAI Haldia Jetty - Narayanganj	826			6557	9325	Flyash
4	IWAI BISN Jetty - Narayanganj	909			6068	10627	Flyash
5	Sri Ram Jetty-Narayanganj	905			2621	661	Flyash
6	IWAI BISN Jetty- Khulna	522	…		7316		Flyash
7	T.T.Shed-Khulna	523	…	…	2010		Flyash
8	IWAI BISN Jetty- Mongla	509			992		Flyash
9	T.T.Shed-Mongla	510			1281	855	Flyash
10	IWAI Haldia Jetty - Mongla	426				686	
39	**Tetron Marchandise**						
1	IWAI BISN Jetty- Khulna	522	…		5778	5512	Flyash
2	Budge Budge - Khulna	497			1462	3061	Flyash
3	IWAI BISN Jetty - Narayanganj	909				802	
40	**Transcoast Trading Pvt. Ltd.**						
1	Budge Budge - Narayanganj	884			25354	9721	Flyash
2	IWAI Haldia Jetty - Narayanganj	826			2130	546	Flyash
3	IWAI BISN Jetty - Narayanganj	909			13491	31736	Flyash
4	T.T.Shed-Narayanganj	910	…	…	10539	15300	Flyash
5	G. R. Jetty-II-Mongla	509			264		Project Cargo
6	G. R. Jetty-II-Mongla	509			84		Steel Items
7	KPD-Mongla	510			782		Steel Items
8	G. R. Jetty-II-Narayanganj	909				8055	Flyash
9	Khulna-NSD Kolkatta	521				626	Strand Jack with Accessories
10	KPD Kolkatta-Ashuganj	1038				2367	Rice, TMT BarsSteel Sheets, Iron Pipe & Plates
11	KPD Kolkatta-Mongla	510				2107	Parallel Flange Universal Beems &ISMC Channel & Equal Angles, Steel Iron Pipe
12	KPD Kolkatta-Narayanganj	910				3267	Steel Iron Plates
13	NSD Kolkatta-Mongla	508				526	Gantry
14	Sri Ram Jetty-Narayanganj	905				1056	Flyash
41	**Hindustan Natural Glass & Industries Ltd.**						
1	Rajmahal-Kolkata	443					Slica Sand, Cement
42	**M/s. Spring Professional Services Pvt. Ltd.**						
1	Haldia-Patna	920			1410	352	Cement
2	Varanasi-GR Jetty 2	1171				12	Cars
43	**M/s. Srimaa Import & Export Pvt. Ltd.**						
1	HDC Haldia-Mongla	426				2074	Steel Coils & Plates
2	HDC Haldia-Narayanganj	826				1558	Steel Coils
3	HDC Haldia-Pangaon	842				805	20 Teu Container (35 No.)
4	KPD Kolkata- Mawa via Narayanganj	910				2500	Stone/Pebbles
5	KPD Kolkata- Mongla	510				1949	Steel Plates
6	KPD Kolkata- Narayanganj	910				2131	Pakur crushed Stone/Pebbles
44	**Mags Impex Pvt. Ltd.**						
1	T.T.Shed-Narayanganj					715	
	Sub Total (C)	**-**	**2093793**	**2512791**	**3001210**	**2955773**	

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.I) - THE GANGA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
D	**IWAI Vessels**						
1	Rajmahal -Patna		…	…	1346	78349	Cement
2	Samdhaghatj-Manihari		8832	…	…	…	Stone chips
3	Samdaghat-Patna		1200	…	…	…	Stonechips
	Other vessels in Patna region		…	…	…	162520	
	Sub Total (D)	**-**	**10032**	**0**	**1346**	**240869**	
E	**KOPT**						
1	Sagar- KPD	146	…	2106300	2744017	726260	Iron Ore,Iron & Steel,Log, Pulses, sulphur,Lime stone, Machinery, Manganese Ore, Petroleum Coke, Rice & Wheat, Other Coke/Coal,Coking Coal, Pet Coke, Fertilizer, Sugar,Rock Phosphate, Timber, Other/Misc.
2	Kolkatta-Sagar	146	85000	…	…		Iron Ore, Iron & Steel ,Other/Misc.
4	Diamond Harbour - KPD	78	…	180700	216868	298000	Pulses, Other Coke/Coal
5	Sagar-Kolkatta	146	764000	…	…	…	Iron Ore,Pulses,Sugar,Timber,Coking Coal,Rock Phosphate,Rice & Wheat,Fertiliser,Manganese Ore,Pet Cock
6	Kolkatta-Diamond Harbour		…	…	…	…	
7	Diamond Harbour-Kolkatta	78	176000	…	…	…	Iron Ore, Sugar, Pet Cock, Pulses, Cokjing, Fertilizer, Limestone,Cooking oil
	Sub Total (E)		**1025000**	**2287000**	**2960885**	**1024260**	
	Total (NW-I) (A+B+C+D+ E)		**3349138**	**5050209**	**6237124**	**4505377**	

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.II)- BRAHMAPUTRA

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
A	**Organised Cargo**		…	3821.90	2530.00	1060.00	
B	**IWTD Assam***		1981935	1981935	1981935	1981935	Transformers of power grid, Transmission equipments ,Goods, Passengers,Bicycle, bikes,live stock
C	**Unorganised Sector**		493414	505964	599841	607759	
	Sub Total (A+B+C)		**2475349**	**2491720.46**	**2584306**	**2590754**	
	Total (NW-II)(A+B+C)		**2475349**	**2491720.46**	**2584306**	**2590754**	

*: Provisional data has been considered for 2015-16 in absence of cargo data received from IWTD, Govt. of Assam.

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.III) - WEST COAST CANAL, CHAMPAKARA CANAL & UDYOG MANDAL CANAL

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
A.	**CHAMPAKARA CANAL**						
1	**KSINC**						
	Cochin Port-FACT-CD	21.5	124954	71062.00	204207.00	217257.00	Raw Sulphur, Rock Phosphate & Phosphoric Acid etc..
	Q10 Berth-CPT-Fact, CD	21	…	39701.00	…	…	Sulpher,Rock Phosphate,Phosphoric Acid
	BPCL Irumbanam-Ship Bunkring	16	…	…	…		Furnace Oil
2	**LOTS Shipping & Trading**						
	Cochin Port-FACT-CD	21.5	158509	39135.00	91383.00	76153.00	Raw Sulphur, Rock Phosphate & Phosphoric Acid & Stone aggregates
	Q10 Berth-CPT-Fact, CD	21	…	76325.00	…		Phopharic Acid,Sulphur,Rock Phosphate
	BPCL Irumbanam-Fact, PD (dist.in Ch. Canal)	16.5	…	…	…	…	Furnace Oil
	Bolgatty to W. Island	3.7			686350.00	608670.00	Various commodities in containers
3	**Kerala Backwater Navigation**						
	Cochin Port -FACT CD	21.5/27	23786	30624.00			Rock Phosphate, Sulphur, LAG
	FACT,PD- FACT, CD	21	...	6528.00	18208.00	31264.00	LAG
	FACT , Ammonia jetty- FACT, CD	27	...	36288.00	36369.00	16704.00	LAG
	FACT , Ammonia jetty- FACT, PD	20			3840.00	4416.00	LAG
	Sub Total		**307249**	**299663**	**1040357**	**954464**	
B.	**UDYOGMANDAL CANAL**						
1	**LOTS Shipping & Trading***						
	Cochin Port FACT-UD	20	50774	460		41926	Zibframe, Sulphur, Furnance oil, Zinc
	BPCL Irumbanam- FACT PD	11	…	…			Furnace Oil
	Q10 CPT-Fact, UD	20	…	9532		0	Phosphoric Acid, Sulphur
	Q6 Berth CPT-Binani Zinc Ltd.	22	…	…			Zinc.
	Q5 Berth CPT-Binani Zinc Ltd.	22	28542	262			Zinc.

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.III) - WEST COAST CANAL, CHAMPAKARA CANAL & UDYOG MANDAL CANAL

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
	South Coal Berth-Q10 Berth CPT	6	…	…			Furnace Oil
	South Coal Berth-Quter Roads	3/2	…	…			Furnace Oil
	SCB-ICTT	4	…	…			Furnace Oil
	Willinbgdon island- Bolgaty-Bolgaty Williangdon Island	3.7	598190	508850		…	commodities in container
2	**KSINC***						
	Cochin Port-FACT UD	21	23779	3144		…	Rock Phosphate , Sulphur, Phospharic Acid
	Q10 Berth, CPT-Fact UD	20	…	7285		…	Phospharic Acid,
3	**Kerala Back Water Navigation**						
	Fact ,PD - FACT, CD	14.5	…	8640	18208	31264	Sulphur. Phospharic Acid
	Fact ,CD - FACT, PD	14.5	5954	…			Lag
	Ammonia jetty (w. Island) - FACT, PD					1728	
4	**Logos Agencies**						
	Aluva Terminal-Sea	23.5	2491	2221	2477	694	Liquid Effluent
5	**Amrok Industrial & Investments**						
	Aluva Terminal-Sea	23.5	…	…			Liquid Effluent
6	**Cochin Bunkers**						
	BPCL, Irumbanam - Fact PD	27.5	7113	…			Furnance oil
	IOC(BPT berth) - Fact PD	17	15344	…			Furnance oil
7	**Tisha Navigation Inc.**						
	Aluva Terminal - Sea					2091	Liquid Effluent
	Bolgatty Terminal - Sea					672	Liquid Effluent
	Sub Total		**732187**	**540394**	**20685**	**78375**	

Table No. 2.2 (Contd...)

Details of Cargo Moved on National Waterways (National Waterway No.III) - WEST COAST CANAL, CHAMPAKARA CANAL & UDYOG MANDAL CANAL

(In tonnes)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2013-14	2014-15	2015-16	2016-17	Cargo generally moved
1	2	3	4	5	6	7	8
C.	**THE WEST COASTAL CANAL**						
1	**KSINC Ltd*.**						
	Fine Arts Jetty- Vypeen	4	18000	...			Potable water
	ErnaKulum terminal-Cochin port	5					POL(Bunkering to Ship)
2	**Travancore Cements Ltd.**						
	Vaikom- Chitramangalam	20	8570	3640	0		Lime shell with clay & other impurities
	Sub Total		**26570**	**3640**	**0**	**0**	
	Total (NW-III) (A+B+C)		**1066006**	**843697**	**1061042**	**1032839**	
	Total Cargo Moved on National Waterways (NW-I+NW-II+NW-III)						
	GRAND TOTAL (NW-I+NW-II+NW-III)		**6890493**	**8385626**	**9882472**	**8128970**	

Source : Inland Waterways Authority of India / CIWTC

SECTION – 3

IWT ACTIVITIES – STATE-WISE

Table No. 3.1

Number of IWT Vessels With Valid Certificate of Survey...By Type (As on 31st March)

Sl. No.	State/UT	Year	Self Propelled					Non-Self Propelled						
			Cargo	Passenger	Cargo cum Passenger	Tugs & Pushers	Total (Col.3 to Col.6)	Dumb Barges	Dumb Tankers	Dumb Flat	Boats	Others	Total (Col.8 to Col.12)	Grand Total
1	2		3	4	5	6	7	8	9	10	11	12	13	14
1	Andhra Pradesh	2015	…	…	…	…	…	…	…	…	…	…	…	0
		2016	…	…	…	…	…	…	…	…	…	…	…	0
		2017	…	…	…	…	…	…	…	…	…	…	…	0
2	Assam	2015	15	114	23	6	158	15	…	9	…	..	24	182
		2016#	15	114	23	6	158	15	…	9	…	…	24	182
		2017	0	14	94	6	114	13	…	60	…	..	73	187
3	Bihar	2015	1	19*	74*	6	100	5	...	...	9	24	38	138
		2016	1	19*	74*	6	100	5	…	…	9	24	38	138
		2017	1	19*	74*	6	100	5	…	…	9	24	38	138
4	Goa	2015	114	81	...	8	203	3	...	...	...	19	22	225
		2016	81@	38	...	2	121	2	…	…	…	36	38	159
		2017	184	126	...	...	310	1	...	...	...	...	1	311
5	Karnataka	2015	…	61	5	…	66	…	…	…	…	…	…	66
		2016	…	61	5	…	66	…	…	…	…	…	…	66
		2017	…	61	5	…	66	…	…	…	…	…	…	66
6	Kerala	2015	111	287	42	2	442	…	3	…	4283	9091	13377	13819
		2016#	111	287	42	2	442	…	3	…	4283	9091	13377	13819
		2017	7	59			66	…		…	5430	60	5490	5556
7	Maharashtra	2015	100	501	…	122	723	20	…	…	…	…	20	743
		2016	152	384	…	98	634	44	…	…	…	…	44	678
		2017	158	165	0	39	362	22	…	…	…	…	22	384
8	Orissa	2015	…	409	…	…	409	…	…	…	…	…	0	409
		2016	…	199	…	…	199	…	…	…	…	…	0	199
		2017	…	557	…	…	557	…	…	…	…	…	0	557
9	West Bengal	2015	53	236	3	21	313	11	3	3	1676	26	1719	2032
		2016	62	251	3	26	342	11	3	3	1722	25	1764	2106
		2017	62	262	3	25	352	10	3	3	1752	35	1803	2155
10	Tamil Nadu	2015	…	…	…	…	0	…	…	…	2	…	2	2
		2016#	…	…	…	…	0	…	…	…	2	…	2	2
		2017	…	…	…	…	0	…	…	…	2	…	2	2
11	MIZORAM***	2015	…	…	…	…	0	…	…	…	…	…	0	0
		2016	…	…	…	…	0	…	…	…	…	…	0	0
		2017	…	…	…	…	0	…	…	…	…	…	0	0

(A) Includes 29 other vessels for 2013 .

... Not available/Nil

$: From 2011-12 onwards, unlicenced vessels and country boats have been excluded

* Vessels are with various agencies in Bihar, and probably they are not certified registered as Bihar does not have IV rule as yet

@ vessel count reduced due to mining ban

#The information for the year 2016 from the States of Assam, Gujarat, Kerala and Tamil Nadu and for the year 2017 Gujarat has not been received. Hence last year data has been repeated.

***Information for the year 2017 has not been received. Last year information has been repeated.

Table No. 3.2

Number of Passengers and Cargo Carried By Inland Water Vessels

(Year Ending 31st March)

Sl. No.	State/UT/Year	Year	Powered Vessels Employed for cargo (Nos.)	Powered Vessels Employed for passengers (Nos.)	Quantity of cargo carried (000' tonnes)	Total No. of passengers carried (000)
1	2	3	4	5	6	7
1		2014	…	…	…	…
	Andhra Pradesh	2015	…	…	…	…
		2016	…	…	…	…
		2017	…	…	…	…
2		2014	56	56	338.53@	7043.84
	Assam	2015	56	56	178.73@	16461.48
		2016#	56	56	178.73@	16461.48
		2017	13	94	3871.07	9187.14
3		2014	1	83	2.40	578.00
	Bihar* **	2015	1	83	2.40	578.00
		2016	1	83	2.40	578.00
		2017	1	83	2.40	578.00
4		2014	81	38	284.17	1450.00
	Goa(a)	2015	140	38	190.01	1448.00
		2016	81	38	429966.00	1440.00
		2017	106	115	116600.76	…
5		2014	66	66	58.72**	2089.96**
	Karnataka	2015	66	66	50.50 **	2003.71**
		2016#	66	66	50.50 **	2003.71**
		2017	66	66	29.98	1747.77
6		2014	38	180	2831.87	15323.71
	Kerala	2015	28	185	2912.06	13750.50
		2016#	28	185	2912.06	13750.50
		2017	7	55	326.64	2994.72
7		2014	…	…	24774.00	17802.00
	Maharashtra	2015	…	…	27357.00	17834.00
		2016	…	…	28849.00	18074.00
		2017	…	…	34890.00	18281.73
8		2014	…	…	…	…
	Orissa	2015	…	8	…	142.00
		2016	…	9	…	164.00
		2017	…	9	…	157.00
9		2014	57	219	11452.00	43619.00
	West Bengal	2015	53	263	14728.00	653604.00
		2016	88	251	16730.00	66492.00
		2017	90	262	22654.00	74468.00
10		2014	…	…	…	…
	MIZORAM* **	2015	48	48	1000.00	10000.00
		2016	…	…	…	…
		2017	…	…	…	…

(a) Excludes traffic reported by Mormugao Port for Iron Ore movement which is 29.00 million tonnes in 2011-12 & 7.40 million tonnes in 2012-13 & 0.31 million tonnes in 2013-14.

(b) No. of vehicles carried LCT 39618, 40807 and 39952 for the year 2010-11, 2011-12 & 2012-13 respectively.

… : Not Available

** : The traffic of passengers & cargo is only operation of Ferry Service across the river in rural area.

@ Cargo includes LMV's, Bicycles,Motor Cycles and Animals etc.

$ No iron ore export due to mining ban.

#The information for the year 2016 from the States of Assam, Kernataka and Kerala has not been received. Hence last year data has been repeated.

***Information for the year 2017 has not been received. Hence last year data has been repeated.

SECTION – 4

IWT ACTIVITIES – PRIVATE COMPANIES/UNDERTAKINGS

Table No. 4.1 **IWT Vessels With Valid Certificates of Survey-Owned By Responding Private Companies/Undertakings By Type (As on 31st March)**

Sl. No.	Company/ Undertaking and Year	Self Propelled				Non-Self Propelled (Dumb Barges) (No.)
		Type of vessel		Carrying capacity		
		Cargo (No.)	Passenger (No.)	Cargo(in thousand Tonnes)	Passenger(in No.)	
1	2	3	4	5	6	7
1	**S.V.Salgaocar, Goa**					
	2014	3	…	...	…	…
	2015					
	2016	3	…	0	N.A.	…
	2017	3	…	684.00	N.A.	…
2	**D.V.Salgaocar, Goa**					
	2014	3	…	...	…	…
	2015	3	…	...	…	…
	2016	3	…	0	N.A.	…
	2017	3	…	681.60	N.A.	…
3	**V.M.Salgaocar Sales International**					
	2014	2	…	...	…	…
	2015	2	…	...	…	…
	2016	2	…	0	N.A.	…
	2017	2	…	453.60	N.A.	…
4	**Sesa Resource Ltd Goa**					
	2014	3	…	3237	…	…
	2015	3	…	3237	…	…
	2016	2	…	2139	…	…
	2017	2	…	2139	…	…
5	***Sesa Sterlite Ltd, Goa**					
	2014	32(a)	…	41714	…	…
	2015	34(a)	…	44106	…	…
	2016	31	1	42235	88	…
	2017	31	1	42235	88	…
6	**Goa Ore Carriers**					
	2017	1	…	124.46	…	…
7	**CIWTC, Kolkata.**					
	2014	7(b)	…	3690	…	10
	2015	1(b)	…	470	…	-
	2016	…	...	…	…	-
	2017	…	...	…	…	-
8	**Indo-Swiss Trading Co. Kolkata.**					
	2014		2	118	270	…
	2015		2	118	270	…
	2016		2	118	270	…
	2017		2	118	270	…
9	**Vivada Inland Waterways Ltd. Kolkata**					
	2014	9	5	…	…	…
	2015	9	5	…	…	…
	2016	9	5	582.80	116128	…
	2017	9	5	595.26	110776	…

Table No. 4.1 (Contd...) **IWT Vessels With Valid Certificates of Survey-Owned By Responding Private Companies/Undertakings By Type (As on 31st March)**

Sl. No.	Company/ Undertaking and Year	Self Propelled				Non-Self Propelled
		Type of vessel		Carrying capacity		
		Cargo (No.)	Passenger (No.)	Cargo(in thousand Tonnes)	Passenger(in No.)	(Dumb Barges) (No.)
1	2	3	4	5	6	7
10	**West Bengal Surface Transport Corporation Ltd**					
	2014	2	24	…	…	…
	2015	2	24	…	…	…
	2016	2	28	…	11139421	…
	2017	4	32	…	31059670	…
11	**Hooghly Nadi Jalapath Paribahan Samabaya Samity, Kolkata**					
	2014	…	34	…	…	…
	2015	…	34	…	…	…
	2016	…	34	…	8130429	…
	2017	…	34	…	21230567	…
12	**West Bengal Tourism Development Corporation limited, Kolkata**					
	2014	…	3	…	…	…
	2015	…	3	…	…	…
	2016	…	3	…	11139	…
	2017	…	3	…	12940	…
13	**Eastern Navigation (P) Ltd., Kolkata**					
	2014	10	1	…	…	…
	2015	10	1	…	…	…
	2016	10	1	79.28	…	…
	2017	21	2	256.34	…	…
14	**Pradeep Boating Company, Kolkata*** **					
	2014	2	….	…	…	…
	2015	2	….	…	…	…
	2016	2	….	…	…	…
	2017	2	….	…	…	…
15	**Ghatal Steam Navigation (P) Ltd., Kolkata**					
	2014	…	3	…	…	…
	2015	…	3	…	…	…
	2016	…	3	…	228192	…
	2017	…	3	…	115508	…
16	**Diamond Harbour Municipality, Kolkata**					
	2014	…	10	…	…	…
	2015	…	10	…	…	…
	2016	…	10	…	116720	…
	2017	…	3	…	118729	…
17	**Bengal Heritage River**					
	2017	…	3	…	15840	…

Table No. 4.1 (Contd...)

IWT Vessels With Valid Certificates of Survey-Owned By Responding Private Companies/Undertakings By Type (As on 31st March)

Sl. No.	Company/ Undertaking and Year	Self Propelled				Non-Self Propelled (Dumb Barges) (No.)
		Type of vessel		Carrying capacity		
		Cargo (No.)	Passenger (No.)	Cargo(in thousand Tonnes)	Passenger(in No.)	
1	2	3	4	5	6	7
18	**Chandan Nagar Municipality, Kolkata**					
	2014	…	5	…	…	…
	2015	…	5	…	…	…
	2016	…	5	…	118251	…
	2017	…	5	…	17608	…
19	**Jain Navigation *****					
	2014	2	…	…	…	…
	2015	2	…	…	…	…
	2016	2	…	9.86	…	…
	2017	2	…	9.86	…	…
20	**K.S.Singhi *****					
	2014	1	…	…	…	…
	2015	1	…	…	…	…
	2016	1	…	4.15	…	…
	2017	1	…	4.15	…	…
21	**Jindal ITF Ltd.**					
	2014	18	…	…	…	…
	2015	18	…	…	…	…
	2016	26	…	52.45	…	…
	2017	28	…	325.27	…	…
22	**Sohom Shipping Pvt.Ltd.**					
	2014	4	…	…	…	…
	2015	4	…	…	…	…
	2016	4	…	42.10	…	…
	2017	3	…	84.21	…	…
23	**Kothari Overseas Private Limited *****					
	2014	…	…	1893	…	…
	2015	1	…	1893	…	…
	2016	1	…	1893	…	…
	2017	1	…	1893	…	…
24	**Assam Bengal Steam Navigation**					
	2017	2	…	…	12540	…
25	**Maharshi Shipping Co.**					
	2017	3	…	84.56	…	…

… Not available.

* Formerly SESA Goa Ltd.

(a) Includes one Passenger Launch & one Oil Tanker

(b) 2 Pusher Tug & 2 Moter Tanker for 2012 & 5 Pusher Tug & 3 Oil Tanker for 2013,4 Pusher Tug & 3 Oil Tanker for 2014.

***The information for the year 2017 has not been received from the company, hence previous year information has been repeated.

Note : This table covers only those IWT operators from whom the data is received by TRW.

Table No. 4.2

Cargo/Passenger Carried And Freight Collected - By Responding Companies

(Year Ending 31st March)

Sl.No.	Company/Undertaking and Year	Type of Vessels	No. of Powered Vessels Employed	Distance Travelled (Kms)	Freight Collected (Rs.in Lakh)	Cargo Carried		Passenger Carried	
						Cargo (in Tonnes)	TKms (in millions)	Passenger (in No.)	PKms
1	2	3	4	5	6	7	8	9	10
1	**S. V. Salgaocar, Goa**								
	2014 (f)	Cargo	-	-	-	-		...	...
	2015	Cargo	-	-	-	-		...	...
	2016	Cargo	3	-	-	-		...	...
	2017	Cargo	3	19950	574.56	684000	13645.80	...	...
2	**D. V. Salgaocar, Goa**								
	2014(f)	Cargo	-	-	-	-		...	...
	2015	Cargo	-	-	-	-		...	...
	2016	Cargo	3	-	-	-		...	...
	2017	Cargo	3	19880	572.54	681600	13550.21	...	...
3	**V.M.Salgaocar Sales International**								
	2014(f)	Cargo	-	-	-	-		...	...
	2015	Cargo	-	-	-	-		...	...
	2016	Cargo	2	-	-	-		...	...
	2017	Cargo	2	13230	381.02	453600	6001.13	...	...
4	**Sesa Resources Ltd Goa**								
	2014	Cargo	3	14800	(d)	163204	2415.42	...	...
	2015	Cargo	3	21658	(d)	137025	2967.69	...	...
	2016	Cargo	2	30212	(d)	235905	7127.16	...	...
	2017	Cargo	2	22966	(d)	417907	9597.65	...	...
5	**Sesa Sterlite Ltd, Goa.**								
	2014	Cargo/Pass/Oil Tankers	32	74300	(d)	1003364	74549.95	...	...
	2015	Cargo/Pass/Oil Tankers	34	127036	(d)	1033779	131327.15	...	...
	2016	Cargo/Pass/Oil Tankers	32	307580	(d)	3018780	928516.35	...	...
	2017	Cargo/Passenger	32	299844	(d)	6554273	1965259.43	...	...
6	**Goa Ore Carriers**								
	2017	Cargo	1	6210	105.79	124462	772.91	...	...
7	**C.I.W.T.C., Kolkata.**								
	2013	Cargo/Tug/Spcs/Dbs	1	160	153.72	21300	3.41	...	...
	2014	Cargo/Tug/Spcs/Dbs	-	-	174.63	8250	-	...	...
	2015	Cargo/Tug/Spcs/Dbs	1	...	...	...	...	...	...
	2016	...	...	...	...	...	...	...	...
8	**Indo-Swiss Trading Co.Pvt. Ltd., Kolkata**								
	2014	Pass.	2	15300	143.26	...		121038	...
	2015	Pass.	2	15610	52.29	...		128749	...
	2016	Pass.	2	15610	53.29	...		231221	...
	2017	Pass.	2	15500	143.00	...		121038	...
9	**VIVADA Inland Waterways Ltd., Kolkata**								
	2014	Cargo/Tug/Pass/LCT	14	...	4024.38	495620(c)		10776	...
	2015	Cargo/Tug/Pass/LCT	14	...	4138.42	512790(c)		12776	...
	2016	Cargo/Tug/Pass/LCT	14	...	4458.42	582800(c)		116128	...
	2017	Cargo/Tug/Pass/LCT	14	...	824.38	595262		110776	...

Table No. 4.2 (Contd...) **Cargo/Passenger Carried And Freight Collected - By Responding Companies (Year Ending 31st March)**

Sl.No.	Company/Undertaking and Year	Type of Vessels	No. of Powered Vessels Employed	Distance Travelled (Kms)	Freight Collected (Rs.in Lakh)	Cargo Carried		Passenger Carried	
						Cargo (in Tonnes)	TKms (in millions)	Passenger (in No.)	PKms
1	2	3	4	5	6	7	8	9	10
10	**W. Bengal Surface Transport Corporation Ltd., Kolkata**								
	2014	Pass./LCT	26	...	402.56	27421(b)	...	105967	...
	2015	Pass./LCT	26	...	414.71	27421(b)	...	118329	...
	2016	Pass./LCT	30	...	423.70	228922(b)	...	11139421	...
	2017	Pass./LCT	36	...	582.56	33581(b)	...	31059670	...
11	**Hooghly Nadi Jalapath Paribahan Samabaya Samity, Kolkata**								
	2014	Pass.	34	...	1203.72	...	...	123000	...
	2015	Pass.	34	...	1312.72	...	...	128429	...
	2016	Pass.	34	...	341.82	...	...	8130429	...
	2017	Pass.	34	...	383.72	...	...	21230567	...
12	**West Bengal Tourism Development Corpn. Ltd., Kolkata**								
	2014	Pass.	3	...	148.27	...	...	10900	...
	2015	Pass.	3	...	152.28	...	...	11139	...
	2016	Pass.	3	...	152.28	...	...	11139	...
	2017	Pass.	3	...	88.27	...	...	12940	...
13	**Eastern Navigation (P) Ltd., W. Bengal, Kolkata**								
	2014	Cargo/Tug/Pass.	11	...	200.00	56340	...	...	...
	2015	Cargo/Tug/Pass.	11	...	212.00	68420	...	...	...
	2016	Cargo/Tug/Pass.	11	...	229.00	79280	...	...	...
	2017	Cargo/Tug/Pass.	23	...	315.25	256340	...	...	...
14	**Pradeep Boating Company, W. Bengal, Kolkata*** **								
	2014	Tugs	2	...	7.36	900	...	...	...
	2015	Tugs	2	...	6.20	780	...	...	...
	2016	Tugs	2	...	6.20	780	...	...	...
	2017	Tugs	2	...	6.20	780	...	...	...
15	**Ghatal steam Navigation (P) Ltd. Kolkata**								
	2014	Pass.	3	...	41.29	...	...	115508	...
	2015	Pass.	3	...	41.29	...	...	122629	...
	2016	Pass.	3	...	48.39	...	...	228192	...
	2017	Pass.	3	...	141.29	...	...	115508	...
16	**Diamond Harbour Municipality, Kolkata**								
	2014	Pass.	10	...	123.56	...	...	10729	...
	2015	Pass.	10	...	142.56	...	...	13912	...
	2016	Pass.	10	...	142.56	...	...	116720	...
	2017	Pass.	3	...	133.56	...	...	118729	...
17	**Maharshi Shipping Co.**								
	2017	Cargo	3	...	59.36	84560	...	...	...
18	**Assam Bengal Steam Navigation**								
	2017	Tugs	2	...	15.13	...	...	12540	...
19	**Bengal Heritage River**								
	2017	Tugs	3	...	18.45	...	...	15840	...
20	**Chandan Nagar Municipality, Kolkata**								
	2014	Pass.	5	...	5.45	...	...	15608	...
	2015	Pass.	5	...	15.42	...	...	17641	...
	2016	Pass.	5	...	116.21	...	...	118251	...
	2017	Pass.	5	...	6.45	...	...	17608	...

Table No. 4.2 (Contd...) **Cargo/Passenger Carried And Freight Collected - By Responding Companies (Year Ending 31st March)**

Sl.No.	Company/Undertaking and Year	Type of Vessels	No. of Powered Vessels Employed	Distance Travelled (Kms)	Freight Collected (Rs.in Lakh)	Cargo Carried		Passenger Carried	
						Cargo (in Tonnes)	TKms (in millions)	Passenger (in No.)	PKms
1	2	3	4	5	6	7	8	9	10
21	**Jain Navigation *****								
	2014	Tugs/Pass	2	…	16.45	7260	…	….	….
	2015	Tugs/Pass	2	…	26.45	7260	…	….	….
	2016	Tugs/Pass	2	…	28.20	9860	…	….	….
	2017	Tugs/Pass	2	…	28.20	9860	…	….	….
22	**K.S.Singhi*****								
	2014	Tugs	1	…	10.13	3310	…	….	….
	2015	Tugs	1	…	10.15	3310	…	….	….
	2016	Tugs	1	…	11.15	4150	…	….	….
	2017	Tugs	1	…	11.15	4150	…	….	….
23	**Jindal ITF Ltd.**								
	2014	Cargo	18	…	65.23	40210	…	….	….
	2015	Cargo	18	…	165.23	58280	…	….	….
	2016	Cargo	26	…	145.20	52450	…	….	….
	2017	Cargo	28	…	365.23	325270	…	….	….
24	**Soham Shipping Pvt.Ltd.**								
	2014	Cargo	4	…	49.72	25270	…	….	….
	2015	Cargo	4	…	149.72	35270	…	….	….
	2016	Cargo	4	…	154.72	42100	…	….	….
	2017	Cargo	3	…	59.72	84210	…	….	….
25	**Kothari Overseas Private Limited *****								…
	2014	Cargo	…	…	…	…	…	…	…
	2015	Cargo	1	…	…	…	…	…	…
	2016	Cargo	1	…	…	…	…	…	…
	2017	Cargo	1	…	…	…	…	…	…

(a) : transportation for self (b) : data relates to no of vehicles on L.C.T.

(c) : 257859 no. of vehicles on LCT for year 2012-13 and 26812 no. of vehicles on LCT for the year 2013-14 and 27829 no. of vehicles on LCT for the year 2014-15

(d): Own barges plying for group company

(e): Barges not plied due to ban on mining.

(f): Ships have been baned by the Govt. Therefore cargo has been reported as 'Nil'.

* due to stoppage of iron ore mining by Goa Govt & Hon'ble Supreme Court

** Formerly SESA Goa Ltd.

Relates to the year 2014

***The information for the year 2017 has not been received from the company, hence previous year information has been repeated.

Note : This table covers only those IWT Operators from whom the data is received by TRW.

SECTION – 5

PLAN-WISE OUTLAY & EXPENDITURE FOR IWT SECTOR

Table No. 5.1

PLAN WISE FINANCIAL PERFORMANE FROM 10th FIVE YEAR PLAN TO 11th FIVE YEAR PLAN AND PART OF 12th FIVE YEAR PLAN

(Rs in Cr.)

Sl. No.	Budget head/ Waterways	10th Five Year Plan (2002-07)			11th Five Year Plan (2007-12)			Financial Year (2013-14)			Financial Year (2014-15)			Financial Year (2015-16)			Financial Year (2016-17)		
		B.E	R.E	Exp.	B.E	R.E	Exp.	B.E	R.E	Exp.	B.E	R.E	Exp.	B.E	R.E	Exp.	B.E	R.E	Exp.
I	**Grants to IWAI**																		
1	National Waterway 1	154.97	155.11	135.62	241.69	235.81	228.95	74.43	65.24	48.63	77.29	64.2	64.01			47.89			112.94
2	National Waterway 3	54.49	46.58	36.10	75.48	107.23	104.82	22.11	17.70	22.50	17.85	10.66	10.66			8.32			8.33
3	Others	37.60	23.88	12.99	26.00	7.59	9.57	22.26	7.06	14.20	85.96	3.36	3.36			153.65			44.11
	Sub Total - I (Grants to IWAI)	**247.06**	**225.57**	**184.71**	**343.17**	**350.63**	**343.34**	**118.80**	**90.00**	**85.33**	**181.10**	**78.22**	**78.03**	**205.00**	**216.72**	**209.86**	**250.00**	**103.00**	**165.38**
4	Jal Marg Vikas Project (JMVP)																	100.00	301.99
	Sub Total - II (Grants to IWAI including JMVP)	**247.06**	**225.57**	**184.71**	**343.17**	**350.63**	**343.34**	**118.80**	**90.00**	**85.33**	**181.10**	**78.22**	**78.03**	**205.00**	**216.72**	**209.86**	**250.00**	**203.00**	**467.37**
II	**North Eastern Area**																		
4	National Waterway 2	216.28	180.60	132.15	319.29	243.17	202.07	72.00	48.21	47.44	78.10	37.61	36.02	90.08	77.80	79.39	75.00	93.30	74.67
5	Central Plan scheme for NER	17.00	0.00	0.00	16.03	15.03	6.62	3.20	3.20	1.22	3.20	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00
6	Proposed NW-6 (Barak)	3.00	0.00	0.00	1.51	0.00	0.00	2.00	0.25	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Development of Indo-Bangladesh protocol for Channel marking, Dredging & Night Navigation etc.	1.30	1.10	0.66	0.00	0.00	0.00	3.00	1.34	1.20	2.60	1.32	1.32	0.00	0.00	0.00	0.00	0.00	0.00
	Sub total - II (NER)	**237.58**	**181.70**	**132.81**	**336.83**	**258.20**	**208.69**	**80.20**	**53.00**	**49.86**	**84.90**	**40.00**	**38.41**	**90.08**	**77.80**	**79.39**	**75.00**	**93.30**	**74.67**
III	**Interest Subsidy** to Bank, Loan to IWT Enterprenuer for Inland Vessel Subsidy	8.50	5.00	5.40	8.00	7.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IV	**Tech Studies & R&D**	26.00	19.00	9.09	5.00	5.00	4.32	1.00	1.00	1.00	1.00	0.77	0.77	1.00	1.00	0.99	0.00	0.00	0.00
V	**Central Plan Scheme/ CSS**	40.00	65.00	52.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grand Total	**559.14**	**496.27**	**384.84**	**693.00**	**620.83**	**560.48**	**200.00**	**144.00**	**136.19**	**267.00**	**118.99**	**117.21**	**296.08**	**295.52**	**290.24**	**325.00**	**296.30**	**542.04**

Note: Above information pertains to 2015-16.

Centrally Sponsored Scheme for IWT sector was discontinued after 10th Plan

In addition to above, during the year 2013-14 an amount of Rs. 9.00 Crore was allocated in B.E. & R.E. Stage to be released to Government of Bangladesh for maintenance of Protocol routes on Inland Water Transit out of which an amount of Rs. 8.077 Crore was released by Ministry of Shipping directly.

Source: Inland Waterways Authority of India

SECTION – 6

INLAND WATERWAYS TRANSPORT ACCIDENTS

Table No. 6.1 **No. of Accidents, Persons Injured And Died by Drowning (Boat Capsize) in States During 2015.**

Sl. No.	State/UT	No. of Accidents	Drowning (Boat Capsize)							
			No. of Persons Injured				No. of Persons Died			
			Male	Female	Transgenders	Total	Male	Female	Transgenders	Total
1	2	3	4	5	6	7	8	9	10	11
	STATES									
1	Andhra Pradesh	3	0	0	0	0	3	1	0	4
2	Arunachal Pradesh	0	0	0	0	0	0	0	0	0
3	Assam	139	2	0	0	2	98	34	0	132
4	Bihar	5	0	0	0	0	1	15	0	16
5	Chhattisgarh	11	0	0	0	0	11	0	0	11
6	Goa	0	0	0	0	0	0	0	0	0
7	Gujarat	3	0	0	0	0	3	1	0	4
8	Haryana	0	0	0	0	0	0	0	0	0
9	Himachal Pradesh	0	0	0	0	0	0	0	0	0
10	Jammu & Kashmir	0	0	0	0	0	0	0	0	0
11	Jharkhand	0	0	0	0	0	0	0	0	0
12	Karnataka	8	0	0	0	0	8	0	0	8
13	Kerala	30	17	19	0	36	36	6	0	42
14	Madhya Pradesh	20	0	0	0	0	15	7	0	22
15	Maharashtra	1	0	0	0	0	7	0	0	7
16	Manipur	1	0	0	0	0	1	0	0	1
17	Meghalaya	0	0	0	0	0	0	0	0	0
18	Mizoram	0	0	0	0	0	0	0	0	0
19	Nagaland	0	0	0	0	0	0	0	0	0
20	Odisha	7	0	0	0	0	6	4	0	10
21	Punjab	0	0	0	0	0	0	0	0	0
22	Rajasthan	0	0	0	0	0	0	0	0	0
23	Sikkim	0	0	0	0	0	0	0	0	0
24	Tamil Nadu	31	0	0	0	0	25	6	0	31
25	Telangana	0	0	0	0	0	0	0	0	0
26	Tripura	0	0	0	0	0	0	0	0	0
27	Uttar Pradesh	55	4	1	0	5	49	11	0	60
28	Uttarakhand	0	0	0	0	0	0	0	0	0
29	West Bengal	1	0	0	0	0	4	0	0	4
	Total(States)	315	23	20	0	43	267	85	0	352
	UNION TERRITORIES									
30	A&N Island	0	0	0	0	0	0	0	0	0
31	Chandigarh	0	0	0	0	0	0	0	0	0
32	D&N haveli	0	0	0	0	0	0	0	0	0
33	Daman & Diu	0	0	0	0	0	0	0	0	0
34	Delhi	0	0	0	0	0	0	0	0	0
35	Lakshadweep	0	0	0	0	0	0	0	0	0
36	Pondicherry	0	0	0	0	0	0	0	0	0
	Total (UTs)	0	0	0	0	0	0	0	0	0
	Total States/UTs	315	23	20	0	43	267	85	0	352

Note (1): The data includes boats plying in all water bodies.

Source : Accidental Deaths & Suicides in India - 2015

National Crime Records Bureau, M/o Home Affairs, Govt. of India

Note (2): Above information pertains to 2015-16.

SECTION – 7

INLAND WATERWAYS IN SELECT COUNTRIES

Table No. 7.1

Length of Navigable Inland Waterways in Europe and USA in 2013, 2014 & 2015

(In Kms.)

Sl. No.	Country	Canals			Rivers and Lakes			Total		
		2013	2014	2015	2013	2014	2015	2013	2014	2015
1	2	3	4	5	6	7	8	9	10	11
1	Austria	_	_	_	351	351	351	351	351	351
2	Bulgaria	_	_	_	470	470	_	470	470	0
3	Belarus	250	250	_	734	712	_	984	962	0
4	Croatia	_	_	_	1017	1017	1017	1017	1017	1017
5	Czechia	39	_	_	648	_	_	687	0	0
6	Estonia	_	_	_	399	_	_	399	0	0
7	Finland	125	125	125	7927	7927	8002	8052	8052	8127
8	France	3481	2775	3136	1583	1943	1686	5064	4718	4822
9	Germany	2000	2000	2027	5675	5675	5648	7675	7675	7675
10	Hungary	173	173	173	1691	1691	1691	1864	1864	1864
11	Italy	950	950	_	612	612	_	1562	1562	0
12	Lithuania	1	1	1	451	451	445	452	452	446
13	Poland	336	336	336	3319	3319	3319	3655	3655	3655
14	Republic of Moldov	_	_	_	42	42	42	42	42	42
15	Romania	132	132	132	1647	1647	1647	1779	1779	1779
16	Russian Federatio	_	_	_	101664	101668	101662	101664	101668	101662
17	Serbia	522	522	522	1071	1071	1071	1593	1593	1593
18	Slovakia	39	39	39	134	134	134	173	173	173
19	United Kingdom	159	159	159	891	891	891	1050	1050	1050

Source: 2017 Inland Transport Statistics for Europe & North America by UNECE (UN Publication).

Table No. 7.2

Length of Navigable Waterways By Permissible carring Capacity of Vessels - 2015

(in kms)

Sl.No.	Country	Total Length (Kms.)	Carrying Capacity of Vessels (in tonnes)						
			upto 249	250-399	400-649	650-999	1000-1499	1500-2999	3000 & Above
1	2	3	4	5	6	7	8	9	10
1	**Austria**	**351**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
2	**Bulgaria**	**...**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
3	**Belarus**	**...**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
4	**Croatia**	**1017**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	1017	...	...	...	...	...	...	...
5	**Czechia**	**...**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
6	**Estonia**	**...**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
7	**Finland**	**8127**							
	Canals	125	...	...	...	...	...	...	...
	Rivers & Lakes	8002	...	...	...	...	...	...	...
8	**France**	**4822**							
	Canals	3136	...	...	...	...	...	...	...
	Rivers & Lakes	1686	...	...	...	...	...	...	...
9	**Germany**	**7675**							
	Canals	2027	...	...	...	...	...	...	...
	Rivers & Lakes	5648	...	...	...	...	...	...	...
10	**Hungary**	**1864**							
	Canals	173	...	...	...	...	...	...	...
	Rivers & Lakes	1691	...	...	...	...	...	...	...

Table No. 7.2 (Contd…)

Length of Navigable Waterways By Permissible carring Capacity of Vessels - 2015

(in kms)

Sl.No.	Country	Total Length (Kms.)	Carrying Capacity of Vessels (in tonnes)						
			upto 249	250-399	400-649	650-999	1000-1499	1500-2999	3000 & Above
1	2	3	4	5	6	7	8	9	10
11	**Italy**	**...**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
12	**Lithuania**	**446**							
	Canals	1	...	...	...	...	...	...	...
	Rivers & Lakes	445	...	...	...	...	...	...	...
13	**Poland**	**3655**							
	Canals	336	…	…	…	…	…	…	…
	Rivers & Lakes	3319	…	…	…	…	…	…	…
14	**Republic of Moldova**	**42**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	42	...	...	...	...	...	...	...
15	**Romania**	**1779**							
	Canals	132	...	...	...	...	...	...	...
	Rivers & Lakes	1647	...	...	...	...	...	...	...
16	**Russian Fedration**	**101662**							
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
17	**Serbia**	**1593**							
	Canals	522	...	...	...	...	...	...	...
	Rivers & Lakes	1071	...	...	...	...	...	...	...
18	**Slovakia**	**172**							
	Canals	39	...	...	...	...	...	...	...
	Rivers & Lakes	134	...	...	...	...	...	...	...
19	**United Kingdom**	**1050**							
	Canals	159	...	...	...	...	...	...	...
	Rivers & Lakes	891	...	...	...	...	...	...	...

Source: 2017 Inland Transport Statistics for Europe & North America by UNECE (UN Publication).

Table No. 7.3

Inland Waterways vessels in Service at the end of 2015

Sl. No.	Country	Self Propelled Vessels			Dumb & Pushed Vessels		Tugs and Pushers	
		Nos.	Carrying Capacity (1000 Tonnes)	Power (1000 KW)	Nos.	Carrying Capacity (1000 Tonnes)	Nos.	Power (1000 KW)
1	2	3	4	5	6	7	8	9
1	Belgium	...	...	...	...	...	...	...
2	Bulgaria	...	...	...	...	...	...	...
3	Croatia	19	21	12	111	83	40	14
4	Czechia	...	...	...	...	...	...	...
5	Estonia	...	...	...	...	...	...	...
6	Finland	197	18	...	46	7	32	...
7	France	804	665	318	363	488	-	-
8	Germany	1168	1764	861	861	842	411	166
9	Hungary	70	...	...	252	...	58	...
10	Belarus	...	...	...	...	...	...	...
11	Italy	...	...	...	...	...	...	...
12	Lithuania	35	12	9	50	8	19	8
13	Poland	89	67	32	511	237	217	57
14	Republic of Moldova	...	...	...	9	...	8	1
15	Romania	154	140	...	1134	1468	328	...
16	Russian Fedration	1520	2523	1269	4902	7159	2784	1408
17	Serbia	72	74	43	126	172	52	35
18	Slovakia	23	13	8	104	172	32	28
19	Switzerland	13	23	...	3	6	8	...
20	United Kingdom	158	...	...	...	...	...	...

Source: 2017 Inland Transport Statistics for Europe & North America by UNECE (UN Publication).

Table No. 7.4

Goods Transport by Type of Transport on National Territory - 2015

Sl. No.	Country	Goods carried ('000 Tonnes)					Tonne Kms. of Goods carried(Million)*				
		National	International		Transit	Total	National	International		Transit	Total
			Loaded	Unloaded				Loaded	Unloaded		
1	2	3	4	5	6	7	8	9	10	11	12
1	Austria	-	-	-	-	-	-	-	-	-	-
2	Belarus	-	-	-	-	-	-	-	-	-	-
3	Belgium	49913	52341	78656	7248	188158	3971	1982	3401	1072	10426
4	Bulgaria	-	-	-	-	-	-	-	-	-	-
5	Croatia	51	346	169	6076	6642	11	21	9	838	879
6	Czechia	-	-	-	-	-	-	-	-	-	-
7	Finland	503	-	-	-	503	128	-	-	-	128
8	France	26985	15409	11291	7169	60854	4601	1527	1327	859	8314
9	Germany	54565	48841	102459	15504	221369	10845	12713	21632	10125	55315
10	Hungary	220	3922	1535	2485	8162	11	632	239	942	1824
11	Italy	-	-	-	-	-	-	-	-	-	-
12	Lithuania	68	-	-	-	68	0	-	-	-	0
13	Poland	3838	981	86	3	4908	44	35	4	0	83
14	Republic of Moldova	-	-	-	-	-	-	-	-	-	-
15	Romania	-	-	-	-	-	-	-	-	-	-
16	Russian Federation	94340	23439	1234	387	119400	29313	28296	1495	1256	60360
17	Serbia	687	126	709	15	1537	50	89	706	20	865
18	Slovakia	19	1605	94	4003	5721	1	46	6	689	742
19	Switzerland	-	1039	5295	-	6334	44	-	-	-	44
20	United Kingdom	3556	-	-	-	3556	119	-	-	-	119

Source: 2017 Inland Transport Statistics for Europe & North America by UNECE (UN Publication).

* : Kilometers within the territory of the reporting country.

ANNEXURES

Annexure-I

111 - NATIONAL WATERWAYS LIST

No. of National Waterways	Name of National Waterways	Length in Km	State
1.	Ganga – Bhagirathi - Hooghly	1620	UP, Bihar, Jharkhand, West Bengal
2.	Brahmaputra	891	Assam
3.	West Coast Canal alongwith Champakara & Udyogmandal Canal	365	Kerala
4.	Kakinada Puducherry Canal alongwith Godavari & Krishna rivers	2890	Tamil Nadu, Andhra Pradesh, Telanagana
5.	East Coast Canal alongwith Brahmani & Mahanadi Delta	588	Odisha, West Bengal
6.	Aai	71	Assam
7.	Ajoy (Ajay)	96	West Bengal
8.	Alappuzha- Changanassery Canal	28	Kerala
9.	Alappuzha- Kottayam-Athirampuzha Canal	38	Kerala
10.	Amba River	45	Maharashtra
11.	Arunawati/ Aran River	98	Maharashtra
12.	Asi	5.5	UP
13.	AVM Canal (Kanyakumari to Kollam)	11	Tamil Nadu
14.	Baitarni River	49	Odisha
15.	Bakreswar/ Mayurakshi River	137	West Bengal
16.	Barak	121	Assam

No. of National Waterways	Name of National Waterways	Length in Km	State
17.	Beas	191	HP & Punjab
18.	Beki	73	Assam
19.	Betwa	68	UP
20.	Bhavani River	94	Tamil Nadu
21.	Bheema	139	Telangana & Karnataka
22.	Birupa/ BadiGenguti/ Brahmani River System	156	Odisha
23.	BudhaBalanga	56	Odisha
24.	Chambal	60	UP
25.	Chapora	33	Goa
26.	Chenab	53	J&K & Punjab
27.	Cumberjua	17	Goa
28.	Dabhol Creek/ Vasishti river	45	Maharashtra
29.	Damodar	135	West Bengal
30.	Dehing	114	Assam
31.	Dhansiri/ Chathe	110	Assam
32.	Dikhu	63	Assam
33.	Doyans	61	Assam
34.	DVC Canal	130	West Bengal
35.	Dwarekeswar	113	West Bengal
36.	Dwarka	121	West Bengal
37.	Gandak	300	Bihar & UP
38.	Gangadhar	62	Assam & West Bengal
39.	Ganol River	49	Meghalaya

No. of National Waterways	Name of National Waterways	Length in Km	State
40.	Ghaghra River	340	Bihar & UP
41.	Ghataprabha	112	Karnataka
42.	Gomti	518	UP
43.	Gurupur	10	Karnataka
44.	Ichamati	64	West Bengal
45.	Indira Gandhi Canal	650	Haryana, Punjab & Rajasthan
46.	Indus	35	J&K
47.	Jalangi	131	West Bengal
48.	Jawai-Luni river &Rann of Kutch	590	Rajasthan & Gujarat
49.	Jhelum	110	J&K
50.	Jinjiram River	43	Meghalaya & Assam
51.	Kabini	23	Karnataka
52.	Kali	54	Karnataka
53.	Kalyan – Thane – Mumbai Waterway, Vasai creek & Ulhas river	145	Maharashtra
54.	Karamnasa	86	UP & Bihar
55.	Kaveri/ Kollidam river	324	Tamil Nadu
56.	Kherkai	23	Jharkhand
57.	Kopili River	46	Assam
58.	Koshi	236	Bihar
59.	Kottayam- Vaikom Canal	28	Kerala
60.	Kumari	77	West Bengal
61.	Kynshi River	28	Meghalaya

No. of National Waterways	Name of National Waterways	Length in Km	State
62.	Lohit	100	Assam
63.	Luni	327	Rajasthan
64.	Mahanadi	425	Odisha
65.	Mahananda	81	West Bengal
66.	Mahi	248	Gujarat
67.	Malaprabha	94	Karnataka
68.	Mandovi	41	Goa
69.	Manimutharu	5	Tamil Nadu
70.	Manjara	242	Maharashtra, &Telangana
71.	Mapusa/ Moide river	27	Goa
72.	Nag	60	Maharashtra
73.	Narmada	227	Gujarat
74.	Netravathi	78	Karnataka
75.	Palar	141	Tamil Nadu
76.	Panchagangavali (Panchagangoli)	23	Karnataka
77.	Pazhyar	20	Tamil Nadu
78.	Penganga/ Wardha	265	Maharashtra & Telangana
79.	Pennar	29	Andhra Pradesh
80.	Ponniyar	125	Tamil Nadu
81.	Punpun	35	Bihar
82.	Puthimari	72	Assam
83.	Rajpuri creek	31	Maharashtra
84.	Ravi	42	HP & J&K
85.	Revdanda Creek/ Kundalika river	31	Maharashtra

No. of National Waterways	Name of National Waterways	Length in Km	State
86.	Rupnarayan River	72	West Bengal
87.	Sabarmati	212	Gujarat
88.	Sal	14	Goa
89.	Savitri River (Bankot creek)	46	Maharashtra
90.	Sharavati River	29	Karnataka
91.	Shastri River/ Jaigad creek	52	Maharashtra
92.	Silabati	26	West Bengal
93.	Simsang River	62	Meghalaya
94.	Sone	160	Bihar
95.	Subansiri	111	Assam
96.	Subarnrekha River	314	Jharkhand, West Bengal & Odisha
97.	Sunderbans Waterway	654	West Bengal
	Bidya river		West Bengal
	ChhotaKalagachi (ChhotoKalergachi) river		West Bengal
	Gomar		West Bengal
	Haribhanga river		West Bengal
	Hogla (Hogal) – Pathankhali river		West Bengal
	Kalindi (Kalandi) river		West Bengal
	Katakhali river		West Bengal
	Matla river		West Bengal
	Muri Ganga (Baratala) river		West Bengal
	Raimangal river		West Bengal
	Sahibkhali (Sahebkhali) river		West Bengal

No. of National Waterways	Name of National Waterways	Length in Km	State
	Saptamukhi river		West Bengal
	Thakurran river		West Bengal
98.	Sutlej	377	Punjab & HP
99.	Tamaraparani	64	Tamil Nadu
100.	Tapi	436	Maharashtra & Gujarat
101.	Tizu / Zungki Rivers	42	Nagaland
102.	Tlawng (Dhaleswari)	86	Mizoram
103.	Tons	73	UP
104.	Tungabhadra	230	Telangana, Karnataka & AP
105.	Udayavara	16	Karnataka
106.	Umngot (Dawki) River	20	Meghalaya
107.	Vaigai	45	Tamil Nadu
108.	Varuna River	53	UP
109.	Wainganga / Pranahita River	164	Maharashtra & Telangana
110.	Yamuna	1089	Haryana, UP & Delhi
111.	Zuari	50	Goa

Annexure-II

PART 'B'- INFRASTRUCTURE FACILITIES ON NATIONAL WATERWAYS 1, 2 & 3

1. National Waterway – 1: River Ganga-Bhagirathi-Hooghly river system from Haldia to Allahabad, 1620 km- Declared as NW in October 1986

A. Fairway:

- Existing : 2.5 to 3.0 m Least Available Depth (LAD) in Haldia – Farakka (560km), 2.5 m in Farakka- Barh (396km) & 2 m in Barh – Ghazipur (294 km), 1.5 m in Ghazipur-Varanasi (133 km) and 1.2 m in Varanasi - Allahabad (237 km), Departmental dredgers (11), Survey vessels (12)
- A World Bank assisted project (called Jal Marg Vikas) is under implementation which is aimed to improve navigation infrastructure in the entire NW- 1 in general and Barh- Varanasi- Allahabad stretch in particular.
- Planned/ under implementation**:** 3 m LAD in Haldia- Farakka (560 Km), 2.5 m in Farakka - Patna (460 km), 2 m in Patna – Varanasi (363 km), 1.5 m LAD in Varanasi - Allahabad (237 km)

B. Terminals

(i) Fixed

- Existing**:** GR Jetty (Kolkata), Pakur, Farakka and Patna (Low level and high level)
- Planned/ under implementation**:** Varanasi.

(ii) Floating (20 nos.)

- Existing: Haldia- 1, Haldia- 2, Kolkata (BISN, Botanical Garden), Shantipur, Swaroopganj, Katwa, Hazardwari, Downstream Farakka, Upstream Farakka, Rajmahal, Sahibganj, Bateshwarsthan, Bhagalpur, Munger, Semaria, Buxar, Ghazipur, Varanasi & Allahabad.
- Planned: Floating terminal can be provided at any location on demand.

C. Navigational aids

- Existing:
    - Day navigation aids in entire waterway;
    - 24 hrs Navigational aids between Diamond harbor and Ballia (1030 km);
    - DGPS station setup at Swarooopganj, Bhagalpur and Patna providing DGPS connectivity between Sagar and Buxar (1195 km)
- Planned:
    - Night navigation facility can be extended beyond Ballia on demand
    - DGPS station at Varanasi
    - Establishment of River Information System between Sagar and Farakka- project under implementation

2 National Waterway – 2: River Brahmaputra from Dhubri to Sadiya, 891 km - declared as NW in September 1988

A. Fairway

- Existing: 2.5 m LAD in Dhubri-Neamati (630 kms) 2.0 m LAD in Neamati - Dibrugarh (138 km), 1.5 m in Dibrugarh – Oriumghat (92 km), Departmental dredgers (4) and survey launches (6)

B. Terminals

(i) Fixed

- Existing– Low and high level jetties at Pandu
- Planned/ under implementation**:**Terminals at Dhubri under construction.Terminal on opposite bank of Brahmaputra at Dhubri (ie. Hatsingimari) is planned but deferred due to severe erosion. This will be taken up once bank protection is provided by Brahmaputra Board for which a project is in their hand.

(ii) Floating

- Existing (10 nos.) **:**Dhubri, Jogighopa, Tezpur, Silghat, Vishwanathghat, Neamati, Bogibeel, Panbari, Sengajan, Dibrugarh and Oriumghat

- Planned/ under implementation**:**Floating terminals can be provided at any location on demand.

C. Navigational aids

- Existing**:**
  - **Day navigation aids in entire waterway,**
  - 24 hrs Navigational aids between Dhubri and Silghat (440 km)
  - DGPS station established at Dhubri, Jogighopa, Silghat and Dibrugarh providing DGPS connectivity in entire NW- 2 and some portion of Protocol routes in Bangladesh.

- Planned/ under implementation**:**24 hrs Navigational aids can be provided in entire waterway on demand.

3 National Waterway–3: West Coast Canal from Kottapuram to Kollam, Champakara and Udyogmandal canals, 205 km - Declared as NW in Feb. 1993

A. Fairway

- Existing**:** The target depth of 2 m has been provided in the entire NW- 3. At few places (about 6 km) there is single lane channel where dredging for widening of the channel is underway. Number of dredgers- 5 (Departmental) and 3 of contractor, Survey Vessel- 1.

- Planned/ under implementation***:*** Widening of the waterway to full width of 32 m in the above section with Bank Protection - continued.

B. Terminals

- Existing**:** Fixed terminals at Kayamkulam, Trikkunnapuzha, Vaikkom, Aluva, Kottapuram, Thaneermukam, Maradu and Kollam, Bolghatty & Willingdon island. Terminal at Bolgetty& Willingdon have Ro- Ro/ Lo- Lo facilities.
- **Planned/under implementation: Alaphuzha (under construction)**

C. Navigational aids

- Existing: 24 hours navigational aids in entire waterway.

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APPENDICES

Appendix – I

DEFINITIONS OF TERMS USED

(For Section-8)
Source: Annual Bulletin of Transport Statistics for Europe and North America

Navigable Inland Waterways	A stretch of water, not part of the sea, over which craft of a carrying capacity not less than 50 tonnes can navigate when normally loaded. This term covers both navigable rivers and lakes (natural water-courses, whether or not they have been improved for navigation purposes) and canals (waterways constructed primarily for the purpose of navigation). The length of rivers and canals is measured in mid channel and length of lakes, as well as lagoons, is counted as the length between the most distant points between which the transport is performed. An inland waterway forming a common frontier between two countries is reported by both.
Inland Water Transport (IWT) Craft	Craft having a minimum carrying capacity of 20 tonnes designed for the carriage of goods by inland waterways.
Dumb Barge	IWT craft designed for being towed and not having its own means of mechanical propulsion. The fact that a dumb barge is fitted with an auxiliary engine does not change its nature.
Dumb Tanker	Dumb barge intended for the bulk transport of liquids or gases. Tankers for the transport in bulk of powdered products such as cement, flour, plaster, etc. are to be excluded, and to be counted among dumb barges.
Self-Propelled Barge	IWT craft having its own means of mechanical propulsion, dumb barges, pushed barges and pushed-towed barges with only an auxiliary engine should be regarded as dumb, pushed or pushed-towed barges as the case may be. The fact that a self propelled barge can be used for towing does not change its nature.
Self Propelled Tanker	Self propelled barge intended for the bulk transport of liquids or gases. Tankers for the transport in bulk of powdered products such as cement, flour, plaster etc. are to be excluded and to be counted among self-propelled barges.

Self Propelled Craft for River-Sea Navigation	Craft having a Dead Weight capacity of at least 20 tonnes, designed for the transport of goods by river and by Sea and equipped with their own means of propulsion developing at least 37 KW.
Tug	Powdered craft developing not less than 37 KW and designed for the towing of dumb barges, pushed towed barges, rafts, but not for the carriage of goods.
Pusher Craft	Powdered craft developing not less than 37 KW and designed or fitted for the pushing of pushed or pushed-towed barges but not for the carriage of goods.
Pusher Tug	Powdered craft developing not less than 37 KW and designed or fitted for the towing of dumb barges, pushed-towed barges or rafts, and for the pushing pushed and pushed-towed barges but not for the carriage of goods.
Pushed Barge	IWT craft designed for being pushed and not having its own means of mechanical propulsion. The fact that a pushed barge is fitted with an auxiliary engine does not change its nature.
Pushed Barge	Pushed barge intended for the bulk transport of liquids or gases. Tankers for the transport in bulk of powdered products such as cement, flour, plaster etc. are to be excluded and to be counted among pushed barges.
Carrying Capacity (also referred to as Dead Weight Capacity)	Maximum permissible weight of goods, expressed in tones, which a craft may carry according to ship's document.
Power (KW)	Mechanical force developed by the motive power installation in craft. This power should be measured in effective kilowatts (power transmitted to the propeller).

Appendix – II

ABBREVIATION

...	Not Available
-	Nil
IWT	Inland Water Transport
Kms.	Kilometers
M.T.	Metric Tonnes
CIWTC	Central Inland Water Transport Corporation
IWAI	Inland Waterways Authority of India
KSINC	Kerala Shipping & Inland Navigation Corporation
H.P.	Horse Power
POL	Petroleum Oil Lubricant
ODC	Over Dimensional Cargo
LAG	Liquified Amonnia Gas
FO	Furnace Oil
LDO	Light Diesel Oil
GC/G Cargo	General Cargo
Neg/N	Negligible
FBP	Farakka Barage Project
IOC	Indian Oil Corporation
HSD	High Speed Diesel
LCT	Loaded Carriage Tug
FACT	Fertilisers and Chemicals Travancore Ltd.