

(16)

# **STATISTICS OF INLAND WATER TRANSPORT**

**2008-09**



**Government of India  
Ministry of Shipping  
Transport Research Wing  
New Delhi**

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MINISTRY OF SHIPPING  
TRANSPORT RESEARCH WING  
NEW DELHI**



सत्यमेव जयते

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## P R E F A C E

Transport Research Wing (TRW) is the nodal agency for providing information/data on various facets of road and water borne transport modes. The present issue '**Statistics of Inland Water Transport 2008-09**' is the 16<sup>th</sup> issue in the Series.

The present volume begins with an overview of the current status of Inland Water Transport (IWT). Besides, it consists of 8 sections covering navigable waterways and infrastructure, cargo movement on waterways, commodity/route wise cargo movement, IWT activities undertaken by private and public sector companies, plan outlays/expenditure for IWT sector, accidents related to inland waterways and Inland Waterways in select countries.

As the information contained in the volume is obtained from a large number of source agencies spread across both public and private sector, there is a time lag in bringing out collated data. We hope to reduce the time lag in bringing out this publication with the cooperation of the various stake holder. In particular, we would like 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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January 2011

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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 Brahmaputra 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 31<sup>st</sup> 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**

5. The Inland Waterways Authority of India (IWAI) was set up 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:
- (i) Conducting surveys and investigations and techno-economic feasibility for developing inland water transport mode;
  - (ii) Development and regulation of National Waterways for shipping and navigation by providing conservancy measures, river training works, setting up infrastructural facilities etc.;

and waterways in the State of Goa and Maharashtra increased from 56.77 million tonnes in 2007-08 to 58.02 million tonnes in 2008-09 reflecting an increase of 2.2 percent. In terms of tonne kms, it has increased by 5.06% from 2.81 billion tonne kms in 2007-08 to 2.95 billion tonne kms in 2008-09. In terms of tonnage Goa and Maharashtra, accounted for about 78.8% and 17.2% of the cargo volume with balance 4% being accounted by the 3 National Waterways in 2008-09. However, in terms of tonne km. (movement of one tonne of cargo over a distance of one km) Goa waterways accounted for around 66.8 per cent of the total cargo movement on inland waterways across India. In case of Goa and Maharashtra, high volume of cargo movement was carried over relatively short average distances of about 43 Kms and 25 Kms respectively leading to their intensive use. However, in the three National Waterways the volume of cargo traffic was relatively much small. 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 around 61 Kms and 14 Kms respectively in 2008-09. In case of National Waterway I (Ganga- Bhagirathi-Hooghly) the average distance over which cargo moved was relatively much longer at around 522 Kms.

**Table 2: Cargo Movement on Waterways**

Sl. No.	Details of Waterway	Cargo Moved (lakh Tonnes)		Tonne Kms (in lakh )	
		2007-08	2008-09(P)	2007-08	2008-09(P)
1	National Waterway No. I	15.10(2.7)	13.54(2.3)	7092(25.3)	7068(24.0)
2	National Waterway No. II	13.08(2.3)	2.31(0.4)	422(1.5)	142(0.5)
3	National Waterway No. III	6.73(1.2)	7.66(1.3)	89(0.3)	109(0.4)
	<b>Sub Total NWs</b>	<b>34.91(6.2)</b>	<b>23.51(4.0)</b>	<b>7603(27.1)</b>	<b>7319(24.8)</b>
4	Goa Waterways	402.24(70.8)	457.10(78.8)	17537(62.5)	19677(66.8)
5	Maharashtra Waterways	130.56(23.0)	99.63(17.2)	2924(10.4)	2487(8.4)
	<b>Grand Total</b>	<b>567.71(100.0)</b>	<b>580.24(100.0)</b>	<b>28064(100.0)</b>	<b>29483(100.0)</b>

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. Average IWT distance of 50 kms for the data received from Govt of Goa and 40.6kms for the data received from Mormugao Port Trust.
3. Figure within bracket indicate percentage to the total.

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.

## NATIONAL WATERWAYS (NW)

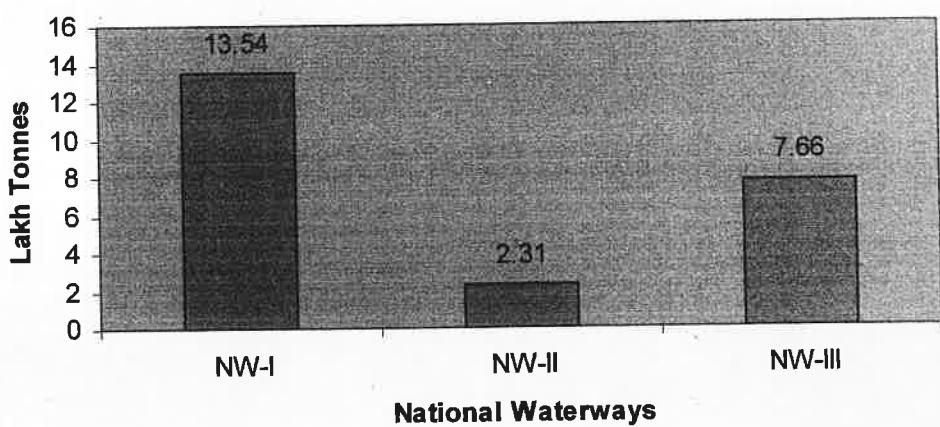
### Box 2: Criteria for declaration of National Waterway

- 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

8. The Three waterways that have been declared as National Waterways are:

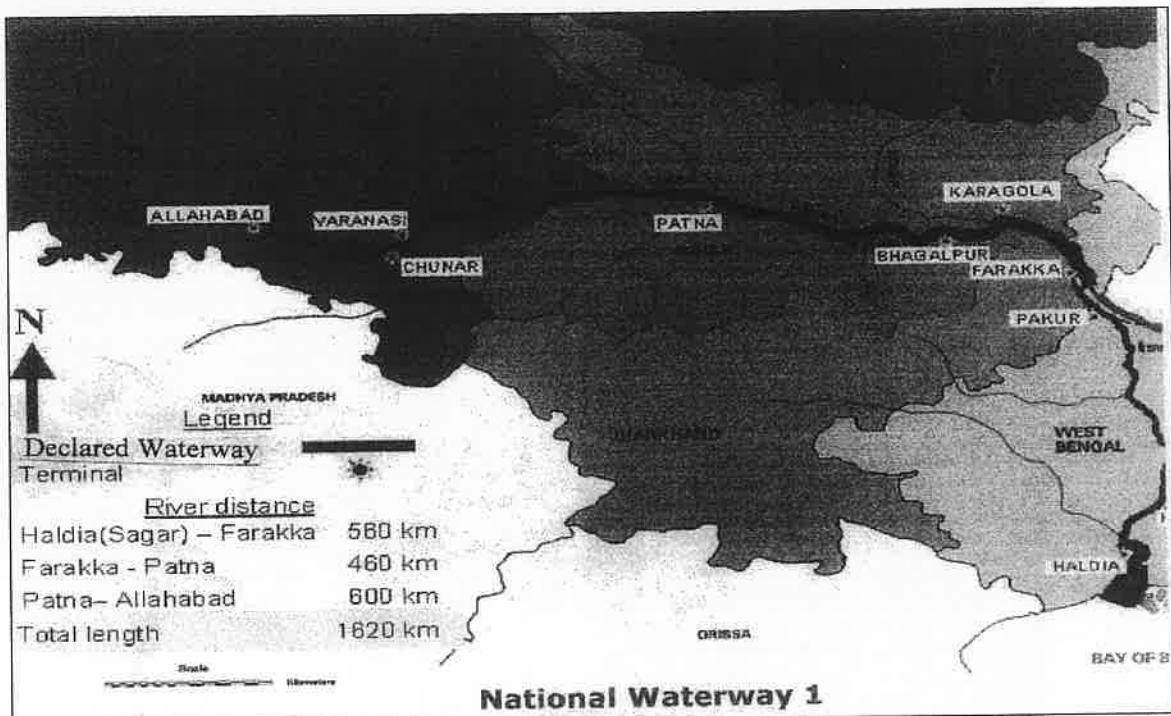
- (a) Allahabad-Haldia stretch (1620 kms) of Ganga-Bhagirathi-Hooghly river system was declared National Waterway- 1 in October, 1986.
- (b) Sadiya-Dhubri stretch (891 kms) of the Brahmaputra river was declared National Waterways- II in September, 1988.
- (c) Kottapuram-Kollam stretch (168 kms) of the West Coast Canal along with Champakara canal (14 kms) and Udyogmandal canal (23 kms) was declared National Waterways-III in February, 1993.

**Cargo Moved on National Waterways (2008-09)**



## National Waterways-1 (The Ganga-Bhagirathi-Hooghly)

9. The National Waterway No. 1 has been divided into three stretches for operational convenience and is being developed for shipping and navigation. Over the years, schemes for river conservancy works have been undertaken along with the issues connected with river depth and navigability, repair of vessels, terminal maintenance and other related works. Least Available Depth (LAD) of 2m round the year is being maintained between Haldia and Patna (1020 km) and; LAD of 1.5m between Patna-Varanasi (363 km) for most part of the year. However, LAD of 1.5 metre is maintained only for 4-5 monsoon months in a year between Varanasi and Allahabad stretch (237 Km). The volume of freight movement on National Waterways-I has decreased from 15.1 lakh tonnes in 2007-08 to 13.5 lakh tonnes in 2008-09 reflecting a fall of 10.3%.



The composition of cargo movement on National Waterway I shows that share of POL/POL Products in the total cargo movement has declined from 34.5% in 2004-05 to 24.9% in 2008-09. In contrast, over the same period the cargo movement of building materials has steadily risen; its share in total cargo rose from from 14.4 % (127412 tonnes) in 2004-05 to about 61.7 % (835585 tonnes) in 2008-09. (Table 3).

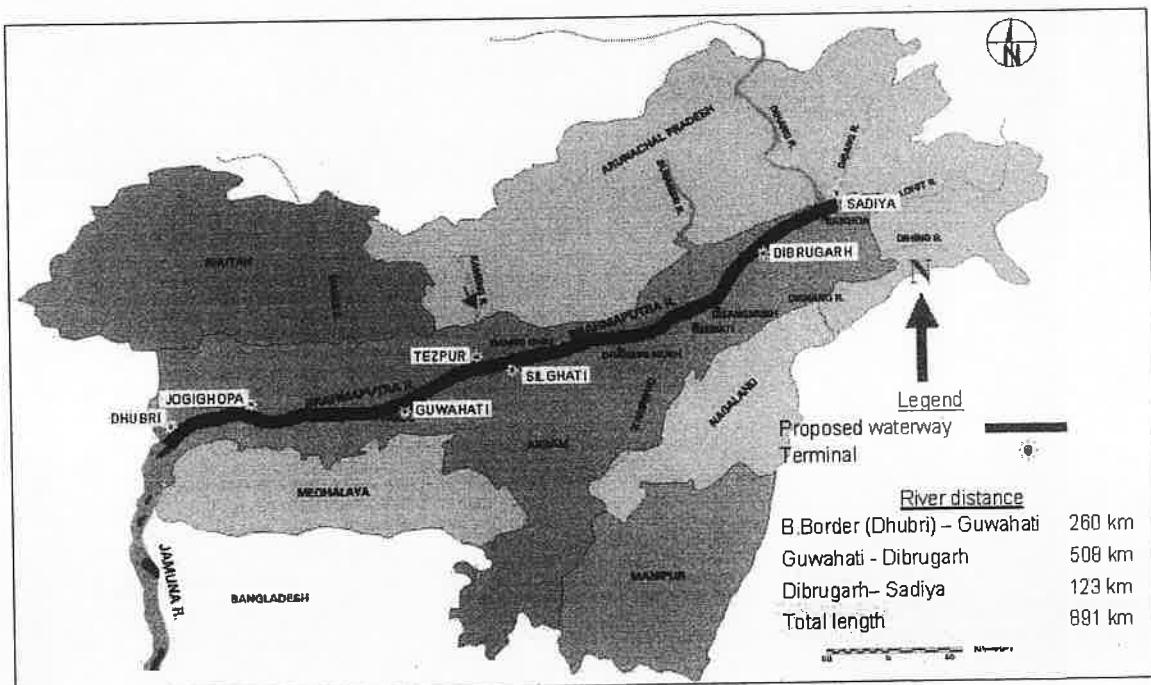
**Table 3 : Composition of Cargo Moved on National Waterway - I (In Tonnes)**

Name of the Commodity	2004-05	2005-06	2006-07	2007-08	2008-09(P)
Building Material	127412 (14.4)	525779(52.6)	773740(58.7)	899519(59.6)	835585(61.7)
Fertilisers	12000 (1.4)	1719(0.2)	-	2400(0.2)	-
Food items	20022 (2.3)	37781(3.8)	10268(0.8)	4894.76(0.3)	42352 (3.1)
Miscellaneous	8065 (0.9)	20944(2.1)	1297(0.1)	193917.39(12.8)	42814(3.2)
Mix	399038 (44.4)	3368(0.3)	191936(14.6)	-	-
Ore/Minerals	14399 (1.8)	80989(8.1)	48606(3.7)	68284.08(4.5)	96358(7.1)
POL/POL products	306381 (34.5)	328663(32.9)	291548(22.1)	341404(22.6)	337189(24.9)
Total NW I	887317(100.0)	999243(100.0)	1317395(100.0)	1510418.86(100.0)	1354298(100.0)

Note: Figure within bracket indicate percentage to the total.

### National Waterways No. 2 (The Brahmaputra)

10. Since its declaration as National Waterway II various developmental activities have been taken up on the Sadiya- Dhubri stretch of Brahmaputra. Some of the schemes undertaken to improve navigability include river conservancy works such as bandalling, channel marking and hydrographic surveys. Pilotage services have also been provided to the vessels plying on this waterway. River conservancy works for maintaining navigable depth are taken up on a year to year basis. LAD of 2 metres between Dhubri and Dibrugarh (768 km) is maintained for most part of the year. However, between Dibrugarh and Sadiya, LAD of 1.5 metres could be maintained only during monsoon months.



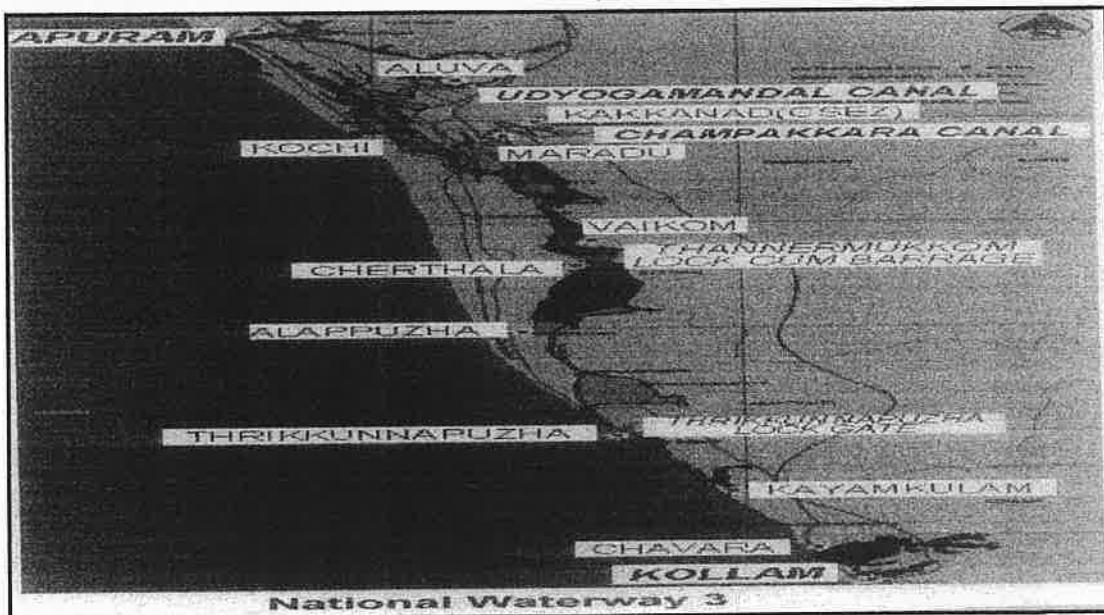
11. The total cargo traffic on NW II decreased from around 13.08 lakh tonnes during 2007-08 to 2.31 lakh tonnes during 2008-09 reflecting a drastic fall of 82.3%. Commodity wise composition of cargo movement indicates that there is no single item with significant share on this waterway. The overwhelming share of cargo moved on this waterway is of a mixed nature.

<b>Table 4 : Composition of Cargo Moved on National Waterway - II (In Tonnes)</b>					
Name of the Commodity	2004-05	2005-06	2006-07	2007-08	2008-09(P)
Building Material	0 (0.0)	0 (0.0)	360(0.03)	2500(0.2)	5100(2.2)
Food items	0 (0.0)	0 (0.0)	985(0.09)	-	-
Miscellaneous	8506(1.0)	220(0.03)	-	1298410(99.3)	225040(97.3)
Mix	803033(99.0)	796612(99.03)	1076874(99.16)	-	-
Ore/Minerals	0 (0.0)	1051(0.13)	-	-	-
POL/POL Products	0 (0.0)	6518(0.81)	7807(0.72)	6679(0.5)	1169(0.5)
Total NW II	811539(100.0)	804401(100.0)	1086026(100.0)	1307589(100.0)	231309(100.0)

Note: Figure within bracket indicates percentage to the total

### The National Waterway No. 3(West Coast Canal)

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 total volume of cargo moved on National Waterway III has been fluctuating over the past few years. It has, however, gone down from 11.59 lakh tonnes in 2004-05 to 7.66 lakh tonnes in 2008-09. The cargo composition of freight traffic shows that fertilisers and Ores/Minerals (viz, sulphur and rock phosphate) constituted around 43% and 6% respectively of the total cargo movement on this waterway in 2008-09.

Table 5 : Composition of Cargo Moved on National Waterway - III (In Tonnes)					
Name of the Commodity	2004-05	2005-06	2006-07	2007-08	2008-09(P)
Chemicals	602114(52.0)	39131(3.3)	18864(1.8)	53319(7.9)	-
Fertilisers	-	564153(48.1)	509703(49.8)	168083(25.0)	327824(42.8)
Food items	492130(42.5)	432860(36.9)	336570(32.9)	-	-
Mix	33015(2.9)	17680(1.5)	23080(2.3)	288678(42.9)	308218(40.2)
Ore/Minerals	-	-	-	136505(20.3)	44953(5.9)
POL/POL products	31524(2.7)	119065(10.2)	134559(13.2)	26542(3.9)	85219(11.1)
Total NW III	1158783(100.0)	1172889(100.0)	1022776(100.0)	673127(100.0)	766214(100.0)
Note : Figure within bracket indicate percentage to the total					

12. The total cargo moved through all the three National Waterways (NW) decreased by 32.7% from 34.9 lakh tonnes during 2007-08 to 23.5 lakh tonnes during 2008-09. The 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 57.6%, 9.8%, and 32.6 % of the total cargo moved in national waterways respectively in 2008-09. In terms of tonne kilometers, the share of NW I, NW II and NW III is 96.6%, 1.9% and 1.5% of the total tonne kilometers moved respectively. The high share of NW I in tonne kilometers reflect long average distance traversed by cargo of 522 kms compared with an average distance of about 14 kms for NW III and average distance of 61 kms for NW II in the year 2008-09.

**Table 6 : Cargo Movement on National Waterways**

Sl. No.	Details of Waterway	Cargo Moved (lakh tonnes)		Tonne Kms (in lakh )	
		2007-08	2008-09(P)	2007-08	2008-09(P)
1	National Waterway No. I	15.10(43.2)	13.54(57.6)	7092(93.3)	7068(96.6)
2	National Waterway No. II	13.08(37.5)	2.31(9.8)	422(5.5)	142(1.9)
3	National Waterway No. III	6.73(19.3)	7.66(32.6)	89(1.2)	109(1.5)
	Total NWs	<b>34.91(100.0)</b>	<b>23.51(100.0)</b>	<b>7603(100.0)</b>	<b>7319(100.0)</b>

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 bracket indicate percentage to the total

13. The movement of Building Material and Fertilizers have shown significant increase on the National Waterways since 2004-05. The share of Building material has increased from 4.5% in 2004-05 to 35.8% in 2008-09. Similarly, the share of Fertilizer has moved up from 0.4% in 2004-05 to 13.9% in 2008-09. However, the movement of food items and chemicals has shown considerable decrease during this period. The share of food items decreased from 17.9% in 2004-05 to 1.8% in 2008-09 while the share of chemicals fell from 21.1% in 2004-05 to negligible in 2008-09. The details of the commodities moved on the National Waterways may be seen from Table 7.

**Table 7: Composition of Cargo Moved on national waterways (In tonnes)**

Commodity	2004-05	2005-06	2006-07	2007-08	2008-09(P)
Building Material	127412 (4.5)	525779(17.7)	774100(22.6)	902019(25.8)	840685(35.8)
Chemicals	602114 (21.1)	39131(1.3)	18864(0.6)	53319(1.5)	-
Fertilisers	12000 (0.4)	565872(19.0)	509703(14.9)	170483(4.9)	327824(13.9)
Food items	512152 (17.9)	470641(15.8)	347823(10.2)	4895(0.1)	42352(1.8)
Miscellaneous	16571(0.6)	21164(0.7)	1297(Neg.)	1492327(42.7)	267854(11.4)
Mix	1235086 (43.2)	817660(27.5)	1291890(37.7)	288678(8.3)	308218(13.1)
Ore/Minerals	14399 (0.5)	82040(2.7)	48606(1.4)	204789(5.9)	141311(6.0)
POL/POL Products	337905 (11.8)	454246(15.3)	433914(12.7)	374625(10.7)	423577(18.0)
Total	<b>2857639(100.0)</b>	<b>2976533(100.0)</b>	<b>3426197(100.00)</b>	<b>3491135(100.0)</b>	<b>2351821(100.0)</b>

Note : Figure within bracket 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**

14. The table below shows the cargo and the main commodities carried on India-Bangladesh route on National Waterway-I during the years 2004-05 to 2008-09.

Movement of Cargo ( in Tonnes) on India- Bangladesh route of NW I*(Tonnes)						
Route	2004-05	2005-06	2006-07	2007-08	2008-09	Commodities
India to Bangladesh	389686	586973	785989	955722	940381	Flyash, Salt in bulk, Rice, Wheat POL, Coal, Slag Gypsum, HSD.
Bangladesh to India	1888	1000	-	5177	-	Cement, Bone crushed
<b>Total</b>	<b>391574</b>	<b>587973</b>	<b>785989</b>	<b>960899</b>	<b>940381</b>	

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

### **TWO NEW NATIONAL WATERWAYS**

15. Two new water ways have been declared by the Government as National Waterways.

- (i) The Kakinada – Puducherry stretch of Canals and the Kaluvelly Tank; Bhadrachalam – Rajahmundry stretch of River Godavari and Wazirabad – Vijayawada stretch of River Krishna (NW-4, 1095 km); and
- (ii) The Talcher -Dhamra stretch of river Brahmani, Geonkhali-Charbatia stretch of East Coast Canal, Charbatia-Dhamra stretch of Matai river and Mangalgadi-Paradip stretch of Mahanadi delta rivers (NW5,623km).

Gazette notifications for both these waterways were published on 25.11.2008. Detailed Project Reports (DPR) for these new NWs are being prepared.

#### **National Waterway 4 (Kakinada-Puducherry canals with Godavari and Krishna rivers)**

16. The stretches of the waterway (1095 kms) which has been declared as National Waterways (NW) are as follows:

- (iii) Godavari river from Bhadrachalam to Rajahmundry – 171km.
- (iv) Krishna River from Wazirabad to Vijayawada- 157 km.
- (v) Kakinada canal from Rajahmundry-50 km.
- (vi) Eluru canal from Rajahmundry to Vijayawada-139 km.
- (vii) Commamur canal from Vijayawada to Peddaganjam lock-113 km.
- (viii) North Buckingam canal from Peddaganjam lock to Chennai-34 km.
- (ix) South Buckingham canal from Chennai to Mercanum-103; and
- (x) Kaluvelli tank from Mercanum to Puducherry-22km.

17. The waterway is located in the States of Andhra Pradesh (888Km), Tamil Nadu (205 km) and Union Territory of Puducherry (2 Km). Out of 1095 km, 50 km stretch within Chennai city (from Ennore to Muthukadu) is not envisaged for development due to encroachment of canal. This waterway runs through rural and Urban centres like Chennai, Vijayawada, Rajahmundry, Kakinada, Eluru, Bhadrachalam & Wazirabad and hence provide a vital link between rural areas and urban centres. Further it also connects sea ports of Kakinada, Krishnapatnam, Ennore and Chennai and will facilitate import/export of cargo from/to hinterland. The waterway is proposed to be developed with 32m wide and 1.8m deep navigational channel for Godavari river, Krishna river and North and South Buckingham canal while navigational channel proposed for Kakinada, Eluru and comamur canals is 14m wide and 1.6m deep. The Estimated Cost of development of National Waterways at 2008-09 prices is (Rs. 1372 crore).

18. The Government of Andhra Pradesh has suggested for making availability of water in rivers and Irrigation canals for 330 days in a year for navigation. After the construction of dams at Polavaram in Godavari and Pulichinthala in Krishna by the year 2014-15, the development of waterway in Andhra Pradesh would be taken up in two Stages as given below:-

Under stage I, 583 km of water way will be completed by the year 2013-14. Stage II works will be taken up after completion of construction of dams at Polavaram across Godavari river and at Pulichintala across Krishna river. Under Stage-II, 462 km of waterway will be completed by the year 2016-17.

19. In addition to the above mentioned cargo transportation by the environment friendly mode of water transport, the development of this waterway will provide social benefits e.g. employment generation, reduction in pollution, providing port- hinterland connectivity, reduction in road maintenance and road accidents, increase in economic activities etc.

### **National Waterway-5 (East Coast canal along with Brahmani river and Mahanadi delta)**

20. The stretches of the water way which has been declared as National waterway (NW) are as follows.

(i) East Coast Canal (Geonkhali-Charbatia)	217km.
(ii) Matai River (Charbatia- Dhamra)	40 km.
(iii) River Brahmani (Taicher-Dhamra)	265 km.
(iv) Mahanadi delta river (Mangalgadi-Paradip)	101 km.

**Total** **623 km.**

21. The waterway is located in the States of West Bengal (91 km) and Orissa (523km). For Brahmani- Kharsua-Dhamra River, Matai river and Mahanadi delta portion (406 km), the waterway is proposed to be developed with 45 m wide and 2m deep navigational channel while for East Coast Canal portion (217 km) navigational channel proposed is 32 m width and 1.5 depth. Developmental works envisaged are as follows:

- (i) Widening of narrow canal
- (ii) Dredging, Excavation
- (iii) Bank protection
- (iv) Construction of barrages in Brahmani river at 5 places
- (v) Repair of locks
- (vi) Modification of bridges & roads
- (vii) Navigational aids
- (viii) Setting up of IWT terminals (all terminals are in Orissa)

The estimated cost of development of National Waterway at 2002 price is (Rs. 1526 crore).

### **CENTRAL INLAND WATER TRANSPORT CORPORATION (CIWTC LTD)**

22. Central Inland Water Transport Corporation Ltd. (CIWTC) was established as a Government of India undertaking in the year 1967. (CIWTC took over the assets and liabilities of the River Steam Navigation Company Ltd. which was looking after Inland Water Transport services on river Barak). It is primarily responsible for transportation of cargo through inland waterways spread across Kolkata-Bangladesh-Assam and Allahabad-Haldia-Budge. It is operating on different routes on National Waterways- I and II including the protocol routes through Bangladesh and other parts of the country in Eastern and Northern India.

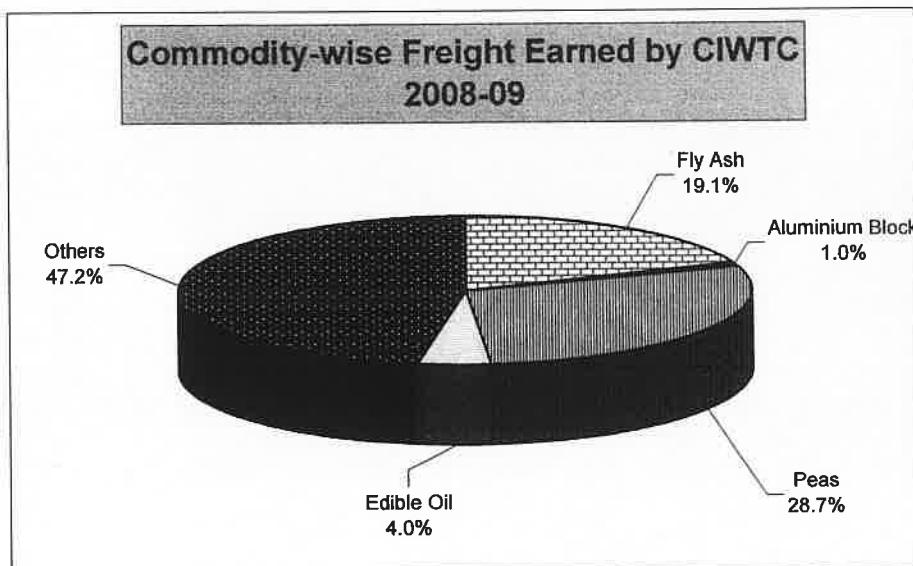
23. CIWTC Ltd. has three main divisions, viz. River services Division (RSD), Rajabagan Dockyard (RBD) and Deep Sea Ship Repair (DSSR).

- i) River Services Division (RSD) has its main terminal at Kolkata and branch offices at Haldia, Patna, Karimganj, Badarpur, Dhubro, Pandu and Guwahati. For running, repair and maintenance of its own crafts, the RSD has two workshops, one at Kolkata (West Bengal) and the other at Pandu (Assam).

- ii) The Rajabagn Dockyard (RBD), whose main factory establishment is located at Kolkata, is engaged in ship building, ship repair and general engineering activities.
- iii) The Deep Sea Ship Repair Division (DSSR) located at Kolkata undertakes repair of ocean going vessels for outside agencies.

24. The cargo carried by CIWTC decreased by 63% from 200086 tonnes in 2007-08 to 74070 tonnes in 2008-09. Concomitantly, the freight earnings declined by 50.3% from Rs. 253 lakh in 2007-08 to Rs.125.99 lakh in 2008-09. However the non-commodity earnings of CIWTC showed an increase of 86% from Rs. 152.07 lakh in 2007-08 to 283.51 lakhs in 2008-09.

25. The maximum cargo carried during 2008-09 was on the Saugar/Haldia Diamond Harbour-Kolkata route with freight volume of 65973 tonnes and freight earnings of about Rs. 82 lakh was lower compared with freight volume of 192304 tonnes and freight earnings of Rs 234 lakh during 2007-08.



## IWT ACTIVITIES - STATE GOVERNMENT

26. The number of vessels deployed and volume of cargo carried on Inland Waterways across the reporting States & UTs is given in Table 8.

**Table 8 : Number of Inland Water Vessels and Cargo Carried – State wise**

State/UT	Number of Vessels					Volume of Cargo Carried ( thousand tonnes)				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09.
Andhra Pradesh	1075	1075	...	111	111	...	...	...	...	...
Assam	...	...	267	240	240	...		741.56	846.24	865.15
Bihar	22	21	19	21	21	...	...	...	...	...
Goa	157	212	273	221	191	8457.0	11762	14306.0	12824.59	11901.32
Karnataka	45	302	302	49	49	1347	...	...	610.60	159.00
Kerala	4195	6970	9060	10069	9230	2964.3	6618.0	5679.0	8637.13	5129.01
Maharashtra	406	447	512	512	662	12121.0	10859	11553	13056.00	9963.00
Orissa	...	155	180	163	155	...	...	...	...	...
West Bengal	1972	2084	2182	2245	2321	788	1544	2935	3312	3644
<b>TOTAL (Reporting states)</b>	<b>7872</b>	<b>11266</b>	<b>12795</b>	<b>13631</b>	<b>12980</b>	<b>25677.3</b>	<b>30783.0</b>	<b>35214.56</b>	<b>39286.56</b>	<b>31661.48</b>

## PERFOMANCE OF COMPANIES ENGAGED IN IWT

27. The data received from 34 IWT companies shows that the maximum number of cargo vessels (16) is held by the Sesa Goa Ltd., Goa followed by Vivada Inland Waterways Ltd. Kolkata (9). The actual cargo carried during the year 2008-09 was maximum through Sesa Goa Ltd., Goa with 6200 thousand tones.

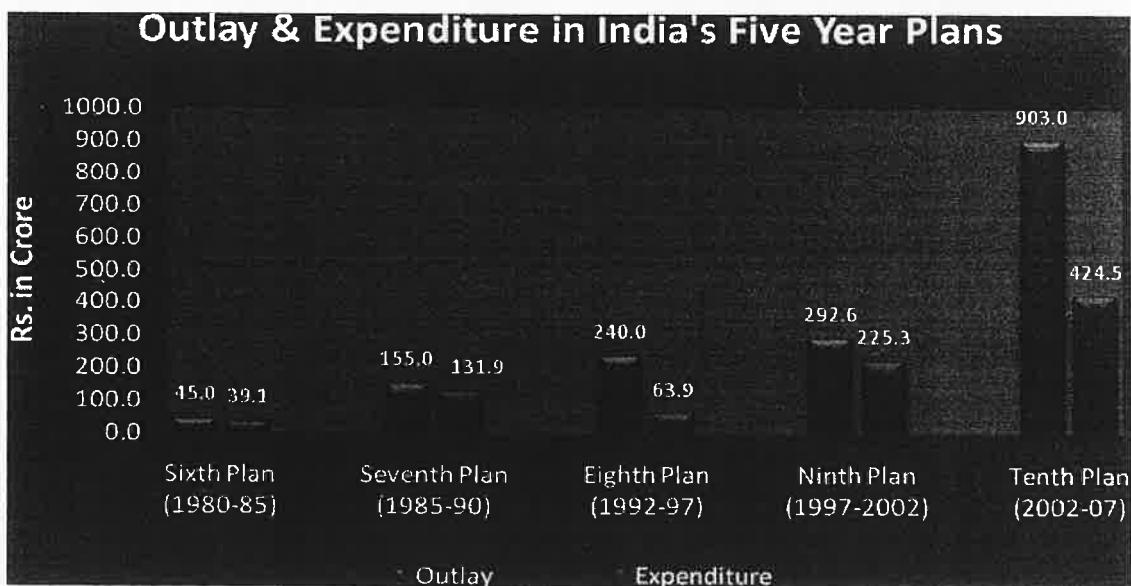
28. CIWTC Kolkata had the maximum number of powered vessels employed (94) which carried a cargo of 747 thousand tonnes and 534.84 lakh tonnes kilometres during 2008-09. Hooghly Nadi Jalapath Paribahan Samabaya Samity, Kolkata (41 vessels) carried 24 million passengers followed by West Bengal Surface Transport Corporation Ltd. with 30 powered vessels carrying 6.9 million passengers during 2007-08. The cargo/passengers carried and freight collected pertaining to 34 companies is shown in Table No. 5.2.

**Table : 9 : Top ten Private Companies Cargo moved and Vessels Employed 2008-09**

Name of the Company	No. of Vessels Employed	Cargo moved (thousand tonnes)
1. Sesa Goa Ltd. Goa.	16	6199.71
2. Vaibhavi Shipping Pvt. Ltd	9	3650.00
3.Costa River Transport Pvt. Ltd.,Goa	3	2340.75
4. S.V.Salgaocar, Goa	4	1236.00
5.D.V.Salgaocar, Goa	4	1178.40
6. V. S. Dempo & Co. Pvt. Ltd., Goa	3	797.33
7 V.M. Salgaocar Sales International	2	650.40
8. Sociedade De Fomento Ind Ltd,Goa	2	642.99
9. VIVADA Inland Waterways Ltd,Goa	16	362.60
10.M.N. Shipping	1	248.00

## PLAN OUTLAY AND EXPENDITURE

29. The total plan outlay for the IWT sector for Tenth Plan was Rs. 903 crore which was around three times the outlay during the Ninth Plan. Out of Rs. 903 crore, Rs. 883 crore was for central schemes and only Rs. 20 crore was for centrally sponsored schemes. The provision for State Plan Outlay was highest for Kerala with Rs. 70 crore followed by Karnataka Rs. 48 crore. The minimum outlay was for Uttar Pradesh at Rs. 10 lakh. (See details Table Nos. 6.1 and 6.2)

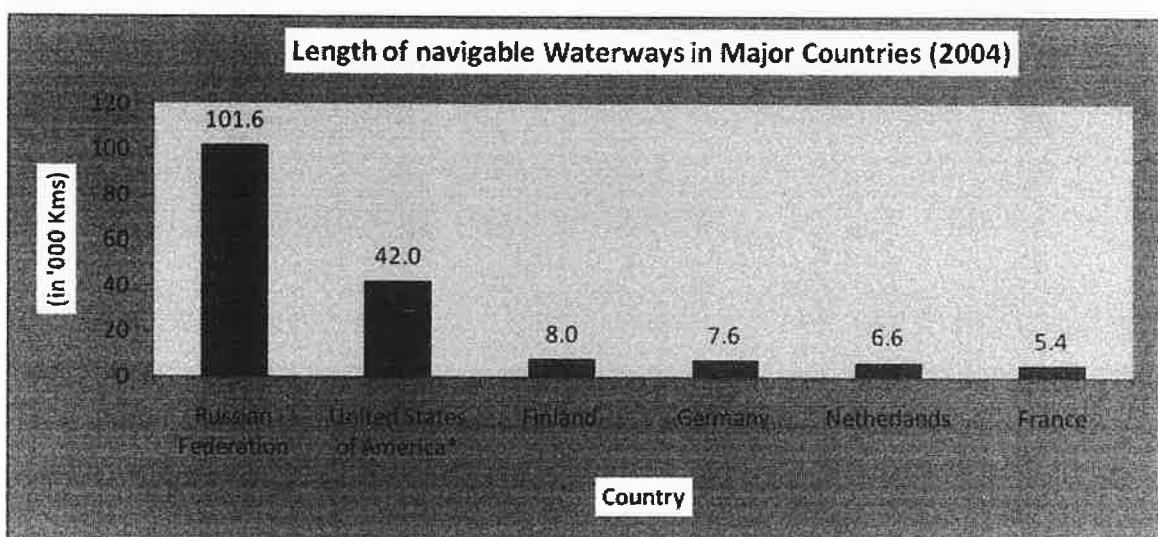


## INLAND WATERWAYS TRANSPORT ACCIDENTS

30. The total number of accidents on inland waterways during the year 2008 was 847 out of which 337 were reported in Madhya Pradesh followed by Uttar Pradesh with 127 accidents. The number of death due to boat mishaps was highest for Madhya Pradesh at 244 followed by Uttar Pradesh at 84 in 2008. A striking feature observed (Table No. 7.1) is that the number of persons killed is more in all the States than the number of persons injured unlike in the road accidents.

## INLAND WATERWAYS IN SELECT COUNTRIES

31. The maximum length of Navigable Inland Waterways belongs to Russian Federation with 101,679 Kms followed by United States of America with 42,000 Kms , Finland with 8,018 Kms, Germany with 7,565 Kms., Netherlands with 6,595 Kms and France 5372 Kms. However, the maximum quantity of Goods carried was in the United States of America with 2662 million tonnes followed by Russian Federation with 104 million tonnes and Germany with 55.2- million tonnes .



Relates to 2003

Source: Annual Bulletin of Transport Statistics for Europe & North America,2008(UN Publication).

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# **SECTION – 1**

## **NAVIGABLE WATERWAYS AND INFRASTRUCTURE**

Table No. 1.1

**Navigable Waterways in India**

(In Kms.)

Sl. No.	State/Rivers/Canals/Lakes	2008-09	
		Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1	2	3	4
<b>1 ANDHRA PRADESH</b>			
(i)	Godavari	1530	171
(ii)	Krishna	386	35
(iii)	Others **	585	585
	<b>Total</b>	<b>2501</b>	<b>791</b>
<b>2. ASSAM</b>			
(i)	Brahmaputra	2800	891
(ii)	Borak	900	152
(iii)	Subansiri	...	111
(iv)	Dhansiri	...	26
(v)	Lohit	...	132
(vi)	Gangadhar	...	112
(vii)	Sonkosh	...	48
(viii)	Manas	...	48
(ix)	Aai	...	64
(x)	Beki	...	56
(xi)	Nakhonda	...	41
(xii)	Pahumara	...	40
(xiv)	Pagladia	...	40
(xv)	Borolia	...	24
(xvi)	Puthimari	...	64
(xvii)	Dikrang	...	41
(xviii)	Rangandi	...	45
(xix)	Kapil	...	102
(xx)	Dehing	...	160
(xxi)	Katakhal	...	160
(xxii)	Sonai	...	48
(xxiii)	Amguri	...	16
(xxiv)	Mahura	...	32
(xxv)	Badri	...	25
(xxvi)	Chiri	...	42
(xxvi)	Jiri	...	64
	<b>Total</b>	<b>3700</b>	<b>2584</b>
<b>3. BIHAR</b>			
(I)	Damodar	...	...
(ii)	Ganga	510	510
(iii)	Gandak	300	300
(iv)	Koshi	233	160
(v)	Ghaghra	100	100
(vi)	Sone	226	31
(vii)	Mahananda	140	...
(viii)	Burhi Gandak	400	...
(ix)	Punpun	200	...
(x)	Phalgu Hariharpur	300	...
(xi)	Kiul	100	...
(xii)	Kari Koshi	150	...
(xiii)	Chandan	100	...
(xiv)	Karamnasha	144	...
(xv)	Others	860	290
	<b>Total</b>	<b>3763</b>	<b>1391</b>

Table No. 1.1(Contd...)

**Navigable Waterways in India**

(In Kms.)

Sl. No.	State/Rivers/Canals/Lakes	2008-09.	
		Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1	2	3	4
4	<b>GOA</b>		
(i) Mandovi	78	65	
(ii) Zuari	56	45	
(iii) Mapusa	26	20	
(iv) Chapora	34	25	
(v) Tiracol	29	15	
(vi) Sal	20	15	
(vii) Others	17	17	
Total	260	202	
5	<b>GUJARAT</b>		
(i) Narmada	161	130	
(ii) Tapti	215	8	
(iii) Ambica	136	19.4	
(iv) Auranga	75	7	
(v) Purna	141	12.2	
Total	728	176.6	
6	<b>KARNATAKA</b>		
(i) Sharavathi	80	27	
(ii) Tungabhadra	375	375	
(iii) Malaprabha	230	230	
(iv) Ghataprabha	160	160	
(v) Krishna	325	325	
(vi) Cauvery	270	34	
(vii) Kabini	117	22	
(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	2862	1407	
7	<b>KERALA</b>		
(i) Manjeswar	16	3.2	
(ii) Uppala	50	...	
(iii) Shiriya	67	4.8	
(iv) Mogral	34	...	
(v) Chandragiri	105	12.8	
(vi) Chittari	25	...	
(vii) Nileswar	46	11.2	
(viii) Karingode	64	24	
(ix) Kavvayi	31	9.6	
(x) Peruvamba	51	16	
(xi) Ramapuram	19	6.4	
(xii) Kuppam	82	24	

Table No. 1.1(Contd...)

**Navigable Waterways in India**

(In Kms.)

Sl. No.	State/Rivers/Canals/Lakes	2008-09.	
		Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1	2	3	4
	(xiii) Valapattanam	110	44.8
	(xiv) Anjara Kandy	48	27.2
	(xv) Tellicherry	28	21.6
	(xvi) Mahe	54	24
	(xvii) Kuthiadi	74	9.6
	(xviii) Korapuzha	40	24.8
	(xix) Kallai	22	9.6
	(xx) Chaliyar	169	68.4
	(xxi) Kadalandy	130	43.2
	(xxii) Tirur	48	9.6
	(xxiii) Bharathappuzha	209	40
	(xxiv) Keecheri	51	...
	(xxv) Puzhakkal	29	...
	(xxvi) Karivannur	48	24
	(xxvii) Chalakkudy	130	16
	(xxviii) Periyar	244	72
	(xxix) Muvattei puzha	121	25.6
	(xxx) Meenachil	78	41.6
	(xxxi) Manimala	90	54.4
	(xxxii) Pamba	176	73.6
	(xxxiii) Achan coil	128	32
	(xxxiv) Dallickal	42	2
	(xxxv) Kallada	121	40
	(xxxvi) Ithikkara	56	16
	(xxxvii) Ayroor	17	1
	(xxxviii) Vamanapuram	88	11.2
	(xxxix) Mamom	27	1
	(xxxx) Karamana	68	...
	(xxxxi) Neyyar	56	...
	<b>Total</b>	<b>3092</b>	<b>845.2</b>
<b>8</b>	<b>MAHARASHTRA</b>		
	(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

Table No. 1.1(Contd...)

**Navigable Waterways in India**

(In Kms.)

Sl. No.	State/Rivers/Canals/Lakes	2008-09.	
		Total Length of the Rivers/Canals/Lakes in the	Navigable Length
1	2	3	4
	(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
	<b>Total</b>	<b>634</b>	<b>466</b>
<b>9</b>	<b>ORISSA</b>		
	(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
	(xviii) Makara	...	11
	(iv) Others **	...	462
	<b>Total</b>	<b>1840</b>	<b>1650</b>
<b>10</b>	<b>TAMIL NADU</b>		
	(i) North Buckingam Canal	58	-
	(ii) Central Buckingam Canal	7	-
	(iii) South Buckingam Canal	105	-
	<b>Total</b>	<b>170</b>	-

Table No. 1.1(Concl...)

**Navigable Waterways in India**

(In Kms.)

Sl. No.	State/Rivers/Canals/Lakes	2008-09.	
		Total Length of the Rivers/Canals/Lakes in the State	Navigable Length
1	2	3	4
<b>11 UTTAR PRADESH</b>			
(i) Gomti	960	-	-
(ii) Rapti	778	-	-
(iii) Ghaghra	1116	-	-
(iv) Ganga	2345	-	-
(v) Sai	760	-	-
(vi) Tons	485	-	-
<b>Total</b>	<b>6444</b>	-	-
<b>12 WEST BENGAL</b>			
(I) Hooghly	580	580	580
(ii) Mahananda	206	58	58
(iii) Ajoy	174	174	174
(iv) Jalangi	232	232	232
(v) Dwarka	129	129	129
(vi) Bakreswar	102	102	102
(vii) Damodar	437	437	437
(viii) Dwarekeswar	103	103	103
(ix) Silabati	135	135	135
(x) Kumari	347	347	347
(xi) Icharnati	232	232	232
(xii) Others@	2064	2064	2064
<b>Total</b>	<b>4741</b>	<b>4593</b>	<b>4593</b>
<b>13 NAGALAND*</b>			
(I) Doyans	185	105	105
(ii) Tizu/Zungki	287	90	90
(iii) Dhansiri/Chathe	170	75	75
(iv) Dikhu	120	52	52
(v) Tapi-Yangnyu	95	18	18
(vi) Tsurang/Disai	60	15	15
(vii) Others	20	20	20
<b>Total</b>	<b>937</b>	<b>375</b>	<b>375</b>
<b>14 MIZORAM</b>			
(i) R. TlawNg (Dhaleswari)	185	60	60
(ii) R. Kolodyne (Chhimtuipoi)	138	138	138
(iii) Khawthlang Tuipui	128	40	40
(iv) R. Tuichawrg	108	55	55
<b>Total</b>	<b>559</b>	<b>293</b>	<b>293</b>

\*: Relates to 2006-07

\*\*: including canals

#: Data not received from the State Govts.

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

Table No. 1.2

**Infrastructure Facilities Available on National Waterways (As on 31-3-2009)**

NE - NEVADA  
Nevada has about 100 floating cranes with a total capacity of 100,000 tons.

Notes : 1) There also are two floating cranes and two shore cranes off NW-1

2) Pontoons as well as Cranes can be shifted to any other location on demand.

3) Floating terminals with pontoon/crane can be provided at any location along waterway on demand.

4) Night navigation aids have been provided between

**Table No. 1.2****Infrastructure Facilities Available on National Waterways (As on 31-3-2009)**

Navigational Channel	Depth (Meters) about 350 days in a year	Place	Availability and Capacity of Terminals					Remarks
			Size of Vessels that can be accommodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available		
National Waterway No.2	1	2	3	4	5	6	7	8
1. Dhubri-Pandu (255 km)	2.00	(a) Dhubri	600	One(floating)	-	-	Floating terminal facilities with pontoon and gangway provided	
		(b) Jorjgapha	600	One(floating)	-	-	Terminal being developed for coal loading	
		(c) Pandu	600	One (fixed)	Two floating and two shore cranes	Two godowns each of size 75x20m and open storage.	Construction of one low level jetty completed and one high level permanent berth for handling container and general cargo under progress. BG siding also being progress.	
2. Pandu-Neamati (376 km)	2.00	(d) Tezpur	600	One(floating)	-	-		
		(e) Silghat	600	One(floating)	Pipeline for POL	-		
		(f) Jamuguri	600	One(floating)	-	-		
3. Neamati-Dibrugarh (137 km)	2.00	(g) Neamati	600	One(floating)	-	-		
4. Dibrugarh-Sadiya (123 km)	1.00	(h) Dibrugarh	600	One(floating)	-	-		

Notes : 1) Pontoons as well as cranes can be shifted to any other location depending on need/demand.

2) One container,two shore cranes and five floating cranes available on the waterway

3) Channel marks for day navigation are provided on the entire waterway. Pilotage to the vessel is also provided on request.

4) Night navigation aids have been provided between Dhubri and Silghat

5) River notices are issued on fortnightly basis.

**Table No. 1.2****Infrastructure Facilities Available on National Waterways [As on 31-3-2009]**

Navigational Channel	Depth (Meters) about 330 days in a year	Availability and Capacity of Terminals						Remarks
		Place	Size of Vessels that can be accommodated (DWT)	No. of Berths	Cargo Handling Equip. and their Capacity	Type and Extent of Storage Facility Available		
1	2	3	4	5	6	7	8	
<b>National Waterway No.3</b>								
1. Kochi-Kottapuram (34 km)	1.2	(a) Kottapuram	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
2. Udyogmandal Canal (23 km)	2.0	(b) Aluva	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
3. Champakara Canal (14 km)	2.0	(c) Ernakulam GC (Maradu)	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
		(d) Kakkannad (CSEZ)					Only Land for terminal acquired	
4. Kochi-Alapuzha (63 km)	2.0	(e) Vaikom	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
		(f) Chertala	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
		(g) Alapuzha					Land yet to be handed over by State Govt.	
5. Alapuzha-Kollam (71 km)	1.5	(h) Trivandrum	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
		(i) Kayamkulam	350	One fixed	One 18 T crane & T Fork lift	3 Covered storage(20x20m) Open storage(2000 sqm)		
		(j) Chavara					Only land acquired	
		(k) Kollam					A container terminal is under construction	

Note : 1) Channel marks for 24 hrs navigation provided on the entire waterway.  
 2) River notices are issued on fortnightly basis.

Table No. 1.3

**Infrastructure Facilities Available on State Waterways (As on 31-3-2009)**

Sl. No.	Navigational Channel	Depth (Meters)	Place	Size of vessels that can be accommodated (DWT)/dimension	Availability and Capacity of Terminals			Remarks
					No. of berths	cargo handling equip. and their capacity	Type and extent of storage facility available	
1	2	3	4	5	6	7	8	9
1 ANDHRA PRADESH	NIL				NIL	NIL	NIL	NIL
2 ASSAM								
3 BIHAR @	2 metres		Stretch Lakhipur to Bhanga	upto 250 MT Barge	2 Nos.	16.0 T Capacity	30m x 15m capacity Godowns	1) During flood season each size of vessels can be accommodated. 2) During lean season dredging will be required.
			Dist: Cachar & Karimganj	Size = 32.0 m x 8.50 m	At Karimganj and Badarpur			
			(I) (a) Sahebganj	134x31'x6x2 Nos	2 Nos.	NIL	NIL	
			(b) Manihari	80x15x7'x1 No	2 Nos.	NIL	NIL	
			(II) Kahalgaoan	55x13'3"x4'8"x2 Nos	2 Nos.	NIL	NIL	
			Tintanga	60x16x6'x2Nos.	2 Nos.	NIL	NIL	
			(III) Sultanganj	70x18'x6'x1 No.	2 Nos.	NIL	NIL	
			-Agwani	59x15x5x1 No.				
			(IV) (a) Munghyr	56'3"x14'x2"x5'4"x1 No.	2 Nos.	NIL	NIL	
			(b) Rajghat	58'9"x16'4"x5'8"x1 No.				
				47'2"x12'6"x5' "x1 No.				
				59'5"x15'6"x5'8"x1 No.				
			(V) Buxar-Ujjirhat	NA	1 No.	2 Nos.	NIL	
4 GOA	Panaji Port (River Mandovi)	3 metres	Panaji	75 Mtrs Length	1	-	-	Ports jetty being used by vessels calling in the Ports

Table No. 1.3 (contd.)

**Infrastructure Facilities Available on State Waterways (As on 31-3-2009)**

Sl. No.	Navigational Channel	Depth (Meters)	Place	Size of vessels that can be accommodated (DWT)/dimension	No. of berths	cargo handling equip. and their capacity	Availability and Capacity of Terminals		Remarks
							Availability	Capacity	
1	2	3	4	5	6	7	8	9	
<b>5 GUJARAT</b>									
Mangleshwar-Kabinwad Narmada	3.5 to 4 Meters	Mangleshwar		Boat	-	NA	NA	NA	NA
Tapi-Magdalla Bridge	2.5 to 3.5 Meters	Surat		Boat	-	Small Equip.	NA	NA	
<b>6 KARNATAKA</b>	Nil	Nil		Nil	Nil	Nil	Nil	Nil	
<b>7 KERALA*</b>									
<b>8 MAHARASHTRA*</b>									
<b>9 ORISSA</b>									
<u>Balugaon Sector</u>									
Balugaon-K. Prasad	Varies between 2 to 10 metres	Lake Chalika	30 ft	2	-	NA			Passenger waiting hall is available at Balugaon. Repair of jetties and construction are needed. Black wall at Balugaon and Krishnaprasad waiting hall is not available at Krishnaprasad at present.
Balugaon-Kalijai	2 to 10 Metres	Lake Chalika	40 ft	2	-	NA			Black wall at Kalijai is available for berthing & landing. Waiting hall is not available at Kalijai.
Balugaon-Nuapada	2 to 4 Metres	Lake Chalika	30 ft	2	-	-do-			No Jetty and waiting hall is available at Nuapada.

Table No. 1-3 (contd.)

## **Infrastructure Facilities Available on State Waterways [As on 31.3.2009]**

Sl. No.	Navigational Channel	Depth (Meters)	Place	Size of vessels that can be accommodated (DWT)/dimension	No. of berths	cargo handling equip. and their capacity	Availability and Capacity of Terminals		Remarks
							Type and extent of storage facility available		
1	2	3	4	5	6	7	8	9	
Balugaon-Satapada	2 to 4 Metres	Lake Chalika		30 ft	2	-	-do-	Berthing & landing facilities are available at Satapada. No waiting hall is available for the passengers at present.	
<b>Astrang Sector</b> Nuagarh-Shribantpur	2 to 10 Metres	River Devi		26 ft	3	-	-do-	No jetty & waiting hall is available for the sector.	
<b>Chandballi Sector</b> Chandballi-Rajnagar	Varies between 7 to 18 metres	River Baitarani/ Brahmani		52 ft	13	-	-do-	Jetty & waiting hall are available at Chandballi. The Jetty at Rajnagar washed away during super cyclone 1999. Waiting hall is available at Rajnagar which needs Major repair.	
Chandballi-Talucha	Varies between 7 to 20 metres	Baitarani/Kharastrota/ Brahmani		50 ft	10	-	-do-	Jetty at Nalitapatia in the Chandballi. Talucha, route has been severely damaged during super cyclone 1999 & Floor 2001. Waiting hall at Nalitapatia is not available.	
Chandballi-Aradi	Varies between 7 to 18 meters	Brahmani		35'	3	-	-do-	Both Jetty and waiting hall is available at Aradi. Both the structures require repair & renovation.	
<b>10 TAMILNADU</b>									
Chandballi-TaluchaPeriyar Lake in Kerala, (Under lease in Varie4.46 Tamil Nadu)	Thekkady	Vessel 1 (Kannaki) Length -8.5 m Breath - 3m Depth -1.4m		Vessel 2 (Jalaraina) Length -11.5 m Breath - 2.4m Depth -1.6m					

Table No. 1.3 (contd.)

**Infrastructure Facilities Available on State Waterways (as on 31.3.2008)**

\* Data not received @  
Source : State Govt.

to 31st March 2008.

# **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)	
			2007-08	2008-09	2007-08	2008-09
1	2	3	4	5	6	7
1	National Waterway No. I  (Allahabad-Haldia stretch of Ganga – Bhagirathi – Hooghly river system)	1620	15.10	13.54	7092	7068
2	National Waterway No. II  (Sadiya-Dhubri stretch of Brahmaputra River system)	891	13.08	2.31	422	142
3	National Waterway No. III  (Kollam-Kottapuram stretch of West Coast Canal along with Champakara Canal and Udyogmandal Canal)	205	6.73	7.66	89	109
<b>Sub Total NWs</b>		<b>2716</b>	<b>34.91</b>	<b>23.51</b>	<b>7603</b>	<b>7319</b>
4	Goa Waterways	202.00	402.24	457.10	17537.00	19677.00
5	Maharashtra Waterways	453	130.56	99.63	2924	2487
<b>Grand Total</b>		<b>3371.00</b>	<b>567.71</b>	<b>580.24</b>	<b>28064</b>	<b>29483</b>

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 received from the Mormugao Port Trust.(MPT)  
Maharashtra Maritime Board for Maharashtra Waterways

Table No. 2.2

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

(In ton)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2006-07 (^)	2007-08(^)	2008-09(^)	Cargo generally moved
1	2	3	4	5	6	7
<b>A. CIWTC</b>						
1	Kolkata-Patna-Kolkata	1400	1002	...	...	Stonechips, Eligible Oil, Mill Dirt
2	Kolkata-Bangladesh * Harbour/Haldia/Kolkata/Kolkata	790	1780	1500	5100	Flyash,Slag,
3	Internal	80	217538	192304	66773	Pulses,Logs,Salt,Iron Ore,Steel, Fly Ash,Aluminium bl
4	Kolkata-Karimganj-Kolkata	1218	2	2807	2197	GC, Cement, Personnel effect,EdibleOils,Cement Clin
5	Bangladesh-Assam-Bangladesh	690	...	3475 ✓	...	Fly Ash,POL
Sub Total (A)		220322	200086	74070		
<b>B. VIVADA IWL</b>						
1	Haldia-Kolkata	100	...	218815	...	POL.
2	Haldia-Budge-Budge	78	204031	86705	78823	POL., FO, LDO, HSD
3	Haldia-Diamond Harbour	...	...	...	...	
4	Haldia-Jelihman	...	...	...	...	
5	Haldia-Kantapurk	...	...	...	17612	FO
6	Haldia-NSD	...	63949	...	103995	LO,HSD
7	Haldia-Falta	...	...	...	...	
8	Haldia-River Moori	...	...	...	112277	FO,HSD, LDO
9	Haldia-Guwahati	...	...	...		
10	Budge-Budge-Kolkata	22	...	16824	...	POL.
11	Budge-Budge-Kantapurk	...	...	...	...	
12	Budge-Budge-NSD	...	...	...	8132	HSD/LDO
13	Budge-Budge-Surinam	100	3171	...	...	FO, HSD
14	Budge-Budge-KPD	...	3558	...	659	FO, HSD
15	Budge-Budge-Haldia	78	16839	17085	12122	LDO
16	Budge-Budge-Jelingman	...	...	...	...	
17	Haldia-Namkhana	...	...	...	3569	LDO
18	Budge-Budge-Muri river	...	...	...	...	
19	Budge-Budge-Pujali	...	...	...	...	
20	Guwati-Kolkata	...	...	...		
21	Numaligarh-BudgeBudge	...	...	...		
Sub Total (B)		291548	339429	337189		

\*: The route is a link between NW-I &amp; NW-II through Banagladesh.

Cargo handled in this route is taken in NW-I.

^ : Data for the year 2006-07, 2007-08 and 2008-09 is taken from monthly returns.

Table No. 2.2  
(Contd...)

**Details of Cargo Moved on National Waterways  
(National Waterway No.1)- THE GANGA**

(In ton)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2006-07 (^)	2007-08(^)	2008-09(^)	Cargo generally moved
1	2	3	4	5	6	7
<b>C. OTHER PRIVATE OPERATORS</b>						
<b>1 TIRUPATI VESSEL( P)LTD.</b>						
1	Budge-Budge-Mongla(B'Desh)	80982	...	...	...	Flyash
2	Budge-Budge-Kulna(B'Desh)	45338	...	...	...	Flyash
3	Budge-Budge- Narayanganj(B'Desh)	159372	...	...	...	Flyash
4	Kulna(B'Desh)-Budge-Budge	...	...	...	...	
5	Kolkata-Narayanganj(B'Desh)	...	...	...	...	
6	Haldia-Narayanganj(B'Desh)	...	...	...	...	
<b>2 RELIANCE EXPORT CORPORATION</b>						
1	Kolkata-Narayanganj(B'Desh)	3942	...	...	...	Flyash
2	Haldia-Narayanganj(B'Desh)	...	...	...	...	
3	B.B. Narayanganj	5696	...	...	...	Flyash
4	Haldia-Kulna	...	...	...	...	
5	Budge-Budge-Kulna(B'Desh)	...	...	...	...	
<b>3 PRADEEP BOATING</b>						
1	Diamond Habour-Kolkata	80	...	...	...	
2	Diamond Habour-Sauger/Phalta	59	...	...	...	
3	Kolkata-Pandu	22	X 105	...	...	Plant and Machinery
4	Kolkata-Mongla(B.Desh)	497	...	...	...	
5	Kolkata-Narayanganj(B.Desh)	780	...	...	...	
6	Budge- Budge-Mongla(B.Desh)	475/413	1800	...	...	Flyash
7	BudgeBudge-Narayanganj(B.D.)	758	...	...	...	
8	Sagar-Kolkata	139/144	...	...	...	
<b>4 HANDCON</b>						
1	Kolkata-Mongla (B. Desh)	435	...	...	...	
2	Kolkata-Narayanganj(B. Desh)	870	...	...	...	
3	Budge Budge-Mongla(B. Desh)	433/413	...	...	...	
4	Budge Budge-Kulna	444	...	...	...	
5	Budge Budge-Narayanganj	778	...	...	...	
6	Khulria-Kolkata	446	...	...	...	
<b>5 SEAWATER TRANSPORT CO. (P) LTD.</b>						
1	Kolkata-Kulna	446	....	...	...	
2	Budge-Kulna	...	2400	...	...	Sugar
3	Kolkata- Mongla(B.Desh)	435	....	...	...	
4	Budge-Budge- Mongla(B.Desh)	413	....	...	...	
<b>6 GANGES WATER TRANSPORT CORPN. (P) LTD.</b>						
1	Kolkata-Kulna (B. Desh)	446	...	...	...	
2	Budge-Budge-Mongla(B' Desh)	413	1866	...	...	Flyash
3	Budge-Budge- Kulna	424	....	...	...	
<b>7 SOHOM COMMERCIAL</b>						
1	Kolkata-Karimganj (Barak)	1318	...	...	...	
2	Kolkata- Kulna(B' Desh)	446	8688	...	...	Flyash, Gypsum
3	Haldia-Mongla(B' Desh)	355	...	...	...	
4	Haldia-Kulna (B' Desh)	346	...	...	...	
5	Haldia-Narayanganj (B' Desh)	680	...	...	...	
6	Kolkata-Narayanganj (B' Desh)	780	77358	...	...	Wheat, Flyash
7	Khulna-Narayanganj(B' Desh)	424	...	...	...	
8	Budge-Budge - Narayanganj (B'Desh)	2606	...	...	...	Flyash

Table No. 2.2  
(Contd...)

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

(In ton)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2006-07 (^)	2007-08(^)	2008-09(^)	Cargo generally moved
1	2	3	4	5	6	7
<b>8 WINSHIP INDIA</b>						
1	Budge Budge-Narayanganj	5742	...	...		Flyash
2	BISN Jetty - Narayanganj	...	...	...		
3	Kolkata-Khulna	1103	...	...		Flyash
4	Kolkata-Narayanganj	1930	...	...		Flyash
5	Bhuj Bhuj Khulna	35112	...	...		Flyash
<b>9 SNEHA OVERSEAS CORPN.</b>						
1	Haldia-Khulna (B. Desh)	346	...	...		
2	Kolkata-Kulna(B. Desh)	446	...	...		
3	Haldia-Narayanganj	780	...	...		
4	Budge-Budge Narayanganj(B'Desh)	...	...	...		
5	Budge-Budge Khulna(B'Desh)	...	...	...		
6	Kolkata-Narayanganj(B' Desh)	780	...	...		
<b>10 SPEEDWAYS SHIPPING SERVICE</b>						
1	Kolkata-Narayanganj(B' Desh)	780	...	...		
<b>11 RENAISSANCE SHIPPING LINES</b>						
1	Kolkata-Narayanganj	780	44824	...		Wheat,Proj.cargo,Flyash,Steelwire,coal,Steelrod,
2	Kolkata-Khulna(B. Desh)	446	638	...		Gypsum, Flyash
3	Howrah-Narayanganj	680?	20020	...		Wheat
4	Kolkata-Mongla(B. Desh)	413	...	...		
5	Budge-Budge-Mongla(B. Desh)	413	...	...		
6	Budge-Budge-Narayanganj(B'De	758	118327	...		Flyash,wirerod
7	BISN Jetty-Narayanganj	...	...	...		
8	Bhuj Bhuj-Khulna	4795	...	...		Flyash
<b>12 INDWAVE MARITIME PVT.LTD.</b>						
1	Kolkata-Narayanganj(B. Desh)	780	...	...		
<b>13 EXCELL SHIPPING LINES</b>						
1	Kolkata-Narayanganj(B.Desh)	780	...	...		
<b>14 EVERETT KEIHIN CARGO</b>						
1	Budge-Budge-Narayanganj(B'Desh)	...	...	...		
2	Narayanganj-Kolkata	...	...	...		
<b>15 R.S. SHIPPING</b>						
1	Kolkata-Narayanganj	780	33858	...		Wheat/ Rice,Slag, Sugar and MS Wire Rod
2	Kolkata-/Batinical Jetty-Mongla (B' Desh)	428	11589	...		Slag,Sugar, Flyash and Timber
3	Kolkata-Karimganj(Barak) X	1318	X 451	...		Salt,CG Sheet and Flyash
4	Kolkata-Zakiganj	1318	...	...		
5	Zakiganj-Karimganj(Barak)	...	...	...		
6	Budge-Budge-Narayanganj (B' Desh)	758	6909	...		Flyash
7	Budge-Budge-Mongla(B' Desh)	413	...	...		
8	Karimganj(Barak) -Narayanganj (B' Desh)	448	...	...		
<b>16 GLOBAL SHIPPING</b>						
1	Kolkata-Khulna	446	...	...		
2	Kolkata-Narayanganj(B' Desh)	780	2992	...		Flyash
3	Budge-Budge-Narayanganj (B' Desh)	758	2092	...		Flyash
4	Budge-Budge-Mongla(B' Desh)	413	...	...		
	Budge-Budge- Khulna	...	...	...		
5	Kolkata-Mongla(B' Desh)	435	...	...		
6	Haldia-Narayanganj(B' Desh)	680	...	...		
7	Haldia- Khulna(B' Desh)	346	...	...		
<b>17 TITLI NAVIGATION</b>						
1	Kolkata-Narayanganj(B' Desh)	780	20951	...		Proj.Cargo, Flyash,Slag,ManganeseOre,Clinker,Whe
2	Kolkata-Mongla(B' Desh)	435	1379	...		Wheat, Flyash,Slag
3	Budge-Budge-Mongla	...	...	...		
4	Budge-Budge-Narayanganj	...	...	...		

Table No. 2.2  
(Contd...)

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

(In ton)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2006-07 (^)	2007-08(^)	2008-09(^)	Cargo generally moved
1	2	3	4	5	6	7
5	Haldia-Narayanganj	...	...	...	...	
6	Hawrah-Narayanganj	...	✓ 1805	...	...	Flyash
7	Kolkata-Khulna	...	✓ 1057	...	...	Flyash
<b>18</b>	<b>COASTAL CONNEXIONS</b>					
1	Kolkata-Narayanganj(B' Desh)	780	✓ 16427	...	...	Flyash, Proj.Cargo,Gypsum,Mg ore
2	Budge-Budge-Narayanganj	758	...	...	...	
3	Budge-Budge-Khulna	...	✓ 5376	...	...	Flyash
4	Harrah-Narayanganj	...	✓ 5595	...	...	Flyash
<b>19</b>	<b>KANISHKA SHIPPING LINES</b>					
1	Kolkata-Narayanganj(B' Desh)	780	✓ 701	...	...	Flyash
2	Budge-Budge-Narayanganj (B' Desh)	758	...	...	...	
3	Budge-Budge-Khulna(B' Desh)	424	...	...	...	
4	Budge-Budge- Mongla	...	...	...	...	
5	BLSNJetty-Narayanganj(B'Desh)	780	...	...	...	
<b>20</b>	<b>UVM SHIPPING SERVICES</b>					
1	Kolkata-Narayanganj(B'Desh)	780	...	...	...	
<b>21</b>	<b>VANCON STEAMER AGENT</b>					
1	Budge-Budge-Mongla	...	...	...	...	
2	Budge-Budge-Khulna	...	...	...	...	
3	Budge-Budge-Narayanganj	...	...	...	...	
<b>22</b>	<b>GALAXY SHIPPING</b>					
1	Haldia-Narayanganj	...	...	...	...	
2	Kolkata- Narayanganj	...	...	...	...	
3	Kolkata-Khulna	...	...	...	...	
4	Haldia-Khulna	...	...	...	...	
<b>23</b>	<b>Calcutta-Haldia Shipping</b>					
1	Kolkata- Narayanganj	...	...	...	...	
<b>24</b>	<b>Central Shipping Bureau</b>					
1	Haldia-Narayanganj	...	...	...	...	
2	Kolkata- Narayanganj	...	✓ 4697	...	...	Bauxite, Iron Ore, Flyash
3	Bhuj Bhuj Narayanganj	...	✓ 518	...	...	Flyash
<b>25</b>	<b>ESS BEE INTERNATIONAL</b>					
1	Haldia-Khulna	...	...	...	...	
2	Budge-Budge-Narayanganj	...	✓ 1236	...	...	Flyash
3	Budge-Budge-Khulna	...	...	...	...	
4	Kolkata- Narayanganj	...	✓ 1845	...	...	Slag
5	Haldia-Narayanganj	...	✓ 653	...	...	Gypsum
6	Bhuj-Bhuj-Mongla	...	✓ 2020	...	...	Flyash
<b>26</b>	<b>A.K.Navigation</b>					
1	Kolkata- Narayanganj	...	✓ 5425	...	...	Iron Ore, Slag and Flyash
2	Haldia-Naraayanganj	...	✓ 578	...	...	Slag
<b>27</b>	<b>Desta International</b>					
1	Budge-Budge- Narayanganj	...	✓ 41818	...	...	Flyash
2	Kolkata-Narayanganj	...	✓ 1538	...	...	Flyash
<b>28*</b>	<b>Private Operators</b>					
	Kolkata-Narayanganj		811553	810908		Flyash,Non Alloy Steel,Wire M.S. Wise Rod,Slag,OI
	Kolkata-Khulna		115034	88967		packages,ironOre,Steel Sheet,rice, Clay lamps
	Kolkata-Mongla		28237	34237		Fly Ash,Gypsum
	Narayanganj-Pandu		1100 ✓	...		Flyash,Slag
	Kolkata-Karimganj		2214	...		Cement
	Zakiganj-karimganj		602	...		Flyash
	Karimganj-Kolkata		3386	...		Clinker
	Kolkata-pandu		300	1441		Edibleoil
	<b>Sub Total ( C )</b>		<b>794154</b>	<b>962426</b>	<b>935553</b>	

\* : Names of Private operators not available

Table No. 2.2  
(Contd...)

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

(In tonn)

Sl. No.	River/Stretch	Approximate Distance (Kms)	2006-07 (^)	2007-08(^)	2008-09(^)	Cargo generally moved
1	2	3	4	5	6	7
<b>D IWAI</b>						
<b>1 M.V. RAJGOPALACHARI</b>						
1	Rajmahal-Kolkata	...	925	876	SilicaSand, Bitumen,Edible Oil.	
2	Rajmahal-Haldia	520	...	...	Iron Ore	
3	Haldia-Patna	730	1535	325	Edible-Oil	
4	Haldia-Guwhati	419	...	...	Edible Oil	
5	Haldia-Karimganj	...	...	516	Bitumin	
<b>2 M.V.LALBAHADURSHATRI</b>						
1	Rajmahal-Kolkata	210	250	...	SilicaSand, China Clay	
2	Haldia-Patna	522	638	...	Edible-Oil	
3	Kolkatta-Karimgunj	...	...	229	Edible Oil	
4	Rajmahal-Haldia	537	...	...	Iron Dust	
5	Haldia-Karimganj	280	237	...	Edible Oil	
<b>3 M.V.Homi Bhabha</b>						
1	Sahibgunj-Patna	...	...	745	Stone chips	
2	Haldia-Patna	1174	1684	423	Edible-Oil	
3	Rajmahal-Kolkata	210	1337	560	Chinaclay,Silica Sand	
4	Haldia-Karimganj	2300	...	...	Edible Oil	
<b>4 MV Vishweshsariya</b>						
1	Haldia-Varansi	898	590	...	CDSB Oil	
<b>5 MV Rabindra Nath Tagore</b>						
1	Haldia-Karimganj	568	...	...	Edible Oil	
<b>2 Sahibgunj-Patna</b>						
<b>6 D.B.Sucheta</b>						
1	Rajmahal-patna	...	907	...	Stone chips	
2	Sahibgunj-Patna	...	...	2717	Stone chips	
<b>7 Private Operator</b>						
1	Haldia-Semaria	...	375	...	ODC	
2	Haldia-Patna	...	...	473	ODC	
3	Kolkata-Ballia	...	...	337	ODC	
<b>8 Cargo handled at Patna Terminal</b>						
1	Haldia-Patna	5003			Edible Oil and others	
<b>Sub Total (D)</b>						
		11371	8478	7486		
<b>Total (NW-I) (A+B+C+D)</b>						
		1317395	1510419	1354298		

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)	2006-07	2007-08	2008-09	Cargo generally moved
1	2	3	4	5	6	7
<b>A. CIWTC</b>						
1	Kolkata-Banladesh #	1480	...	...	5100	Fly Ash, slag
2	Bangladesh-Assam-Bangladesh #	440	...	3475	...	Cement,POL
	<b>Sub Total</b>			<b>3475</b>	<b>5100</b>	
<b>B. Vivada</b>						
1	Dhbri-Kolkata	1339	...	...	...	
2	Haldia-Pandu	1339	...	...	...	
3	Pandu-Haldia	1339	...	...	...	
4	Pandu-Haldia	1301	...	...	...	
5	Jogighopa-Kolkata	...	7807	...	...	HSD/POL
6	Silghat-Kolkata	...	360	...	...	D/I/Pipes
7	Kolkata-Pandu	...	...	...	...	
<b>C. Other PVt.Operators</b>						
1	Silghat-Kolkata	1711	...	1268	...	HSD
2	Narayanganj-Pandu	665	...	1000	...	Cement
3	Silighat-Baghbari	590	...	3436	1169	HSD
4	Kolkataa-Jogighopa	1739	...	...	882	Boiler with accessories
	<b>Sub Total(B+C)</b>		<b>8167</b>	<b>5704</b>	<b>2051</b>	
<b>D. IWTD Assam</b>						
			1076874	1298410	224158	Goods
<b>E. IWAI Vessel</b>						
1	Haldia-Pandu	...	985	...	...	Edible Oil
	<b>Sub Total(D+E)</b>		<b>1077859</b>	<b>1298410</b>	<b>224158</b>	
<b>Total (NW-II)(A+B+C+D+E)</b>						
			<b>1086026</b>	<b>1307589</b>	<b>231309</b>	

# : Also shown in movement on NW I for the stretch covered in NWI.

Table No. 2.2  
(Contd...)

**Details of Cargo Moved on National Waterways  
(National Waterway No.IID- West Coast Canal,  
Champakara Canal & Udyog Mandal Canal**

(In tonnes)

Sl. No.	Canal/Stretch/IWT Operator	Approximate Distance (Kms)	2006-07	2007-08	2008-09	Cargo generally moved
1	2	3	4	5	6	7

**A. CHAMPAKARA CANAL**

**1 KSINC Ltd.**

Cochin Port-FACT-CD 21.5 197076 210071 207015 Raw Sulphur, Rock Phosphate & Phosphoric Acid

**2 LOTS Shipping & Trading**

Cochin Port FACT-LD	21.5	-	-	45092	Rock Phosphate, Sulphur & Phosphoricacid.
Cochin Port - Cochin Shipyard	4	-	-	2447	Steel
Cochin Port-FACT-CD	21.5	159590	748	-	Rock Phosphate, Sulphur, Phosphoricacid & Stone aggregate.

**3 SKS Shipping Ltd.**

Cochin Port FACT-CD	21.5	57201	-	-	Rock Phosphate & Sulphur.
<b>Sub Total</b>	-	<b>413867</b>	<b>210819</b>	<b>254554</b>	

**B. UDYOGMANDAL CANAL**

**1 LOTS Shipping & Trading**

Cochin Port FACT-UD	20	-	71983	162059	Furnace oil, Rock Phosphate & Sulphur
Cochin-Port-Vallarpadam	20	-	-	19791	Stone aggregate.
Cochin Port-Binani Zinc Ltd.	20	139050	52783	-	Furnace oil, Zinc & Sulphur

**2 KSINC Ltd.**

Cochin Port FACT-UD	...	25297	-	-	Rock Phosphate & Sulphur.
KRL Jetly-FACT-UD	...	1424	-	-	POL

**3 SKS Shipping Ltd.**

Cochin Port FACT-UD	20	48927	-	-	Rock Phosphate & Sulphur.
<b>Sub Total</b>		<b>214698</b>	<b>124766</b>	<b>181850</b>	

**C. THE WEST COASTAL CANAL**

**1 KSINC Ltd.**

Fine Arts Jetty-Vypeen	4	366570	287930	247630	Potable Water
Ernakulam Ter.Cochin Port	5	34561	20412	43830	POL

**2 Travancore Cements Ltd.**

Vaikom- Chitramangalam	20	23080	29200	38350	Lime shell with clay & other impurities
------------------------	----	-------	-------	-------	---

**Sub Total**

<b>Total (NW-III) (A+B+C)</b>	<b>1022776</b>	<b>673127</b>	<b>766214</b>	
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<b>GRAND TOTAL (NW-I+NW-II+NW-III)</b>	<b>3426197</b>	<b>3491135</b>	<b>2351821</b>	
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Source : Inland Waterways Authority of India / CIWTC.

## **SECTION – 3**

**COMMODITY-WISE ROUTE-WISE  
CARGO CARRIED, FREIGHT  
EARNED, INCOME &  
EXPENDITURE OF CIWTC**

**Table No. 3.1**
**Traffic and Freight Earnings of Central Inland Water Transport Corporation (CIWTC)**

<b>Period</b>	<b>Traffic carried (000 tonnes)</b>	<b>Tonne Km Performed (Lakh)</b>	<b>Freight Earnings (Rs.Lakh)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1981-82	75	780	163
1982-83	122	813	135
1983-84	201	928	210
1984-85	255	1184	372
1985-86	304	1621	501
1986-87	321	1566	581
1987-88	288	1434	452
1988-89	304	1415	485
1989-90	410	1163	566
1990-91	385	1197	581
1991-92	289	639	427
1992-93	312	1111	640
1993-94	242	1033	552
1994-95	331	968	781
1995-96	325	994	837
1996-97	188	677	718
1997-98	243	524	802
1998-99	141	311	815
1999-00	251	525	1202
2000-01	106	283	641
2001-02	68	269	462
2002-03	86	392	560
2003-04	66	315	497
2004-05	54	242	479
2005-06	85	143	489
2006-07	220	257	578
2007-08	200	238	405
2008-09	74	110	409

Note :Total freight earned includes towing /hire/detention charges/  
additional freight/godown rent/misc. charges etc. as detailed in Table 3.3.

Source : CIWTC

**Table No. 3.2      Cargo Carried And Freight Earned by CIWTC-Commodity-wise**

Sl. No.	Type	2006-07		2007-08		2008-09	
		Tonnes Carried	Freight Earned (Rs. Lakh)	Tonnes Carried	Freight Earned (Rs. Lakh)	Tonnes Carried	Freight Earned (Rs. Lakh)
		1	2	3	4	5	6
<b>Commodity Earnings</b>							
1	Fly Ash	4438	23.73	1500	1.65	3747	24.02
2	Pol	-	-	1975	4.89	-	-
3	Stone chips	280	2.56	-	-	-	-
4	Iron Ore	18694	33.55	1781	320	-	-
5	Logs	2750	2.55	-	-	-	-
6	Mill Dust	348	1.13	-	-	-	-
7	Aluminium Block	-	-	-	-	800	1.22
8	Salt/Coil	1500	1.73	-	-	-	-
9	Cement/W.Cement	-	-	1500	2.91	-	-
10	Cement Clinkers	-	-	2307	4.91	-	-
11	Peas	-	-	-	-	30100	36.18
12	Pet Cake/Personal Effect	2	0.02	-	-	-	-
13	E.Oil	374	1.12	500	4.63	550	5.10
14	Misc.	191936	269.67	190523	231.08	38873	59.47
<b>SUB TOTAL</b>		<b>220322</b>	<b>334.06*</b>	<b>200086</b>	<b>253.27*</b>	<b>74070</b>	<b>125.99*</b>

**Non Commodity Earnings**

Vessel hire, Godown, Rent, Storage, Towage etc.	-	244.39	-	152.07	-	283.51
<b>SUB TOTAL</b>	<b>-</b>	<b>244.39</b>	<b>-</b>	<b>152.07</b>	<b>-</b>	<b>283.51</b>
<b>GRAND TOTAL</b>	<b>220322</b>	<b>578.45</b>	<b>200086</b>	<b>405.34</b>	<b>74070</b>	<b>409.50</b>

Note :The figures are compiled on the basis of the monthly data received from CIWTC.

Table No. 33

Commodity-wise, Route-wise Cargo Carried, Freight Earned and Tonne Kms. Performed by CINWTC - 2006-07 to 2008-09

Table No. 3.3 (Contd....)

**Commodity-wise, Route-wise Cargo Carried, Freight Earned and Tonne Kms. Performed by CWTC - 2006-07 to 2008-09**

Sl. No.	Route	Distance (in Kms)	Commodity	Tonnes Carried				Freight Earned(Rs.in Lakh)			Tonne Kms(in Lakh) Performed				
				2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	11	12	13
8	Kolkata - Patna	417- 1060	Stone Chips	-	-	-	-	-	-	-	-	-	-	-	
			Cement	-	-	-	-	-	-	-	-	-	-	-	
			SoneSand	-	-	-	-	-	-	-	-	-	-	-	
			E.Oil	374	-	-	-	1.12	-	-	3.61	-	-	-	
			Tug Hire/Towage	-	-	-	-	-	-	-	-	-	-	-	
			<b>TOTAL</b>	<b>374</b>	-	-	-	1.12	-	-	<b>3.61</b>	-	-	-	
Kolkata-Patna-Kolkata	<b>TOTAL</b>	<b>1002</b>	-	-	-	<b>2.81</b>	-	-	-	<b>8.35</b>	-	-	-	-	
							30100	-	-	36.18	-	-	28.48	-	
9	Lighterage Operation at Sugar/Haldia Diamond Harbour -Kolkata	44-144	Peas	-	-	-	-	-	-	-	-	-	-	-	
			Wheat Flour	-	-	-	-	-	-	-	-	-	-	-	
			Misc (Vessel Hire)	-	-	-	-	-	-	-	-	-	-	-	
			Fly Ash	2658	-	-	218.98	-	-	33.17	-	-	-	-	
10	Kolkata Internal	<b>TOTAL</b>	Log	2750	-	-	2.55	-	-	4.26	-	-	-	-	
			Steel Coil	1500	-	-	1.73	-	-	-	-	-	-	-	
			Pipes,Mancanise Ore	-	-	-	-	-	-	-	-	-	-	-	
			Corn Soya Blend	-	-	-	-	-	-	-	-	-	-	-	
			Iron Ore	18694	1781	-	33.55	3.20	-	14.05	1.42	-	-	-	
			Salt (in bags)	-	-	-	-	-	-	-	-	-	-	-	
			Misc.	191936	190523	35873	269.67	231.08	45.67	189.57	166.60	31.57	-	-	
			<b>TOTAL</b>	<b>217538</b>	<b>192304</b>	<b>65973</b>	<b>329.48</b>	<b>234.28</b>	<b>81.85</b>	<b>241.05</b>	<b>168.02</b>	<b>60.05</b>	-	-	-
11	Kolkata Internal	<b>TOTAL</b>	Aluminium Block	-	-	800	-	-	1.22	-	-	0.02	-	-	
						800	-	-	1.22	-	-	0.02	-	-	
12	Misc. Tug Hire and Godown Rent	<b>TOTAL</b>					244.39	152.07	283.51	-	-	-	-	-	
							<b>GRAND TOTAL</b>	<b>220322</b>	<b>200086</b>	<b>74070</b>	<b>578.45</b>	<b>405.34</b>	<b>409.5</b>	<b>257.16</b>	<b>238.4</b>
														<b>110.07</b>	

Note : The figures are compiled on the basis of the monthly data received from CII/WTC.

Table No. 3.4

**Income And Expenditure Of C.I.W.T.C.****(For The Year Ending 31st March)**

(Rs. lakhs)

Sl.No.	Item	2008	2009
1	2	3	4
<b>A</b>	<b>INCOME</b>	<b>1844.78</b>	<b>2111.49</b>
(i)	Earnings (Operational)	371.81	220.77
(ii)	Earnings (Others)	1472.97	1890.72
<b>B</b>	<b>EXPENDITURE</b>	<b>1872.19</b>	<b>2031.31</b>
(i)	Materials & Stores Consumed	77.91	70.52
(ii)	Decrease/Increase in Work in Progress	-	60.13
	Employees Remuneration & Benefits	777.60	875.92
(iv)	Repairs & Maintenance	144.16	92.42
(v)	Power & Fuel	84.16	74.44
(vi)	Other Expenses	390.09	414.43
(vii)	Interest	-	-
(viii)	Depreciation	369.53	367.52
(ix)	Provisions	136.84	180.24
(x)	Transfer to other Heads of Accounts	-108.10	-104.31
<b>C</b>	<b>PROFIT/LOSS (A-B)</b>	<b>-27.41</b>	<b>80.18</b>

Source : CIWTC

**Table No. 3.5      Source-wise Earning of CIWTC**      (Rs. in lakhs)

Sl.No.	Name of Service	2007-08	2008-09
1	2	3	4
<b>A.Earnings (Operational)</b>			
(I) <b>Engineering Activities</b>			
<b>Construction:</b>			
	Construction of Vessels (own)	-	-
	General Engineering	-	-
<b>Repair</b>			
	I.W.T.Repair (Own)	-	-
	I.W.T.Repair (Outside)	-	-
	Marine Repair	-	-
<b>TOTAL ( i )</b>		-	-
(ii) <b>Transportation &amp; Allied Activities:</b>			
	Freight	250.63	122.54
	Dredging	-	-
	Ferries & Charter	121.18	98.23
	Sales pending finalisation	-	-
<b>TOTAL (ii)</b>		<b>371.81</b>	<b>220.77</b>
<b>TOTAL A ( i &amp; ii )</b>		<b>371.81</b>	<b>220.77</b>
<b>B.Earnings (Others)</b>			
	Investment/one time grant	-	-
	Short Term Deposit	526.35	879.43
Interest on:			
	Mobilisation Amount	-	-
	Sunderban	-	-
	Conservancy Amount	-	-
	Port Maintenance	-	-
	Sale of Scrap	-	-
	Rent	146.53	154.55
	Surplus on sale of assets	-	-
	Retired from Operation	-	-
	Miscellaneous Receipts	800.09*	856.74*
Profit on exchange		-	-
<b>TOTAL B</b>		<b>1472.97</b>	<b>1890.72</b>
<b>TOTAL (A+B)</b>		<b>1844.78</b>	<b>2111.49</b>

\* : Rs. 777.60 lakhs received from Govt. of India in the year 2007-08 and  
Rs.824.70 lakhs received form Govt. of India in the year 2008-09.

Table No. 3.6

**Financial Position of CIWTC**

(Rs. in Lakh)

SL No.	Item 2	Year	
		2007-08 3	2008-09 4
<b>A. LIABILITIES</b>			
(a) Paid up capital		13048.48	13048.48
(b) Reserves & Surplus(Capital Reserve)		10909.93	10909.93
(c) Borrowings			
i) From Govt. of India		-	-
ii) From others		-	-
(d) Trade dues and other current liabilities (including provisions) and interest accrued thereon		7541.14	19246.85
<b>TOTAL (A)</b>		<b>31499.55</b>	<b>43205.26</b>
<b>B. ASSETS</b>			
(e) Gross Asset		11119.71	11119.83
(f) Less Depreciation		6425.35	6792.73
(g) Less Provision		-	-
(h) Net Fixed Assets (e-f-g )		4694.36	4327.10
(i) Capital work in progress		535.89	475.85
(j) Investment		-	-
(k) Current Assets, Loans and Advances		11970.62	12632.93
(l) Miscellaneous expences and losses not written off		14298.68	25769.38
<b>TOTAL (B)</b>		<b>31499.55</b>	<b>43205.26</b>
<b>C. WORKING CAPITAL</b>			
(m) Working Capital ( k-d)		-4429.48	-6613.92
(n) Additional provision for Gratuity		-	-
(o) Total Working Capital		4404.96	-7058.76
<b>Capital employed (h+o)</b>		<b>9099.32</b>	<b>-2731.66</b>
<b>Net worth (a-l)</b>		<b>(-1250.20)</b>	<b>(-12720.90)</b>

Source: CIWTC

## **SECTION – 4**

### **IWT ACTIVITIES STATE-WISE**

Table No. 4.1

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

Sl. No.	State/ UT/Year	Self Propelled					Non...Self Propelled					Grand Total	
		Cargo	Passe nger	Cargo cum Passenger	Tugs and Pushers	Total (Col.3 to6)	Dumb Barges	Dumb Tank ers	Dumb Flat	Boats	Others	Total (Col.8 to12)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 <b>Andhra Pradesh</b>	2007	...	...	...	...	...	...	...	...	...	...	...	...
	2008	...	...	43	...	43	...	...	...	17	51	68	111
	2009	...	...	43	...	43	...	...	...	17	51	68	111
2 <b>Assam</b>	2007	128	46	7	181	20	...	42	24	...	...	86	267
	2008	116	44	7	167	18	...	31	24	...	...	73	240
	2009	116	44	7	167	18	...	31	24	...	...	73	240
3 <b>Bihar</b>	2007	13	2	...	15	2	...	...	2	...	...	4	19
	2008	13	2	...	15	4	...	...	2	...	...	6	21
	2009	13	2	...	15	4	...	...	2	...	...	6	21
4 <b>Goa</b>	2007	273	...	...	273	...	...	...	...	...	...	...	273
	2008	221	...	...	221	...	...	...	...	...	...	...	221
	2009	191	...	...	191	...	...	...	...	...	...	...	191
5 <b>Karnataka</b>	2007	35	...	...	35	...	...	...	193	74	267	302	
	2008	33	...	...	33	...	...	...	16	...	...	16	49
	2009	33	...	...	33	...	...	...	16	...	...	16	49
6 <b>Kerala</b>	2007	182	410	7	653	...	...	13	3631	1068	9288	10069	
	2008	656	35	15	781	1	...	26	7466	1025	8518	9230	
	2009	598	33	15	712	1	...	...	...	...	...	...	...
7 <b>Maharashtra</b>	2007	277	235	...	512	...	...	...	7094	1313	8407	9060	
	2008	235	...	277	512	...	...	...	3631	1068	9288	10069	
	2009	251	...	411	662	...	...	...	7466	1025	8518	9230	
8 <b>Orissa</b>	2007	180	...	180	...	...	...	...	...	...	...	...	180
	2008	163	...	163	...	...	...	...	...	...	...	...	163
	2009	155	...	155	...	155	...	...	...	...	...	...	155
9 <b>West Bengal</b>	2007	264	5	40(A)	332	557	...	...	1293	...	...	1850	2182
	2008	252	5	51(A)	331	574	...	...	1340	...	...	1914	2245
	2009	256	7	54(A)	340	579	...	...	1402	...	...	1981	2321

(A) Includes 14, 24 and 27 other vessels for 2007, 2008 and 2009 respectively.

Table No. 4.2

**Number of Passengers and Cargo Carried By Inland  
Water Vessels (Year Ending 31st March)**

Sl. No.	State/ UT/Year	Powered Vessels Employed for cargo (Nos.)	Powered Vessels Employed for passe ngers (Nos.)	Quantity of cargo carried (000' tonnes)	Total No. of passengers carried (000)
1	2	3	4	5	6
<b>1 Andhra Pradesh</b>					
	2007	-	-	-	-
	2008	...	...	...	...
	2009	...	...	...	...
<b>2 Assam</b>					
	2007	53	198	741.56	2439.23
	2008	33	190	846.24	25944.10
	2009	33	190	865.15	26553.15
<b>3 Bihar</b>					
	2007	...	...	...	...
	2008	2	13	...	...
	2009	2	13	...	...
<b>4 Goa(a)</b>					
	2007	273	-	14306.04	...
	2008	221	-	12824.59	...
	2009	191	-	11901.32	...
<b>5 Karnataka</b>					
	2007	-	302	...	10800.00
	2008	49	49	610.60	1101.31
	2009	49	49	159.00	1135.93
<b>6 Kerala</b>					
	2007	57	572	5678.73	24192.25
	2008	91	669	8637.14	13110239.72
	2009	66	576	5129.01	23469445.00
<b>7 Maharashtra</b>					
	2007	...	...	11553.00	14551.00
	2008	...	...	13056.00	15186.00
	2009	...	...	9963.00	16005.00
<b>8 Orissa</b>					
	2007	...	10	...	115.00
	2008	...	10	...	109.00
	2009	...	10	...	103.00
<b>9 West Bengal</b>					
	2007	54	264	2935(b)	54770.00
	2008	50	252	3312(b)	52577.00
	2009	50	256	3644(b)	58044.00

(a) Excludes traffic reported by Marmugao Port for Iron Ore movement which is 26.66 million tonnes in 2006-07, 27.40 million tonnes in 2007-08 and 33.80 million tonnes in 2008-09.

(b) No. of vehicles carried LCT 35990, 37285 and 39770 for the year 2006-07, 2007-08 and 2008-09 respectively.

## **SECTION – 5**

**IWT ACTIVITIES – PRIVATE  
COMPANIES/UNDERTAKINGS**

Table No. 5.1

**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 GR (Tonnes)	Passenger (No.)		
1	2	3	4	5	6	7	
<b>1 S.V.Salgaocar, Goa</b>							
2007		3	...	1224	...	...	
2008		4	...	1214	...	...	
2009		4	...	1236	...	...	
<b>2 D.V.Salgaocar, Goa</b>							
2007		3	...	1255	...	...	
2008		4	...	1229	...	...	
2009		4	...	1178	...	...	
<b>3 V.M.Salgaocar Sales International</b>							
2007		2	...	840	...	...	
2008		2	...	823	...	...	
2009		2	...	650	...	...	
<b>4 V.S.Dempo &amp; Co. Ltd. Goa</b>							
2007		4	...	7150	...	...	
2008		3	...	5300	...	...	
2009		3	...	5300	...	...	
<b>5 Sesa Goa Ltd. Goa</b>							
2007		17(a)	...	30117(b)	84	...	
2008		16	...	32506	...	...	
2009		16	-	32506	...	...	
<b>6 Sociedade De Fomento Ind. Ltd. Goa</b>							
2007		2	-	2434	...	...	
2008		2	-	2434	...	...	
2009		2	-	2434	...	...	
<b>7 CIWTC, Kolkata.</b>							
2007		39 (c)	...	12179	...	62	
2008		12 (c)	...	5648	...	26	
2009		8 (c)	...	2936	...	24	
<b>8 Indo-Swiss Trading Co. Kolkata.</b>							
2007		-	2(d)	118	270	...	
2008		-	2(d)	118	270	...	
2009		-	2(d)	118	270	...	
<b>9 Vivada Inland Waterways Ltd. Kolkata.</b>							
2007		11	2	...	...	...	
2008		11	4	...	...	...	
2009		9	7	...	...	...	

Table No. 5.1  
(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 GR (Tonnes)	Passenger (No.)		
1	2	3	4	5	6	7	
10	<b>West Bengal Surface Transport Corporation Ltd.</b>						
	2007	3	20	...	...	...	
	2008	3	27	...	...	...	
	2009	3	27	...	...	...	
11	<b>Hooghly Nadi Jalapath Paribahan Samabaya Samity, Kolkata.</b>						
	2007	-	41	...	...	...	
	2008	-	41	...	...	...	
	2009	-	45	...	...	...	
12	<b>West Bengal Tourism Development Corporation limited, Kolkata.</b>						
	2007	-	3	...	...	...	
	2008	-	3	...	...	...	
	2009	-	3	...	...	...	
13	<b>Eastern Navigation (P) Ltd., Kolkata.</b>						
	2007	3	2	...	...	...	
	2008	5	2	...	...	...	
	2009	8	1	...	...	...	
14	<b>Pradeep Boating Company, Kolkata.</b>						
	2007	2	...	...	...	...	
	2008	2	...	...	...	...	
	2009	2	...	...	...	...	
15	<b>Government of West Bengal Tourism Department, Kolkata.</b>						
	2007	...	1	...	...	...	
	2008	...	1	...	...	...	
	2009	...	1	...	...	...	
16	<b>Hindustan Petroleum Corp. Ltd., Budge Budge, West Bengal.</b>						
	2007	1	...	...	...	...	
	2008	1	...	...	...	...	
	2009	1	...	...	...	...	
17	<b>K. S. Singhee</b>						
	2007	2	...	...	...	...	
	2008	2	...	...	...	...	
	2009	...	...	...	...	...	
18	<b>Costa River Transport Pvt Ltd., Goa.</b>						
	2007	3	...	5122	...	...	
	2008	3	...	5122	...	...	
	2009	3	...	5122	...	...	

Table No. 5.1  
(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 GR (Tonnes)	Passenger (No.)		
1	2	3	4	5	6	7	
19	<b>Ghatal Station Navigation (P) Ltd., Kolkata.</b>						
	2007	...	3	...	...	...	
	2008	...	3	...	...	...	
	2009	...	3	...	...	...	
20	<b>Diamond Harbour Municipality, Kolkata.</b>						
	2007	...	6	...	...	...	
	2008	...	7	...	...	...	
	2009	...	6	...	...	...	
21	<b>Karya Autota Pvt. Ltd. Kolkata.</b>						
	2007	4	1	...	...	...	
	2008	3	1	...	...	...	
	2009	...	...	...	...	...	
22	<b>Chandan Nagar Municipality, Kolkata.</b>						
	2007	...	3	...	...	...	
	2008	...	3	...	...	...	
	2009	...	5	...	...	...	
23	<b>Jain Navigation</b>						
	2007	1	2	...	...	...	
	2008	2	1	...	...	...	
	2009	...	1	...	...	...	
24	<b>Shree Mangesh Enterprises(Marine) Pvt. Ltd</b>						
	2007	1	...	88470	...	...	
	2008	1	...	790	...	...	
	2009	1	...	790	...	...	
25	<b>Sai Waterways Pvt. Ltd</b>						
	2007	2	...	3829	...	...	
	2008	2	...	3829	...	...	
	2009	2	...	3829	...	...	
26	<b>Rashmi Ore Carriers Pv t. Ltd.</b>						
	2007	1	...	1314	...	...	
	2008	1	...	1314	...	...	
	2009	1	...	1314	...	...	
27	<b>Goa Ore Carriers</b>						
	2007	...	...	...	...	...	
	2008	3	...	3200	...	...	
	2009	3	...	3200	...	...	
28	<b>M. N. Shipping</b>						
	2007	...	...	...	...	...	
	2008	1	...	1177	...	...	
	2009	1	...	1177	...	...	
29	<b>Kothari Overseas Private Limited</b>						
	2007	1	...	1277	...	...	
	2008	1	...	1893	...	...	
	2009	1	...	1893	...	...	

Table No. 5.1  
(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 GR (Tonnes)	Passenger (No.)		
1	2	3	4	5	6	7	
30	<b>Mayur Shipping Private Limited</b>						
	2007	1	-	1179	...	...	
	2008	1	...	1179	...	...	
	2009	1	...	1179	...	...	
31	<b>Cabral &amp; Co. Pvt. Limited</b>						
	2007	1	-	1073	...	...	
	2008	...	...	...	...	...	
	2009	...	...	...	...	...	
32	<b>Vaibhavi Shipping Pvt.Ltd.</b>						
	2007	9	...	19120	...	...	
	2008	9	...	19050	...	...	
	2009	9	...	19050	...	...	
33	<b>Vaishnavi Shipping Co. Pvt.Ltd.</b>						
	2007	...	...	...	...	...	
	2008	1	...	1232	...	...	
	2009	1	...	1232	...	...	
34	<b>Vasco Ore Carriers</b>						
	2007	...	...	...	...	...	
	2008	1	...	49327	...	...	
	2009	1	...	53160	...	...	

(a) Includes one tanker & one Launch

(b) Excludes capacity of one tanker of 150 KL.

(c) Includes 3 oil tanker & 21 Twin Screw Tugs for 2007, 3 Oil Tankers & 5 Twin Screw Tugs for the year 2008 and 2 oil Tankers 4 Twin Screw tugs for the year 2008-9

(d) Passenger vessels can carry Cargo also.

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

**Table No. 5.2 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 (Tonnes)	Tonnes Kms (millions)	Passenger (No.)	Passenger Kms
1	2	3	4	5	6	7	8	9	10
<b>1 S. V. Salgaocar, Goa</b>									
	2007	Cargo	3	35	783.36	1224000	42.84	...	...
	2008	Cargo	4	35	794.22	1214400	42.50	...	...
	2009	Cargo	4	35	840.48	1236000	43.26	...	...
<b>2 D. V. Salgaocar, Goa</b>									
	2007	Cargo	3	35	803.32	1255200	43.93	...	...
	2008	Cargo	4	35	803.63	1228800	43.00	...	...
	2009	Cargo	4	35	801.31	1178400	41.24	...	...
<b>3 V.M.Salgaocar Sales International</b>									
	2007	Cargo	2	35	537.60	840000	29.40	...	...
	2008	Cargo	2	35	538.37	823200	28.81	...	...
	2009	Cargo	2	35	442.27	650400	22.76	...	...
<b>4 V.S.Dempo &amp; Co. Pvt. Ltd., Goa</b>									
	2007	Cargo	4	273	(a)	803583	219.37	...	...
	2008	Cargo	3	273	(a)	739198	201.80	...	...
	2009	Cargo	3	273	(a)	797337	217.67	...	...
<b>5 Sesa Goa Ltd. Goa.</b>									
	2007	Cargo	15	90	...	3997479	359.77	...	...
	2008	Cargo	16	100	88.48	485048	48.50	...	...
	2009	Cargo	16	100	123.40	6199713	620.00	...	...
<b>6 Sociedade De Fomento Ind. Ltd., Goa</b>									
	2007	Cargo	2	110	(a)	444393	48.88	...	...
	2008	Cargo	2	110	(a)	539652	59.36	...	...
	2009	Cargo	2	110	(a)	642995	70.73	...	...
<b>7 C.I.W.T.C., Kolkata.</b>									
	2007	Cargo/Tug/Spcs/Dbs	42	8360	578.46	220322	1841.89	...	...
	2008	Cargo/Tug/Spcs/Dbs	266	7896	405.34	200374	158.22	...	...
	2009	Cargo/Tug/Spcs/Dbs	94	7448	409.50	74070	53.86	...	...
<b>8 Indo-Swiss Trading Co.Pvt. Ltd., Kolkata</b>									
	2007	Pass.	2	1	91.70	...	...	2292000	...
	2008	Pass.	2	1	95.66	...	...	239200	...
	2009	Pass.	2	1	95.15	...	...	2378000	...
<b>9 VIVADA Inland Waterways Ltd., Kolkata</b>									
	2007	Cargo/Tug/Pass/LCT	13	...	1776.00	690000	...	14000	...
	2008	Cargo/Tug/Pass/LCT	15	...	2025.00	544000	...	15850	...
	2009	Cargo/Tug/Pass/LCT	16	...	2534.23	362600	...	32020	...
<b>10 W. Bengal Surface Transport Corporation Ltd., Kolkata</b>									
	2007	Pass./LCT	23	...	601.47	9720 (b)	...	17000000	...
	2008	Pass./LCT	30	...	615.10	9810 (b)	...	6300000	...
	2009	Pass./LCT	30	...	676.41	11770 (b)	...	6930000	...

Table No. 5.2  
(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 (Tonnes)	Tonnes Kms (millions)	Passenger (No.)	Passenger Kms
1	2	3	4	5	6	7	8	9	10
11	Hooghly Nadi Jalapath Paribahan Samabaya Samity, Kolkata								
	2007	Pass.	41	...	927.48	...	...	24058000	...
	2008	Pass.	41	...	981.30	...	...	23867000	...
	2009	Pass.	45	...	982.42	...	...	23900000	...
12	West Bengal Tourism Development Corpn. Ltd., Kolkata								
	2007	Pass.	3	...	96.08	...	...	9100	...
	2008	Pass.	3	...	110.77	...	...	11250	...
	2009	Pass.	3	...	115.16	...	...	10530	...
13	Eastern Navigation (P) Ltd., W. Bengal, Kolkata								
	2007	Cargo/Tug/Pass.	5	...	61.90	10200	...	5800	...
	2008	Cargo/Tug/Pass.	7	...	71.50	...	...	5850	...
	2009	Cargo/Tug/Pass.	9	...	108.30	...	...	...	...
14	Pradeep Boating Company, W. Bengal, Kolkata								
	2007	Tugs	2	...	5.00	10000	...	...	...
	2008	Tugs	2	...	94.25	23112	...	...	...
	2009	Tugs	2	...	103.55	25425	...	...	...
15	Government of W. Bengal Tourism Department, Kolkata								
	2007	Pass.	1	...	...	...	...	...	...
	2008	Pass.	1	...	...	...	...	...	...
	2009	Pass.	1	...	...	...	...	...	...
16	Hindustan Petroleum Corpn. Ltd. Budge-Budge, W. Bengal								
	2007	Tug	1	...	33.55	24960	...	...	...
	2008	Tug	1	...	32.00	19200	...	...	...
	2009	Tug	1	...	33.50	20700	...	...	...
17	K. S. Singhee								
	2007	...	2	...	7.20	...	...	...	...
	2008	Tug/Others	2	...	7.50	...	...	...	...
	2009	...	...	...	...	...	...	...	...
18	Costa River Transport Pvt. Ltd. Goa								
	2007	Cargo	3	130	1411.75	2207582	286.98	...	...
	2008	Cargo	3	130	1411.75	2207582	286.98	...	...
	2009	Cargo	3	130	1541.38	2340754	304.29	...	...
19	Ghatal steam Navigation (P) Ltd. Kolkata								
	2007	Pass.	3	...	22.45	...	...	1994000	...
	2008	Pass.	3	...	22.33	...	...	2545500	...
	2009	Pass.	3	...	2.32	...	...	131500	...
20	Diamond Harbour Municipality, Kolkata								
	2007	Pass.	6	...	4.23	...	...	244100	...
	2008	Pass.	7	...	1.55	...	...	881170	...
	2009	Pass.	6	...	9.45	...	...	230010	...
21	Karya Autota Pvt. Ltd., Kolkata								
	2007	Cargo/Pass.	5	...	33.30	...	...	...	...
	2008	Cargo/Pass.	4	...	7.00	...	...	...	...
	2009	Cargo/Pass.	...	...	...	...	...	...	...
22	Chandan Nagar Municipality, Kolkata								
	2007	Pass.	3	...	4.07	...	...	1215500	...
	2008	Pass.	3	...	4.71	...	...	1148000	...
	2009	Pass.	5	...	8.51	...	...	810000	...

Table No. 5.2  
(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 (Tonnes)	Tonnes Kms (millions)	Passenger (No.)	Passenger Kms
1	2	3	4	5	6	7	8	9	10
23	<b>Jain Navigation</b>								
	2007	Tugs/Pass	3	...	7.05	4100	...	...	...
	2008	Tugs/Pass	3	...	25.00	4100	...	...	...
	2009	Tugs/Pass	1	...	19.00	...	...	...	...
24	<b>Shree Mangesh Enterprises(Marine)Pvt. Ltd.</b>								
	2007	Cargo	1	60	77.38	126000	7.56	...	...
	2008	Cargo	1	60	73.25	113856	6.83	...	...
	2009	Cargo	1	60	80.69	122236	7.33	...	...
25	<b>Sai Waterways Pvt. Ltd.</b>								
	2007	Cargo	2	60-75	1.08	215400	14.53	...	...
	2008	Cargo	2	60-75	1.08	215400	14.53	...	...
	2009	Cargo	2	60-75	1.08	215400	14.53	...	...
26	<b>Rashmi Ore Carriers Pvt. Ltd.</b>								
	2007	Cargo	1	45	115.51	165263	7.43	...	...
	2008	Cargo	1	45	151.08	234896	10.50	...	...
	2009	Cargo	1	45	158.73	208000	9.36	...	...
27	<b>Goa Ore Carriers</b>								
	2007	...	...	...	...	...	...	...	...
	2008	Cargo	3	45	714.00	1020000	45.90	...	...
	2009	Cargo	3	45	714.00	1020000	45.90	...	...
28	<b>M.N. SHIPPING</b>								
	2007	...	...	...	...	...	...	...	...
	2008	Cargo	1	60-70	176.32	269582	17.52	...	...
	2009	Cargo	1	60-70	155.52	248034	16.12	...	...
29	<b>Kothari Overseas Private Limited</b>								
	2007	Cargo	1	60	111.82	192222	11.53	...	...
	2008	Cargo	1	...	110.00	170000	...	...	...
	2009	Cargo	1	...	77.00	117300	...	...	...
30	<b>Mayur Shipping Pvt. Limited</b>								
	2007	Cargo	1	45	136.88	145227	6.53	...	...
	2008	...	...	...	...	...	...	...	...
	2009	Cargo	1	45	127.36	190919	8.59	...	...
31	<b>Cabral &amp; Co. Ltd.</b>								
	2007	Cargo	1	50	134.26	208000	10.40	...	...
	2008	...	...	...	...	...	...	...	...
	2009	Cargo	...	...	...	...	...	...	...
32	<b>Vaibhavi Shipping Pvt. Ltd.</b>								
	2007	Cargo	9	80	1000.00	3000000	240.00	...	...
	2008	Cargo	9	80	1050.00	3500000	280.00	...	...
	2009	Cargo	9	80	1100.00	3650000	292.00	...	...
33	<b>Vaishnavi Shipping Co. Pvt. Ltd.</b>								
	2007	...	...	...	...	...	...	...	...
	2008	Cargo	1	60-70	149.63	1421657	92.40	...	...
	2009	Cargo	1	60-70	146.00	229846	14.94	...	...
34	<b>Vasco Ore Carriers</b>								
	2007	...	...	...	...	...	...	...	...
	2008	...	...	...	...	...	...	...	...
	2009	...	...	...	...	...	...	...	...

(a) : Vessels used for captive purpose.

(b) : Data relates to No. of vehicles carried.

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

## **SECTION – 6**

**PLAN-WISE OUTLAY &  
EXPENDITURE FOR IWT  
SECTOR**

Table No. 6.1

**Inland Water Transport - Plan Outlay and Expenditure -  
Central Sector (Central and Centrally Sponsored Schemes)**

(Rs.in Lakh)

Plan	Central Schemes		Centrally Sponsored Schemes		Total	
	Outlay	Expenditure	Outlay	Expenditure	Outlay	Expenditure
1	2	3	4	5	6	7
<b>First Plan</b>						
(1951-56)	-	33.00	-	-	-	33.00
<b>Second Plan</b>						
(1956-61)	143.32	72.34	-	-	143.32	72.34
<b>Third Plan</b>						
(1961-66)	438.10	126.62	322.00	125.71	760.10	252.33
<b>Annual Plan</b>						
1966-67	164.52	54.09	32.62	27.62	197.14	81.71
1967-68	192.40	299.07	33.65	27.98	226.05	327.05
1968-69	98.86	...	31.00	...	129.86	130.00
<b>Fourth Plan</b>						
(1969-74)	500.00	369.89	400.00	303.91	900.00	673.80
<b>Fifth Plan</b>						
(1974-79)	1392.18	685.82	1100.00	508.86	2492.18	1194.68
<b>Annual Plan</b>						
1979-80	714.30	190.00	242.70	24.00	957.00	214.00
<b>Sixth Plan</b>						
(1980-85)	4117.00	3821.00	383.00	84.00	4500.00	3905.00
<b>Seventh Plan</b>						
(1985-90)	14167.00	12892.00	1333.00	293.00	15500.00	13185.00
<b>Annual Plan</b>						
1990-91	5385.00	1385.00	315.00	58.00	5700.00	1443.00
1991-92(RE)	4748.00	882.00	252.00	150.00	5000.00	1032.00
<b>Eighth Plan</b>						
(1992-97)	23285.00	6241.00	715.00	153.00	24000.00	6394.00
<b>Ninth Plan</b>						
(1997-2002)	38322.00	21670.00	938.00	856.00	29260.00	22526.00
<b>Tenth Plan</b>						
(2002-2007)	88300.00	-	2000.00	-	90300.00	-
2002-03	8690.00	7831.00	300.00	-	8990.00	7831.00
2003-04	8868.00	8147.00	1000.00	985.00	9868.00	9132.00
2004-05	12557.00	5796.00*	2000.00	1598.00	14557.00	7394.00*
2005-06	13500.00	6551.00	1500.00	1500.00	15000.00	8051.00
2006-07(P)	13300.00	8839.00	1700.00	1200.00	15000.00	10039.00

(P) : Provisional

\*: Amount released by the Ministry of Shipping RT&amp;H upto Dec. 2004

Source : Planning Commission, Government of India and Ministry of Shipping, RT&amp;H, Government of India

**Table No. 6.2**

**State Plan Outlay & Expenditure under the Head of Development  
titled "Inland Water Transport"**

(Fig. in Rs. Lakh)

<b>Sl. No.</b>	<b>Name of the State</b>	<b>Plan Outlay (2002-07)</b>	<b>2005-06 (Expd)</b>	<b>2006-07 (Expd)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Andhra Pradesh	100	-	-
2	Arunachal Pradesh	...	...	41.89
2	Assam	1600	262.00	209.57
3	Bihar	...	...	...
4	Goa	800	124.95	112.88
5	Himachal Pradesh	15	10.88	0.86
6	Jammu & Kashmir	1160	197.86	-
7	Karnataka	4797	47.57	-
8	Kerala	7000	487.62	258.46
9	Maharashtra	1000	183.37	257.12
10	Mizoram	47	5.00	32.45
11	Orissa	120	31.51	2.39
12	Tamil Nadu	...	...	...
13	Uttar Pradesh	10	...	...
14	West Bengal	2569	964.63	483.00
15	Lakshadweep	...	2458.09	...
All States/Uts		19218	4773.48	1398.62

Source : Planning Commission, Government of India.

# **SECTION – 7**

## **INLAND WATERWAYS'**

## **TRANSPORT ACCIDENTS**

**Table No. 7.1 No. of Accidents, Persons Injured And Killed by Drowning  
(Boat Capsize) in States with IWT operations During 2008.**

SI. No.	State/UT	No. of Accidents	Drowning (Boat Capsize)					
			No. of Persons Injured			No. of Persons Killed		
1	2	3	4	5	6	7	8	9
<b>STATES</b>								
1	Andhra Pradesh	12	0	0	0	12	8	20
2	Arunachal Pradesh	0	0	0	0	0	0	0
3	Assam	67	0	2	2	45	22	67
4	Bihar	55	7	1	8	45	17	62
5	Chhattisgarh	14	0	0	0	9	5	14
6	Goa	0	0	0	0	0	0	0
7	Gujarat	37	5	1	6	36	2	38
8	Haryana	12	0	0	0	7	5	12
9	Himachal Pradesh	0	0	0	0	0	0	0
10	Jammu & Kashmir	0	0	0	0	0	0	0
11	Jharkhand	3	0	0	0	1	2	3
12	Karnataka	29	0	0	0	29	0	29
13	Kerala	15	0	0	0	12	3	15
14	Madhya Pradesh	337	2	0	2	244	91	335
15	Maharashtra	6	0	0	0	16	20	36
16	Manipur	0	0	0	0	0	0	0
17	Meghalaya	3	0	0	0	3	1	4
18	Mizoram	0	0	0	0	0	0	0
19	Nagaland	0	0	0	0	0	0	0
20	Orissa	27	0	0	0	26	11	37
21	Punjab	63	0	0	0	54	9	63
22	Rajasthan	2	0	0	0	11	1	12
23	Sikkim	0	0	0	0	0	0	0
24	Tamil Nadu	16	1	0	1	45	6	51
25	Tripura	1	0	0	0	2	0	2
26	Uttar Pradesh	127	27	12	39	84	59	143
27	Uttarakhand	11	0	0	0	18	1	19
28	West Bengal	7	0	0	0	5	6	11
<b>Total (States)</b>		<b>844</b>	<b>42</b>	<b>16</b>	<b>58</b>	<b>704</b>	<b>269</b>	<b>973</b>
<b>UNION TERRITORIES</b>								
29	A&N Island	0	0	0	0	0	0	0
30	Chandigarh	0	0	0	0	0	0	0
31	D&N haveli	0	0	0	0	4	0	0
32	Daman & Diu	1	0	0	0	1	0	4
33	Delhi	2	0	0	0	0	1	2
34	Lakshadweep	0	0	0	0	0	0	0
35	Pondicherry	0	0	0	0	0	0	0
<b>Total (UTs)</b>		<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>
<b>Total States/UTs</b>		<b>847</b>	<b>42</b>	<b>16</b>	<b>58</b>	<b>709</b>	<b>270</b>	<b>979</b>

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

Source : Accidental Deaths & Suicides in India - 2008

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

# **SECTION – 8**

## **INLAND WATERWAYS IN SELECTED COUNTRIES**

Table No. 8.1

**Length of Navigable Inland Waterways in  
Europe and USA in 2003 & 2004**

(In Kms.)

Sl. No.	Country	Canals		Rivers and Lakes		Total	
		2003	2004	2003	2004	2003	2004
1	2	3	4	5	6	7	8
1	Albania	...	...	...	...	...	...
2	Austria	—	—	351	351	351	351
3	Belgium	875	875	641	641	1516	1516
4	Bulgaria	—	—	470	470	470	470
5	Croatia	—	—	720	804	720	804
6	Czech. Republic	39	39	625	625	664	664
7	Estonia	—	—	320	320	320	320
8	Finland	125	125	7759	7893	7884	8018
9	France	3715	3693	1669	1679	5384	5372
10	Germany	1620	2379	5089	5186	6636	7565
11	Hungary	121	166	1319	1273	1440	1439
12	Kazakhstan	—	—	4032	...	4032	...
13	Kyrgyzstan	—	—	460	...	460	...
14	Lithuania	1	1	289	289	290	290
15	Poland	331	331	3312	3307	3643	3638
16	Moldova	—	—	42	42	42	42
17	Netherlands	...	3509	...	3086	...	6595
18	Romania	132	132	1647	1647	1779	1779
19	Russian Federation	...	...	...	...	101679	101679
20	Serbia and Montenegro	...	342	...	1077	...	1419
21	Slovakia	39	39	134	134	173	173
22	United Kingdom	155	155	910	910	1065	1065
23	United States of America	...	...	...	...	42000	...

Source: Annual Bulletin of Transport Statistics for Europe &amp; North America, 2008 (UN Publication).

Table No. 8.2

**Length of Navigable Waterways By  
Permissible Carrying Capacity of Vessels - 2004**

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
<b>1</b>	<b>Albania</b>								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	351	...	...	...	...	...	...	351
<b>2</b>	<b>Austria</b>								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
<b>3</b>	<b>Belgium</b>								
	Canals	875		150	245		217	48	200
	Rivers & Lakes	641	-	182	34	-	210	162	53
<b>4</b>	<b>Bulgaria</b>								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	470	...	...	...	...	...	...	470
<b>5</b>	<b>Croatia</b>								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	804	-	17	215	286	149	...	138
<b>6</b>	<b>Czec Republic</b>								
	Canals	39	...	...	...	...	...	...	39
	Rivers & Lakes	625	...	...	...	...	...	...	625
<b>7</b>	<b>Estonia</b>								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	320	...	...	...	...	...	...	320
<b>8</b>	<b>Finland</b>								
	Canals	125	9	...	...	16	...	100	...
	Rivers & Lakes	7893	4183	...	...	2909	...	801	...
<b>9</b>	<b>France</b>								
	Canals	3693	51	2796	-	225	31	13	577
	Rivers & Lakes	1679	13	421	165	-	-	219	861
<b>10</b>	<b>Germany</b>								
	Canals	2379	112	239	...	35	1403	391	109
	Rivers & Lakes	5186	386	734	90	227	830	1870	1049
<b>11</b>	<b>Hungary</b>								
	Canals	166	-	-	45	-	121	-	-
	Rivers & Lakes	1273	-	78	357	330	126	-	382

Table No. 8.2  
(Concl'd...)

**Length of Navigable Waterways By  
Permissible Carrying Capacity of Vessels-2004**

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
12	Kazakhstan*								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	4032	...	...	...	...	...	...	4032
13	Kyrgyzstan*								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	460	...	...	...	...	...	...	460
14	Lithuania								
	Canals	1	...	...	...	...	1	...	...
	Rivers & Lakes	289	...	...	...	289	...	...	...
15	Moldova								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	42	42	...	...	...	...	...	...
16	Netherlands								
	Canals	3509	1238	352	737	150	344	487	201
	Rivers & Lakes	3086	662	53	306	155	154	758	996
17	Poland								
	Canals	331	...	...	...	...	...	...	331
	Rivers & Lakes	3307	...	...	...	...	...	...	3307
18	Romania								
	Canals	132	...	...	40	...	33	27	32
	Rivers & Lakes	1647	...	...	53	274	819	233	268
19	Serbia and Montenegro								
	Canals	342	21	321	-	-	-	-	-
	Rivers & Lakes	1077	38	-	46	405	-	588	-
20	Slovakia								
	Canals	39	-	-	-	-	-	-	39
	Rivers & Lakes	134	-	-	-	-	-	134	-
21	Ukraine								
	Canals	...	...	...	...	...	...	...	...
	Rivers & Lakes	...	...	...	...	...	...	...	...
22	United Kingdom								
	Canals	155	...	...	...	...	...	...	155
	Rivers & Lakes	910	...	...	...	...	...	...	910

\* : Relates to 2003

Source : Annual Bulletin of Transport Statistics for Europe & North America-2008.

**Table No. 8.3 Inland Waterways vessels in Service at the end of 2004**

Sl. No.	Country	Self Propelled Vessels			D.& P. Vessels		Tugs and Pushers	
		Nos.	Carrying Capacity (Th.Tonnes)	Power (Th. KW)	Nos.	Carrying Capacity (Th.Tonnes)	Nos.	Power (Th. KW)
1	2	3	4	5	6	7	8	9
1	Albania	...	...	...	...	...	...	...
2	Austria	...	...	...	...	...	...	...
3	Belgium	1279	1298.00	...	244	453	...	...
4	Bulgaria	10	12.5	10.90	161	245.5	35	33.8
5	Croatia	5	3.00	3.00	121	76.00	59	16.00
6	Czec.Republic	75	66.39	31.76	227	126.33	152	50.80
7	Estonia	1	...	...	3	...	2	...
8	Finland	135	13.00	26.00	32	5.00	31	10.00
9	France	970	511.00	230.00	533	597.00	...	...
10	Germany	...	...	...	...	...	...	...
11	Hungary	135	42.00	62.00	113	...	37	27.00
12	Kazakhstan(a)	2	3.40	...	81	63.10	51	12.30
13	Kyrgyzstan(a)	8	0.60	...	10	...	4	...
14	Lithuania	30	9.90	5.50	27	18.60	19	4.00
15	Poland	93	45.50	22.60	494	237.40	257	68.00
16	Republic of Moldova	...	...	...	15	3.60	10	1.10
17	Romania	...	...	...	1661	2184.60	915	465.11
18	Serbia and Montenegro	72	68.00	25.00	468	510.00	141	77.00
19	Slovakia	27	20.50	13.30	204	301.10	46	46.20
20	Ukraine	...	...	...	...	...	...	...
21	United Kingdom	151	50.00	...	339	117.00	143	...
22	United States of America(a)	4834	1954.80	6036.70	26984.00	40027.90	3393	5363.20

D.& P. Vessels : Dumb & Pushed Vessels

(a): Relates to 2003

Source:Annual Bulletin of Transport Statistics for Europe and North America, 2008

Table No. 8.4

### Goods Transport by Type of Transport on National Territory - 2004

Sl. No.	Country	Goods carried ('000 Tonnes)			Transit	Tonne Kms. of Goods carried(Million)*				
		National	International			National	International		Transit	
			Loaded	Unloaded			Loaded	Unloaded		
1	2	3	4	5	6	7	8	9	10	
1	Albania	...	...	...	...	...	...	...	...	
2	Austria	191	1635	6072	1173	33	1017	6176	1548	
3	Belgium	35747	40712	66631	4146	3057	1528	3717	557	
4	Bulgaria	904	470	3033	...	40	56	602	...	
5	Croatia	493	114	925	...	49	9	121	...	
6	Czech-Republic	621	253	299	-	26	141	195	-	
7	Estonia	...	...	...	...	...	...	...	...	
8	Finland	492	...	...	...	118	...	...	...	
9	France	27500	16088	14394	9343	4163	1625	1526	1106	
10	Germany	55209	51367	105109	24175	11297	13413	23625	15333	
11	Hungary	39	2313	1859	3146	5	385	322	1192	
12	Kazakhstan	...	...	...	...	...	...	...	...	
13	Kyrgyzstan	...	...	...	...	...	...	...	...	
14	Lithuania	...	...	...	...	...	...	...	...	
15	Poland	5010	1832	386	1519	243	465	121	237	
16	Republic of Moldova	120	-	-	-	...	-	-	-	
17	Romania	12183	1500	793	124	2176	1318	714	82	
18	Russian Federation	104000@				71294#				
19	Serbia and Montenegro	2412	464	3429	3289	218	446	3369	5441	
20	Slovakia	106	2287	213	119	5	50	16	20	
21	Ukraine									
22	United Kingdom	2599	-	-	-	152	-	-	-	
23	United States of America	2662045	...	...	...	415819	...	...	...	

\* : Kilometers within the territory of the reporting country.

@: Total Goods Carried during 2003

#: Total Tonne Kms of goods carried during 2003

Source: Annual Bulletin of Transport Statistics for Europe and North America 2008

# **APPENDICES**

## DEFINITIONS OF TERMS USED

### 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).

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 Ammonia 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.