

# **EVALUATION OF ENVIRONMENTAL POLLUTION IN BANGLADESH BY INLAND SHIPPING OPERATION**

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**Department of Naval architecture and marine engineering  
Bangladesh University of Engineering and Technology  
Dhaka – 1000, Bangladesh**

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### EVALUATION OF ENVIRONMENTAL POLLUTION IN BANGLADESH BY INLAND SHIPPING OPERATION

A Thesis Submitted

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## NOTATIONS AND SYMBOLS

IWT – Inland Water Transportation

DOS – Department of Shipping

BIWTA – Bangladesh Inland Water Transport Authority

BIWTC - Bangladesh Inland Water Transport Corporation

GESAMP - Group of Experts on the Scientific Aspect of Marine Pollution

EQS - Environmental Quality Standard

MARPOL – Marine Pollution

MARPOL 73/78 - International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978

ISO – Inland Shipping Ordinance

LCA – Life Cycle Assessment

SimaPro – Computer Software for Life Cycle Assessment

Eco Indicator 99 (I) – Part of SimaPro for impact analysis

DALY - Disability Adjusted Life Years

PDF\*m<sup>2</sup>yr - Potentially Disappeared Fraction

MJ surplus - The surplus of energy required to extract the same amount of minerals

Pt - yearly environmental load of one

UBP- Environmental loading points

## **ABSTRACT**

The Inland Water Transportation is the major source of transportation in Bangladesh. Around ten thousand of different types of registered vessels and thousands of unregistered vessels are plying in inland routes. This sector carries over 50% of cargo, 80% of fuel-oil and one quarter of all passenger traffic per year. However, this huge no of vessels plying in inland routes made us vulnerable to significant marine pollution. The inland water ways are getting polluted by direct throwing of bilges, solid waste, oily water, and ballast water and also through air pollution due to running of engines and machineries.

In this thesis work, quantification of pollutants by inland shipping operation has been done. Four types of ships such as passenger vessels, cargo vessels, oil tankers and sand carriers have been taken for the study. Total discharges of bilges, solid waste, oily water, and ballast water have been approximated by collecting field data using standard statically method and also data from other available sources. It has been found that the quantity of pollutants discharged by cargo vessels are much higher than other vessels such as sand carriers, passenger vessels and oil tankers for inland shipping operation in Bangladesh.

To assess the impacts of pollutants, the environmental modeling has been done with the help of Eco Indicator 99 (I) of SimaPro. It has been revealed that there are considerable impacts of marine pollution on environment by inland shipping operation and the major consequences such as climate change, global warming, eutrophication, destruction of fishing zone, respiratory problems of human being, frequent cyclone and rise of sea level causing flooding in coastal zones and local air pollution have been studied in this thesis work. From the study, it is found that that the impact of pollutants discharged by oil tanker is much higher than the other vessels. Few preventive measures have been suggested in this thesis work in the light of design modification, regulatory enforcement and financial analysis to reduce the impact of marine pollutions by inland shipping operation in Bangladesh.

# **CHAPTER-1**

## **INTRODUCTION**

### **1.1 General Introduction**

1.1.1 Over two thirds of Earth's surface is covered by water; less than a third is taken up by land. As Earth's population continues to grow, people are putting ever-increasing pressure on the planet's water resources. In a sense, the oceans, rivers, and other inland waters are being "squeezed" by human activities—not so they take up less room, but their quality is reduced. The problem of pollution has been spreaded due to industrialization around the globe. According to the environmental campaign organization, "Pollution from toxic chemicals threatens life on this planet. Every ocean and every continent, from the tropics to the once-pristine polar regions, is contaminated."

1.1.2 The term 'pollution' describes the occurrence and inputs of wastes and the impact of these wastes on the environment. On the other hand, as per GESAMP (United Nations Group of Experts on the Scientific Aspect of Marine Pollution) [1] —"marine pollution" is defined as —the introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries) resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water and reduction of amenities".

1.1.3 There are two different ways in which marine pollution can occur; firstly from the land based discharges and secondly from ship borne discharges (includes the accidental spillage of oil or chemicals). As per GESAMP, the sources of marine pollution are maritime transport & dumping (22%), run off & land based discharge (44%), atmosphere (33%), offshore production (1%) [2]. From the above statement, it is quite clear that the land based discharges are quite higher than the pollution occurred by maritime transportation. The vessel source marine pollution by inland transportation system of Bangladesh has been focused in the present study and termed as the environment pollution. The identification and its prevention are an important issues for the world in present days.

1.1.4 In Bangladesh, various industries established near the bank of rivers as well as huge no of inland water vessels are operating through the rivers. Around ten thousand various types of inland vessels are operating in different routes of the country. The number is likely to increase every year due to poor condition and huge

traffic on roads. The illegal/accidental discharges i.e. grease, oil, bilge, garbage etc from ships are causing a severe marine pollution. To find out the pollution status at river, the experts are working for last several years. They have collected the samples of water and found the presence of serious marine pollution [2]. The maximum values of chemical oxygen demand, bio-chemical oxygen demand, total dissolved solids, total solids have found 5 to 6 times greater than the environmental quality standard (EQS) values, on the other side, the minimum value of dissolved oxygen have found 4 times smaller than EQS value, which indicates the deterioration of water quality at investigated areas. Experts also analyzed the trace metals (Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Zn) contamination at river water, because it is also other vital factor to pollute the marine environment. The result is that the contaminations of some trace metals have been exceeded too much higher than the acceptable values, which also shows another danger signal of river pollution.

1.1.5 Marine pollution has significant impact on climate change. Two recent key reports – The Intergovernmental Panel on Climate Change's [Fifth Assessment Report](#) and World Bank's Turn Down the Heat [3] and [4] reveal long-term implications for [Bangladesh](#) and its people from probable catastrophic impacts of climate change. Both paint a very dismal scenario of the future as climate change continues to take its toll. The earth faces a temperature rise of at least 2 degrees Celsius above pre-industrial levels requiring firm and coordinated action to benefit all countries. This was not the only bad news. The recently released sixth annual Climate Change Vulnerability Index, (Maplecroft) revealed that Bangladesh would feel the economic impacts of climate change most intensely and that our capital Dhaka would be one of the five *most climate vulnerable cities in the world*. *Earlier the people were ignorant about the marine pollution and climate change which has changed significantly in last few years. World has become quite concern about the issue, developed countries are inviting support to prevent the causes of climate change, lots of steps have been taken to increase the public awareness. So it is the best time to take all possible measures to prevent the causes of climate change as well as the marine pollution in Bangladesh.*

1.1.6 There is no easy way to solve environmental pollution; if there were, it wouldn't be so much of a problem. Broadly speaking, there are three different things that can help to tackle the problem—education, laws, and economics—and they

work together as a team [5]. Making people aware of the problem is the first step to solve the problem. Environmental laws can make it tougher for people to pollute, but to be really effective they have to operate across national and international borders [6]. However, most of the environmental experts agree that the best way to tackle pollution is through something called the polluter pays principle.

1.1.7 A number of measures have been taken by the world community to reduce the environmental pollution including water pollution by shipping operation. Sewage treatment plant, Ballast water treatment plant, Fuel-oil centrifuge and tanks for dirty or burnout fuel oil have been introduced on board ships to reduce ship borne marine pollution. Moreover, improved technology and various innovations have resulted in cleaner and greener ships. New methods have emerged for combating large accidental oil spills. Many countries have set up contingency plans and disaster management organizations. New marine safety laws have been introduced and their implementation has been tightened world over.

## 1.2 **Present state of the problem.**

1.2.1 Bangladesh is a riverine country with a network of huge no of rivers, canals, creeks and water bodies, which are occupying about 11 per cent of the total area of the country. Since long the river network has been regarded as safe and cost-effective route in Bangladesh. The inland waterways comprise a total length of nearly 6000 Km of navigable waterways. More than half of the country's total land area is within a distance of 10 Km from navigable waterway. Due to cheapest, safest and reachable means the IWT (Inland Water Transportation) sector has become the major means of transportation of the country. For that a huge number of different types of vessels are plying in inland routes. The IWT sector carries over 50% of all arterial freight traffic and one quarter of all passenger traffic each year which clearly defines the dependency on this sector [1] and [2].

1.2.2 The dependency on IWT sector increased the total number of vessels and this demand is likely to increase considerably in the coming years, largely because of poor condition and huge traffic on road, the increasing demand for freight transport and the expected increase in personal mobility. This huge no of vessels plying in inland routes made us vulnerable to significant marine pollution. The inland water ways are getting polluted by discharging of bilges, solid waste, oily water, and ballast water into the water and also through air pollution due to running of engines [5].

1.2.3 On the other hand, now a days climate change issues have become major concern throughout the world and Bangladesh is one of the most vulnerable countries to experience worst impact of climate change. The major consequences of marine pollution are global warming, acid rain, eutrophication, destruction of fishing zone and local air pollution. Low-lying coastal regions of Bangladesh are vulnerable to sea level rise and increased occurrence of intense, extreme weather conditions such as the cyclones from 2007 to 2009. In most countries like Bangladesh, yields from rain fed agriculture could be reduced to 50% by 2020 [7] and [8]. However, the possible source of environmental impact is very important to understand the level of mitigation. But unfortunately no such level of study or data has been done so far accounting inland vessel source pollution, its impact and possible remedial measures etc.

1.2.4 This research is initially sought to find out the data of pollutants through field study, then quantification of pollutants (total discharge of bilges, oily water, solid waste and ballast water into the water as well as air pollution due to total fuel consumption) and followed by environmental modeling with the help of Eco Indicator 99 (I) of computer software SimaPro. Then the overall impacts of such pollutants from inland shipping operation has been assessed by damage oriented method of SimaPro through Exposure and effect analysis followed by Fate analysis [9]. Finally, the preventive measures and remedial actions to eradicate such pollutions by inland shipping operation including the financial impacts have been discussed.

### 1.3 **Objectives.**

From this perspective, the objectives of this study are as follows:

- a. To identify the types of pollutants (such as bilge, ballast water, solid waste, oily water and air pollution through fuel consumption) by inland vessels plying in inland routes of Bangladesh.
- b. To quantify the total pollutants discharged per year by inland vessels.
- c. To assess the impact of pollutants; quantification of the damage to human health and damage to echo system quality.
- d. To identify the ways out to reduce the pollution and its economic impact of implementing suggested remedies.

### 1.4 **Possible Outcome.**



The possible outcomes of the study are as follows:

- a. Depicting the scenario of marine pollution of Bangladesh by inland shipping operation.
- b. Development of environmental model for different sizes and types of ships operating in inland waterways which causes damage to human health and ecosystem quality.
- c. Assessment of individual and overall environmental impact of marine pollution quantitatively by inland water vessels including preventive and remedial measures.

### 1.5 **Outline of Research Methodology**

The following general methodologies were used:

a. **Data Collection.** Primary data and information about marine pollution by different types of inland vessels of Bangladesh were collected through field study, interacting with questionnaires and interviews. The major information collected are as follows:

1. Physical dimensions of different types of inland vessels have been collected and these vessels have been categorized to find out the quantity of pollutants like bilges, oily water mixtures, ballast water etc. The principle data were collected from DOS, BIWTA, BPC, regional concerned offices and on ground survey analysis.
2. Engine power for different types of vessels has been ascertained from approved drawings, interviews with ship designers and builders as well as field data from operators.
3. Capacity plan along with hull shape section have been used to quantity of bilges and ballast water. The calculated quantities have been cross-checked with the field study of various vessels operating in inland routes.
4. Fuel tank was calibrated to find out hourly consumption of fuel. Moreover hourly fuel consumption has been ascertained from the field study, interviews with engine drivers of different types of vessels and ship operators log-books.

Secondary data and information has been also collected from other related private & government organizations.

- b. **Quantification of Ship borne Marine Pollutants.** The calculation of pollutants discharged such as Bilge, Ballast water, Solid waste & Oily water etc. from various types of inland vessels have been done basing on data analysis and field visit.
- c. **Modeling.** Environmental modeling has been done to quantify the emission of compounds and substances like SO<sub>x</sub>, NO<sub>x</sub>, NH<sub>3</sub>, CO<sub>2</sub> etc which causes damage to human health and ecosystem quality from calculated pollutants. Eco indicator 99 (i) v 2.04 (SimaPro) has been used for such modeling where the Buwal databases had its supporting role. SimaPro is the most widely used Life Cycle Analysis software (mostly used in UK, Japan, Europe and USA) which offers standardization as well as the ultimate flexibility so that the things can be done in own way. It has unique features such as parameterized modeling and interactive results analysis. It comes with a uniquely complete implementation of the world's leading database, Eco invent.
- d. **Impact of Marine pollutants.** Impact analysis has been done by Damage oriented method (Eco indicator 99 (I) version 2.04) of SimaPro. This is used to assess damage to human health by exposure and effect analysis followed by fate analysis. The impact or damage to ecosystem quality has also be identified. Three different methods namely Normalization, Weighting and Characterization have been used for finding out the impacts more accurately. Normalization is performed on damage category level. Weighting is performed at damage category level (endpoint level in ISO). A panel performed weighting of the three damage categories. For each perspective, a specific weighting set is available. The average result of the panel assessment is available as weighting set. In characterization, factors are calculated at end-point level (damage). The damage model for emissions includes fate analysis, exposure, effects analysis and damage analysis.
- e. **Impacts Comparison.** Comparison of impacts of marine pollution with and without preventive measures has been analyzed.
- f. **Ways outs & remedial measures.** Various preventive measures from the view of a naval architect including the design of ships, and it's financial and environmental impacts has been ascertained. At the end, some practical remedial measures for existing vessels of inland water

transportation have been suggested to overcome the adverse impacts of marine pollution in Bangladesh.

#### 1.6 **Research Limitations**

The research was undertaken within the following limitations:

- a. Information, data collection, document collection and review are the primary basis for this research. There are still few number of vessels which are not registered and so number of vessels studied in the present study, may vary from the actual cases.
- b. Few assumptions were made on practical experience & analysis due to non availability of information.
- c. For the thesis, only four types of vessels were considered as other vessels do not have significant discharge of pollutants.
- d. Survey and interviews were taken on limited number of experts.

#### 1.7 **Structure of the Thesis**

The thesis is divided into eight chapters. After the general introduction, an overview of the inland water transportation of Bangladesh is discussed. Then the data analysis and quantification of marine pollutants discharged by different types of vessels is done followed by the impact assessment of such pollutants. The report also includes the institutional set up and regulation to prevent marine pollution in Bangladesh, analysis of preventive measures of marine pollution and its financial impacts. At the end, a comparison of impacts of marine pollution with and without preventive measures is shown followed by conclusions and few recommendations to prevent marine pollutions in Bangladesh.

## **CHAPTER-2**

### **AN OVERVIEW OF THE INLAND WATER TRANSPORTATION SECTOR OF BANGLADESH**

2.1 **General**. In this chapter the inland water transportation sector of Bangladesh has been highlighted emphasizing on total number & types of vessel, river networks, river ports & landing facilities, major inland routes etc. This chapter has also described about different types of vessel source marine pollution in Bangladesh.

## 2.2 Inland Water Vessels of Bangladesh.

2.2.1 Inland water transportation (IWT) is recognized worldwide as more energy efficient than rail and even more so than road transport. Water transport is specially suited for the movement of bulk commodities over comparatively long distances. The inland waterways of Bangladesh play an important role in the transportation system of the country with vast network of inland waterways covering almost every part of the country. Moreover, the IWT is the cheapest mode of transportation of the country. Bangladesh is covered by a network of about 24,000 km of waterways, has a navigable network varying from 5968 km during the monsoon to 3865 km during the dry season [1]. Its inland water transport (IWT) continues to be an important mode of transport not only in the inland movement of freight and passengers but also in the transportation of import and export items through the ports of Chittagong and Mongla. The high degree of penetration of the IWT network provides access to about 25% of the rural household in Bangladesh.

2.2.2 The infrastructure problems on the inland waterways system are significant. Within Bangladesh there is high rate of siltation and bank erosion and as a result it is difficult for the vessels to navigate along these waterways. The condition of piers, jetties and other infrastructure is generally poor. There is a lack of storage facilities; cargo handling equipment and existing support craft such as pilot, mooring and survey boats. However, a large no different types of vessels, boats and trawlers are operating everyday in inland routes. There were total 9367 vessels registered under the Inland Shipping Ordinance (ISO) 1976 at the end of year 2013 comprising passenger vessel, cargo vessel, ferry, oil tanker, tug boat, fishing boat, sand carrier, dredger etc. The list of registered vessels is shown in table 2.1 below:

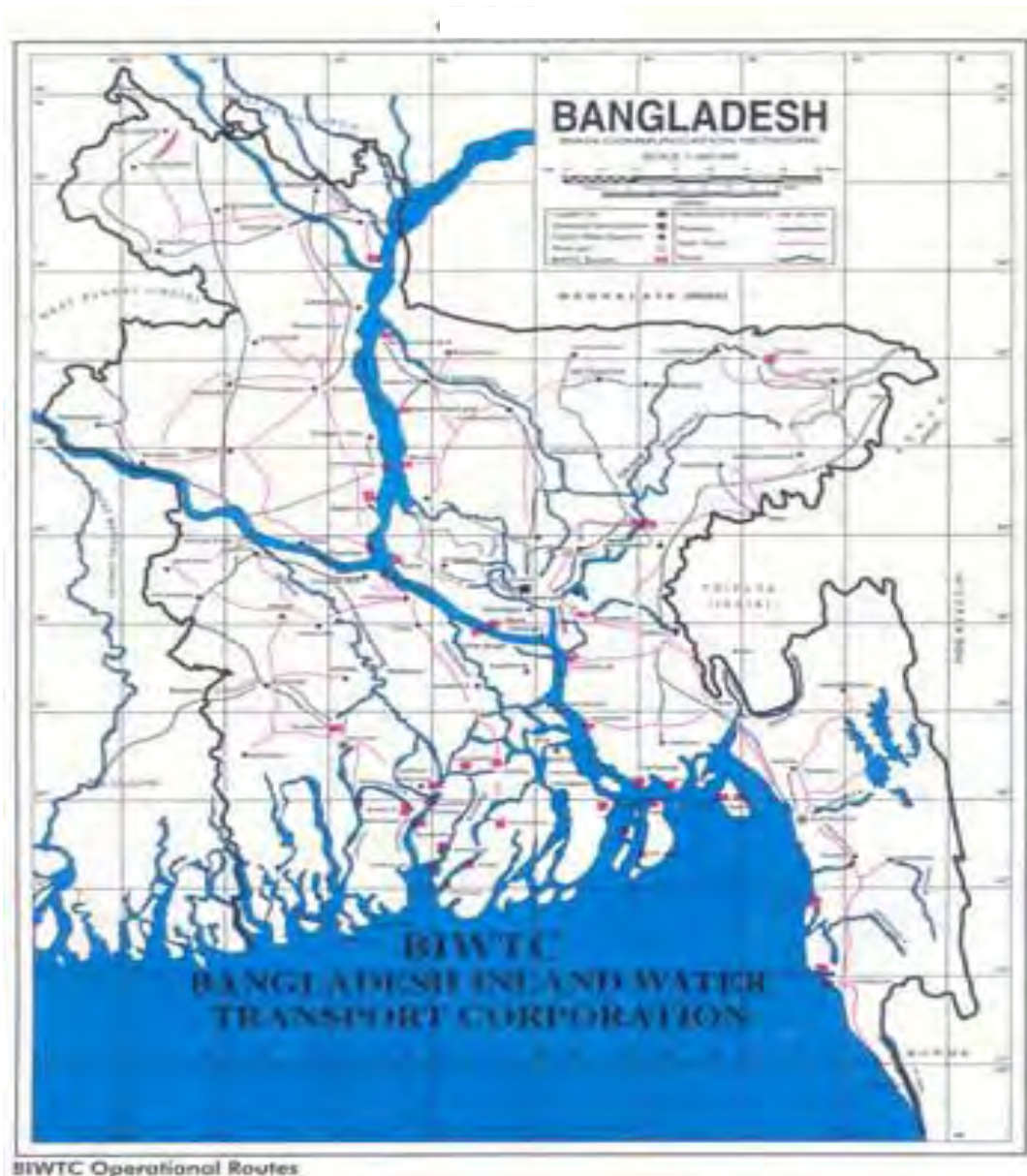
**Table 2.1: Vessels Registered with Department of Shipping under Inland Shipping Ordinance-1976**

Ser	Type of Vessel	Total Number of Vessels				
		Dec 09	Dec 10	Dec 11	Dec 12	Dec 13
1	Passenger Vessels	2162	2188	2209	984	1061
2	Cargo Vessels	2088	2217	2430	2048	2213

3	Ferry	94	96	99	27	27
4	Oil Tanker	160	175	190	210	260
5	Tug Boat	273	283	289	83	89
6	Dumb Barge	1674	1683	1725	202	216
7	Fishing Boat	70	70	70	-	-
8	Speed Boat	674	684	293	224	226
9	Inspection Boat	422	422	422	44	44
10	Sand Carrier	2893	3505	4175	3654	3411
11	Dredger	80	175	267	794	857
12	Others	718	776	840	398	563
<b>Total</b>		<b>11308</b>	<b>12275</b>	<b>13509</b>	<b>8668</b>	<b>9367</b>

### 2.3 River Networks of Bangladesh.

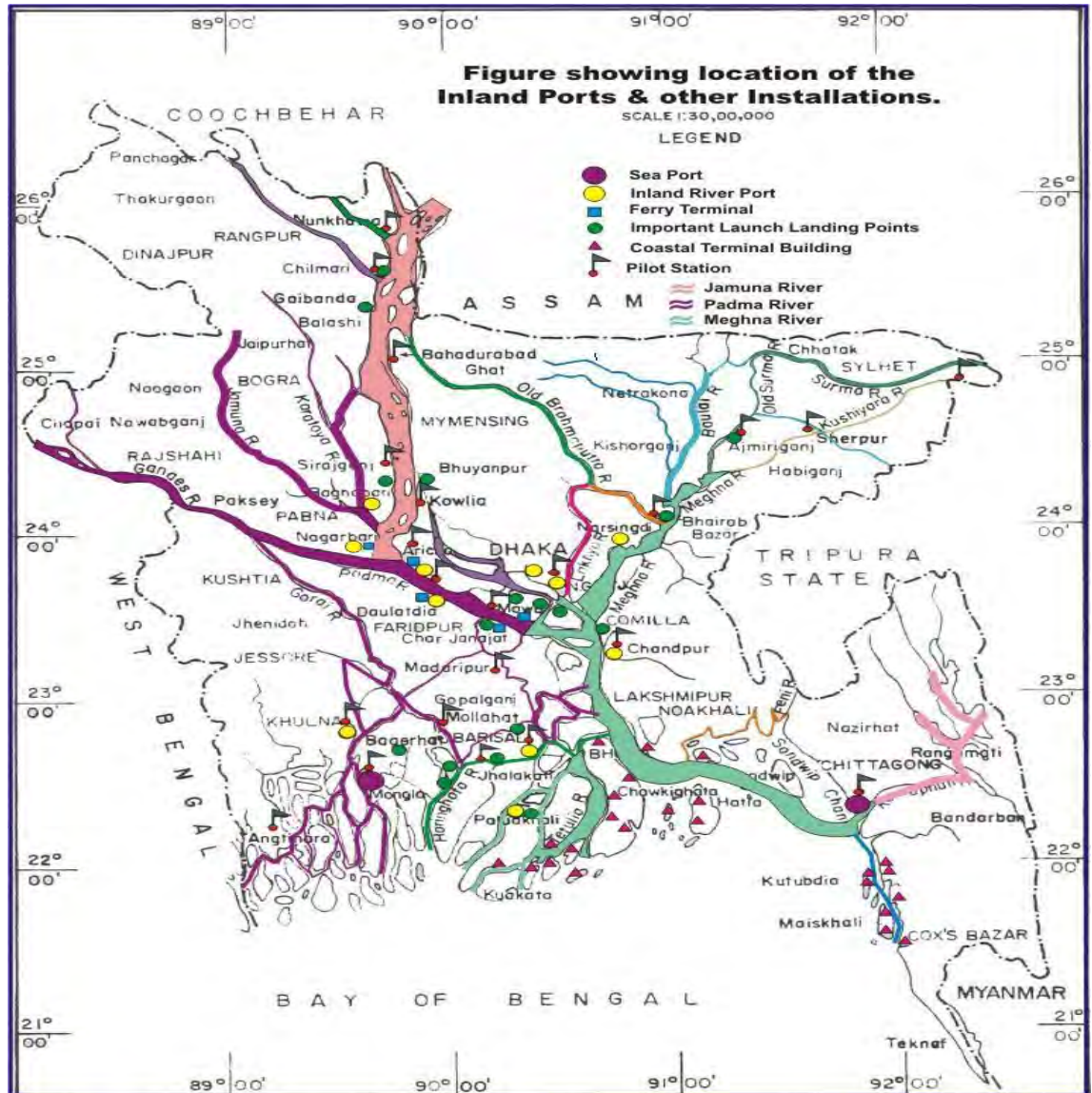
The river network (700 in number) of Bangladesh serves as the main source of principal arteries of commercial transportation. Inland water is widely used in carrying passengers, cargo, food, necessary items and goods, fishes etc. A recent study on "Revival of Inland Water Transport: Options and Strategies" [12] undertaken by World Bank suggests that unit cost of Bangladesh IWT is significantly lower than Road or the Railway. It is estimated that while road transport cost per ton km is Tk.4.5, on IWT it is Tk.0.98. Thus the river network plays a very important role in our country. However, the river network of inland water transportation is shown in Figure 2.1.



**Figure 2.1: River Network of Bangladesh**

**2.4 Inland Ports, Navigable Waterways and Major Oil Depots of Bangladesh.**

2.4.1 Inland ports and other facilities of Bangladesh include 11 major inland ports, 23 coastal island ports, 133 launch stations and more than 1,000 minor landing points located in rural areas. BIWTA and BIWTC give pilotage facilities to about 7,000 inland water vessels. They regulate the movement of about 2000 passenger launches and maintain 22 inland ports along with about 800 launch ghats including terminals. Location of inland ports and other installations are shown in Figure 2.2.



**Figure 2.2: Location of the Inland Ports and Other Installations**

2.4.2 **River Ports.** Considering the importance of waterways, BIWTA has developed a number of River ports, Ferry Ghats (Landing Stations), and Terminals. Due to infrastructure and navigability limitations, different sizes of vessels are plying in various routes. Two of the major ports, which handle maximum number of passengers, are: Sadarghat at Dhaka and Chandpur Terminal. But, unfortunately, no people or the government authorities were found concern about environmental pollution. Moreover the ports were found burdened with different problems which are mentioned below:

a. **Dhaka River Port.** This is the busiest of all the river ports in Bangladesh. Highest traffic is observed in the morning and evening. Major problems are:

(1) The size of the terminal is small compared to the vessels arriving at a time (70-80 vessels arrive on an average). It is difficult to manoeuvre the vessels safely within the narrow space and the vessels' hulls get damaged regularly.

(2) Due to shortage of space, the vessels are to approach with the bow (head) perpendicular to the jetty. This has resulted damage of both the vessel and the jetty or terminal shed on a number of occasions. No infrastructure was seen to handle marine pollution or vessel operated pollution, although it is the busiest port in Bangladesh.

b. **Chandpur Port.** Chandpur is one of the most important inland ports of Bangladesh. The major problems of the port are:

(1) The river port has no permanent jetty and terminal building. There is no safe landing place or permanent terminal for the passengers during wet weather.

(2) The pontoons placed for berthing vessels are not adequate and safe for the vessels. No infrastructure was seen to handle marine pollution or vessel operated pollution.

c. **Other River Ports.** For the sake of research works Barisal, Patuakhali, Khulna terminals have also been visited. The general condition of administration of these ports is not better than the major ports.

2.4.3 **Navigable waterways.** The navigable waterways are assigned to four classes that define the level of service to be guaranteed taking into account the economic importance of the river as well as the technical and financial capacity to maintain the level of service. The descriptions of classes of routes are as follows [1]:

a. **Class-I Route.** Routes comprising the perennial waterways where vessels up to 12-13 feet (3.65-4.0 m) draught can safely ply throughout the year



fall under this category. Most of the major accidents so far have occurred in these routes. Approximate length of the route is 685 Kms.

b. **Class-II Route.** The perennial routes where vessels having draught below 8 feet (2.44m) can ply are grouped under this class. Total length of this route is 1000 Kms, and there are many cases of major accidents of passenger vessels along these routes.

c. **Class-III Route.** The routes where vessels up to 6 (1.83 m) feet draught can ply fall under this class. Transit routes or feeder routes connected with Class-II and Class-I route fall under this category. The total length of the route is 1885 Kms.

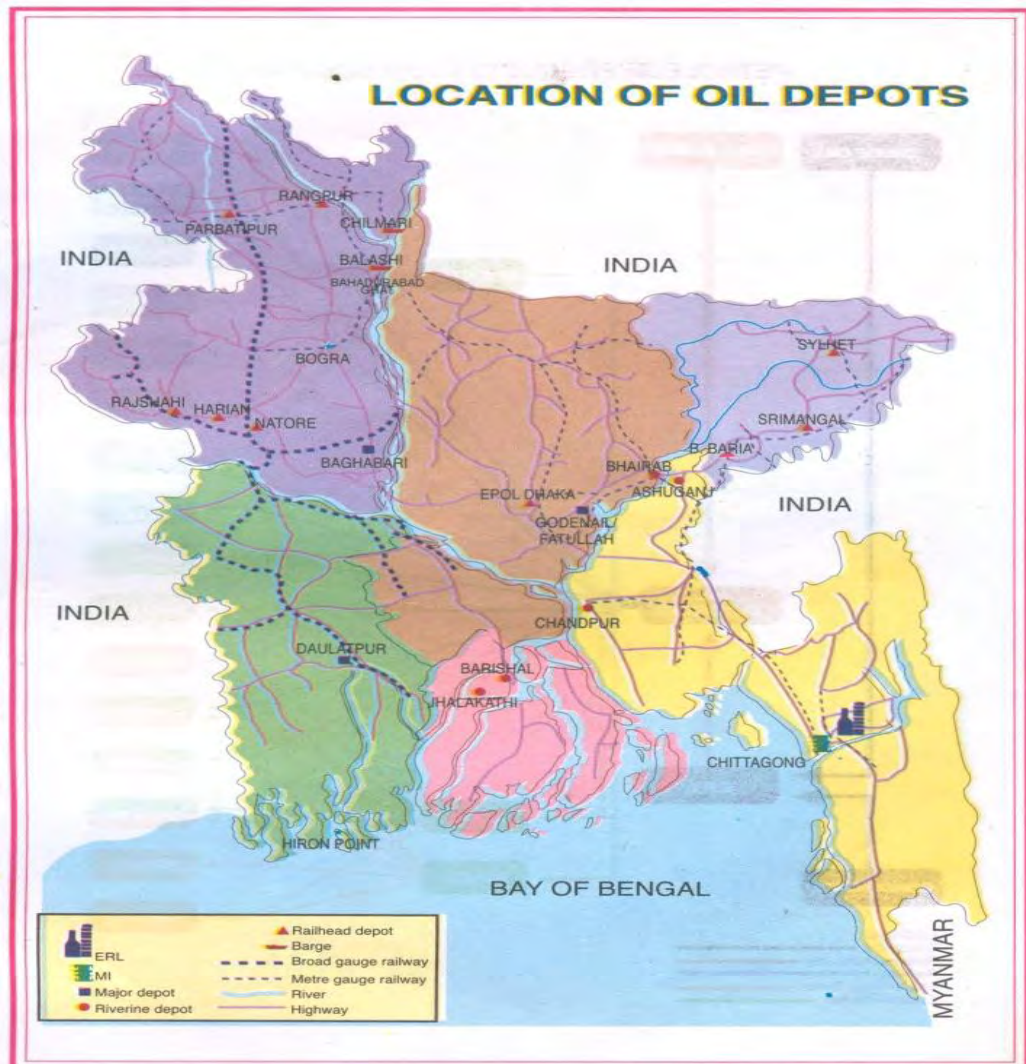
d. **Class-IV Route.** This type of route is only navigable during rainy season. During dry season, boats having draught less than 5 feet (1.52 m) can ply. Average length of such route is 2400 Kms.

Summary of the routes [1] is shown in Table 2.2

Class of Route	Draught (feet)	Length KM (% of Total)	Min Vertical clearances	Remarks
Class I	12-13	683 (12%)	18.30 m	Least Available Draft (LAD) of 3.6 m required to be maintained round the year.
Class II	<8	1000 (17%)	12.20 m	Links major inland ports or place of economic importance to class I routes
Class III	<6	1885 (32%)	7.62 m	Being seasonal in nature, it is not feasible to maintain higher LAD throughout the year
Class IV	<u>≤5</u>	2400 (40%)	5.00 m	These are seasonal routes where maintenance of LAD of 1.5m or more in dry season not feasible
Total		5968 (100%)		

2.4.4 **Major Oil Depots.** The oil depots are located at various places of the country. Major oil depots are located at Godnail, (Narayanganj), Daulatpur (Khulna), Fatullah

(Narayanganj) and Baghabari ([Pabna](#)). Medium-size depots are at Rangpur, Parbatipur (Dinajpur), Bhairab Bazar, Ashuganj, Srimangal, Dhaka, Chandpur, Barishal and [Jhalokati](#). Small depots are at Chilahati ([Kurigram](#)), Balasi ([Gaibandha](#)), Hariari ([Rajshahi](#)), [Natore](#), [Sylhet](#), Brahmanbaria. The map in Figure 2.3 below showing the location of major depots of Bangladesh:



**Figure 2.3: Location of Oil Depots of Bangladesh**

## **2.5 Vessel Source Environment Pollution in Inland Waterways**

2.5.1 The rivers and oceans have always been subject to human activities. To a varying extent, these activities have adverse impacts on the state of the marine environment. Detrimental environmental effects depend upon the nature of human interference with nature. Two types may broadly be distinguished: pollution and physical destruction. As far as threats to the marine environment are concerned, pollution is by far the more significant. Marine pollution must remain an elusive idea

without reference to the major substances that actually cause pollution. Many noxious or hazardous substances find their way into the river/sea from the ships as well as land based sources. The account is limited to those substances considered to be environmentally and toxicologically most significant, namely hydrocarbon compounds, persistent toxic substances, heavy metals, radioactive materials and nutrients. It should be kept in mind that very few substances are added to the river/sea in a chemically pure state, but most are part of complex liquid or gaseous solutions. Contamination, i.e. elevated concentrations of substances in flora or fauna, may only be labelled pollution if human-induced, because —“pollutant is a resource out of place.” Pollution, furthermore, requires substances to have a measurable adverse effect on the population of a certain species.

2.5.2 The types of pollution that may originate from ships include oil, chemicals, garbage, sewage, the emissions and the anti-fouling paint on a ship's hull. Marine pests in ship's ballast water or clinging to the ship's hull can also harm the new environments. In the breaking yards during breaking and scrapping the old ships on beaches in Bangladesh can cause pollution unless great care is taken. One of the major sources of marine environmental pollution in Bangladesh is the unregulated operation of a large number of vessels, operating for inland and merchant shipping. Pollution by shipping at the ports and at other marine areas has become common incident due to the lax applicable of laws and resource deficiencies of the concerned government departments of Bangladesh. For such operation of the vessels, the country has been exposed to massive pollution in the marine environment. Among the various sources of the pollution, the most dangerous and unexpected source of pollution of the marine environment in Bangladesh is the unregistered vessels that can pollute the environment but can't account as the sources and always be out of the count of the source of pollution and action.

2.5.3 Local shipping of Bangladesh especially the passenger ship, cargo ship, oil tanker and sand carrier are the major contributor of marine pollution in inland waterways of Bangladesh. There are basically two types of pollution; operational pollution (shown in Figure 2.4 as an example) and accidental pollution (shown in Figure 2.5 & 2.6 as an example). In operational pollution, the vessels may discharge bilges, ballast water, solid waste, sewage and emit different types of harmful gases & pollutants (the emission of CFCs, halons, volatile organic compounds and exhaust

gas emission from engines, Nox, Sox including CO<sub>2</sub> are the main concern). However, in case of accidental pollution, polluting substances are released due to collisions, contacts with external objects, groundings, explosion etc. Ships often carry large quantities of hazardous substances, fuel –oil etc in tankers, in case any accident may bring disaster for marine environment.



**Figure 2.4: Ship borne Marine Pollution in Bangladesh**

2.5.4 The most recent example of inland vessel accident is the accident of 'OT SOUTHERN STAR 7' on December 9, 2014 which was hit by 'MT Total' in the

Shela River of Sundarban, the world's largest mangrove forest. 'OT Southern Star 7' was carrying 357,664 litres of furnace oil to deliver for power plant in Gopalganj. About 350,000 litres of oil has already been spread which is really dreadful for the environment of Sundarbans. Environmentalists fear that it may seriously harm the flora and fauna of Sundarban because they will not get proper oxygen due to the oil on water surface.

2.6 **Summary.** Bangladesh is a riverine country and these rivers made us largely dependent on inland water transportation. Over ten thousands of registered vessels of different types are plying across the countries. There are 11 major inland ports, 23 coastal island ports, 133 launch stations and more than 1,000 minor landing points located in rural areas. Dhaka, Chandpur, Barisal, Patuakhali, Khulna etc are the major ports of the country with four classes of navigable waterways. Passenger vessels, cargo vessels, oil tanker and the sand carriers are the major transports of inland transportation. These inland transports pollute the marine environment discharging oil, chemicals, garbage, sewage, the emissions and the anti-fouling paint on a ship's hull. Moreover, the age old machineries of those inland vessels also cause air pollution. Accidental oil spillage also contributing as a source of ship borne marine pollution in Bangladesh every year.





**Figure 2.5: Accidental Marine Pollution by Inland Oil Tanker, 'OT SOUTHERN STAR 7'**



**Figure 2.6: Pollution of Marine Environment by Oil Spillage**

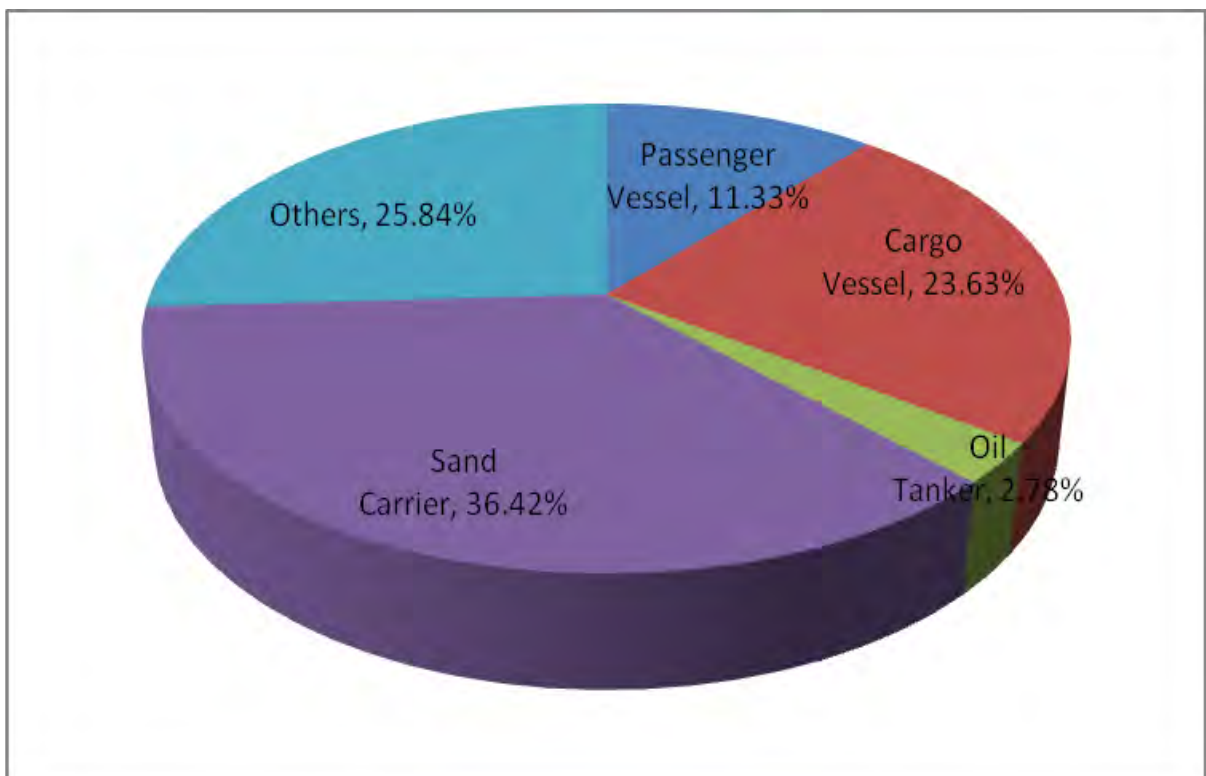
## CHAPTER- 3

### DATA ANALYSIS AND QUANTIFICATION OF MARINE POLLUTANTS DUE TO INLAND WATER TRANSPORTATION IN BANGLADESH

3.1 **General.** The data collected for various types of inland vessels have been analyzed in this chapter, followed by categorization and quantification of pollutants discharged from those vessels. It has also analyzed the trend analysis to show the number of inland vessels in 2025 and 2050.

#### 3.2 **Inland Vessels of Bangladesh.**

3.2.1 Bangladesh is a riverine country and waterways are very important means of communication. Different types of vessels like passenger vessels, cargo vessels, ferry, oil tanker, dumb barge, speed boat sand carrier and dredger are plying in the rivers. Figure 3.1 shows the percentage of different type vessels in inland routes:



**Figure 3.1: Percentage of Different Types of Inland Vessels**

3.2.2 The major portion of inland water vessels (75%) is covered by passenger vessels, cargo vessels, oil tanker, and sand carrier and these four types of vessel

have been taken for the study. These vessels are considered as the major sources of environment pollution in Bangladesh. Other vessels like speed boats, tug boats, dumb barges and dredgers has negligible contribution in marine pollutions due to less discharges of pollutants as their nature. Passenger vessels, cargo vessels and sand carriers are categorized as per length considering the similarities in role, number of engine, engine power, fuel consumption etc. Oil tankers are categorized as per its capacity as convenient with the above parameters. However, a short descriptions of the vessels are mentioned below:

a. **Passenger vessel.** Since long, traditionally river network has been regarded as safe and cost-effective route especially in the southern part of Bangladesh. Every year over 95 million passengers are carried through this route [1]. Passenger vessels are operated both under the formal and informal sectors in the inland waters of Bangladesh. The majority of the passenger services are operated privately.

The passenger launches are generally made of steel hull with no designated cargo holds. Instead of conspicuous cargo compartments, passenger launches contain smaller private cabins to provide some luxury and privacy to the wealthy passengers. Nevertheless, in most of the passenger launches there remain large open spaces on the decks where the economy class passengers reside disorganized during a journey. It is worth mentioning that both cargo ships and passenger launches are designed with mechanical or hydraulic steering and mostly being used for medium to long distance traveling in Bangladesh.

The river ports being the principal origin and destination points, movement of passengers through them provides an indication of their existing activity. The current statistics disclose a growth of 0.05% which is not encouraging. Notwithstanding, a recent study by Asian Development Bank makes an indicative estimate of 332 million passengers in 2020-21. However, the fleet consists of 1061 Passenger vessels of different size and draft. As per survey analysis, the larger and medium passenger vessels accomplish one one-way trip per day where as the smaller category vessels conduct two trips of shorter duration (3-4 hrs/trip). The breakdown of total inland passenger vessels is shown below in Table 3.1:



**Table 3.1: Passenger Vessels of Bangladesh**

<b>Catagory</b>	<b>Type</b>	<b>Length Range</b>	<b>Average Passenger capacity</b>	<b>Total No</b>
Cat - 1	Small	Upto 30 m	146	779
Cat - 2	Medium	30 to 50 m	475	220
Cat - 3	Large	Above 50 m	821	62
Total				1061

Detail particulars of some of the inland passenger vessels of Bangladesh and sample general arrangement drawing (GA) of a passenger vessel are shown in **Annex A**.

b. **Cargo vessel.** Cargo ships are basically larger vehicles which are made of steel hull and often designed with sub-divisional bulkheads to provide water tightness to the cargo holds. In addition, cargo ships contain cargo hatch openings on the upper deck through which the commodities are being loaded and unloaded. Also some cargo ships contain self-sufficient pumping facilities to load or unload liquid cargoes on or off the cargo holds. Cargo Service Unit is mainly responsible for carrying of various kinds of commodities like food, food grains, Jute & jute goods, cement and clinker from Chittagong and Mongla Port to different inland river ports of the country. In addition, cargo vessels also send to Kolkata (India) port under the Inter country transit and trade protocol agreement between the two countries. The total capacity offered by the cargo fleet is estimated 35.2 million tons [5].

The fleet of cargo vessels has significantly changed since 1998-99. Dumb barges of 300 tons on average have been replaced by self-propelled vessels of higher capacity of 500 to 700 tons. The total static capacity has increased by about one third from about 750,000 tons to about 1,000,000 tons. The fleet consists of 2,200 units (2,030 cargo vessels and 170 bay crossing coasters). Cargo vessels make an average 3/4 trips per month. The breakdown of total cargo vessels is shown below in Table 3.2:

**Table 3.2: Cargo Vessels of Bangladesh**

<b>Catagory</b>	<b>Type</b>	<b>Length Range</b>	<b>Total No</b>
Cat - 1	Small	Upto 30 m	348
Cat - 2	Medium	30 to 50 m	1554
Cat - 3	Large	Above 60 m	311
Total			2213

Detail particulars of all the inland cargo vessels of Bangladesh and the general arrangement drawing (GA) of a sample cargo vessel are shown in **Annex B**.

c. **Oil Tanker**. As per the Bangladesh Petroleum Act, 1974, Bangladesh Petroleum Corporation (BPC) established in 1976 for the importation of crude and refined oil, lubricant, refining of crude oil, and distribution of those in the country. BPC has developed a storage capacity of 206,000 tons at its central establishments and approximately 688,000 tons at the other depots of the country. At present, four companies namely Padma, Meghna, Jamuna and Standard Asiatic Oil Company Ltd are engaged in storage, distribution and selling of fuel oil. Fuel – oil is transported by road, railways and ships. More than 80% of fuel-oil is transported by ships (oil tankers). Coastal and riverine tankers are important mode for fuel oil transportation. Normally the fuel distribution companies (Padma, Meghna, Jamuna and Standard Asiatic Oil Company Ltd) hire the oil tankers for a period of time as per their requirement and freight rate. The fleet consists of 260 registered oil tankers among which 210 are used as chartered ship. Oil tankers make an average 36 trips per year. The breakdown of total cargo vessels is shown below in Table 3.3:

**Table 3.3: Oil Tankers of Bangladesh**

<b>Catagory</b>	<b>Type</b>	<b>Capacity (MT)</b>	<b>Total No</b>
Cat - 1	Small	Upto 1000	43
Cat - 2	Medium	Above1000 to17 50	136
Cat - 3	Large	Above 1750	31
Total			210

Detail particulars of all the inland oil tankers of Bangladesh and the general arrangement drawing (GA) of a sample oil tanker are shown in **Annex C**.

d. **Sand Carrier**. The sand carriers are used to carry sands from one place to another place within the local area. Two types of sand, one for building construction and another for filling low lands are transported by this fleet. These vessels are of unique design and maintain relatively lower speed during operation. Sands are picked from various rivers and carried to every corner of the country. The largest fleet among the inland water vessels consists of 3411 sand carriers and according to the survey, average monthly running hr is 200 hrs. The breakdown of total cargo vessels is shown below in Table 3.4:

**Table 3.4: Sand Carriers of Bangladesh**

<b>Catagory</b>	<b>Type</b>	<b>Length Range</b>	<b>Total No</b>
Cat - 1	Small	Upto 30 m	2065
Cat - 2	Large	Above 30 m	1346
Total			3411

Detail particulars of all the sand carriers of Bangladesh and the general arrangement drawing of a sand carrier are shown in **Annex D**.

### 3.3 Quantification of Marine Pollution by Passenger Ship.

3.3.1 The passenger ships of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Solid Waste
- c. Emission of exhaust gases and pollutants by burning fuel

The detail particulars of inland passenger vessels for the calculation are shown below in Table 3.5:

**Table 3.5: Details of Inland Passenger Vessels of Bangladesh**

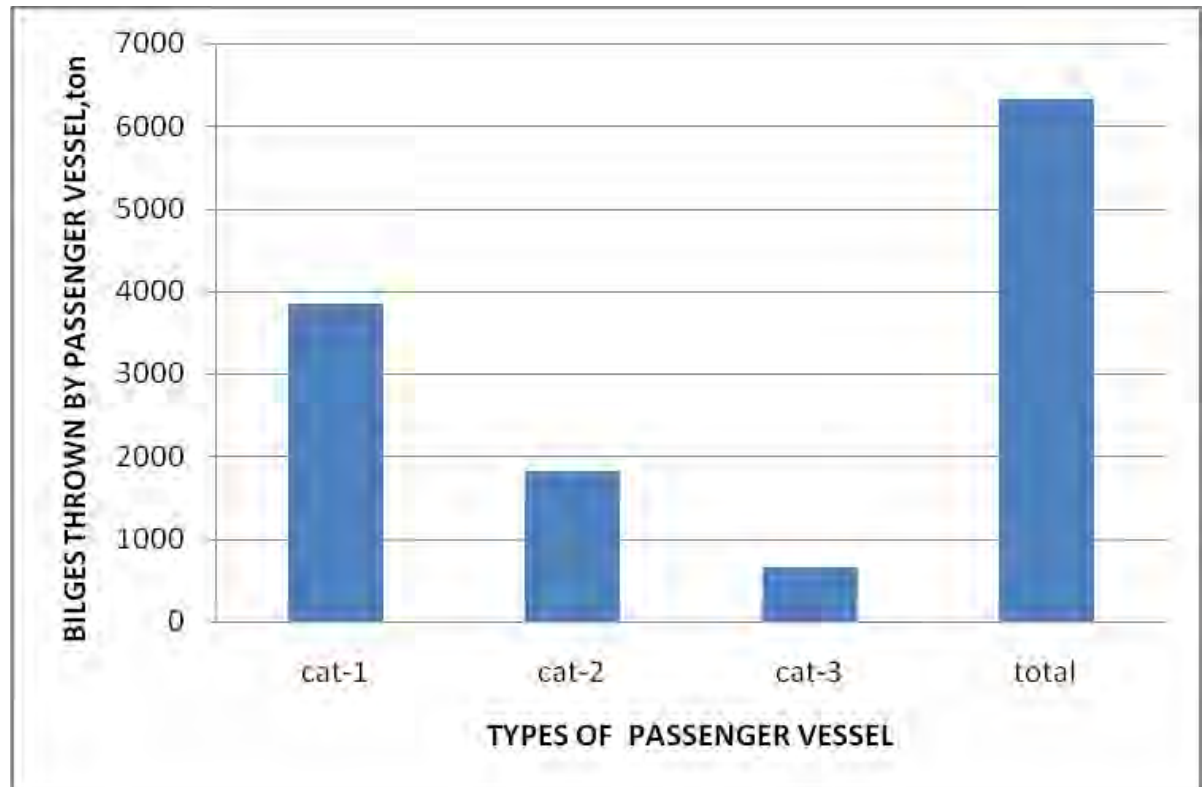
Cat (Length)	Total No	Engine Power (HP)	No of Engine	Fuel Cons (Ltr/hr)	Avg Running hr/month	Passenger Capacity	Bilge/ month /ship (Ltr)
Cat – 1 (Up to 30m)	779	125-200	01	25	240	145	450
Cat – 2 (30-50m)	220	450-720	02	70	300	475	750
Cat – 3 (Above 50 m)	62	1200-1500	02	120	300	821	950

3.3.2 The calculation has been done basing on collected data from field survey, operators statistics and interviews with the relevant technical persons. The detail calculation for total bilges, solid waste, fuel consumption and distance covered by passenger vessels are shown in **Annex E**. However, the summary of the calculations in tabular form and figure are shown below in Table 3.6.

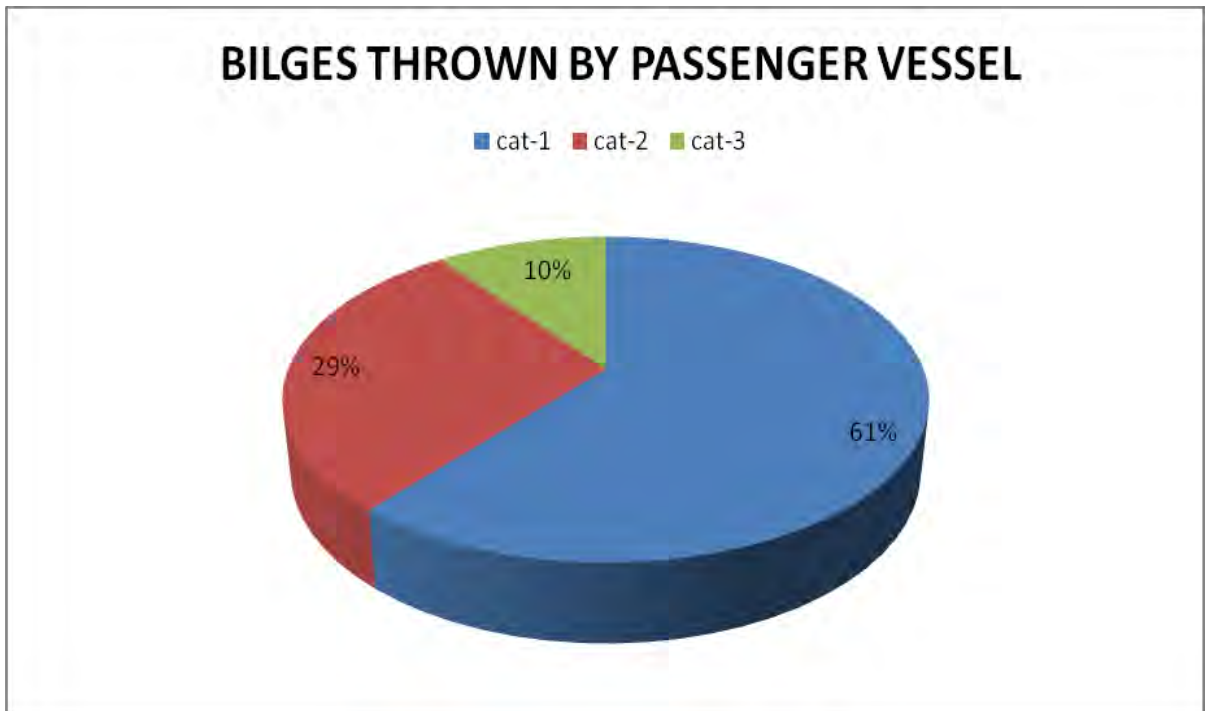
### 3.3.3 Calculation of Bilges Thrown by Passenger Vessels.

**Table 3.6: Summary of Calculation of Bilges Thrown by Passenger Vessels**

Type	Total No	Bilges Thrown/yr (Ton)	% of Bilges Thrown
Category -1 (Up to 30m)	779	3856.05	61.03
Category – 2 (30m to 50m)	220	1815	28.72
Category – 3 (Above 50 m)	62	647.9	10.25
<b>Total</b>	<b>1061</b>	<b>6318.95</b>	<b>100</b>



**Figure 3.2: Summary of Calculation of Bilges (Passenger Vessels)**

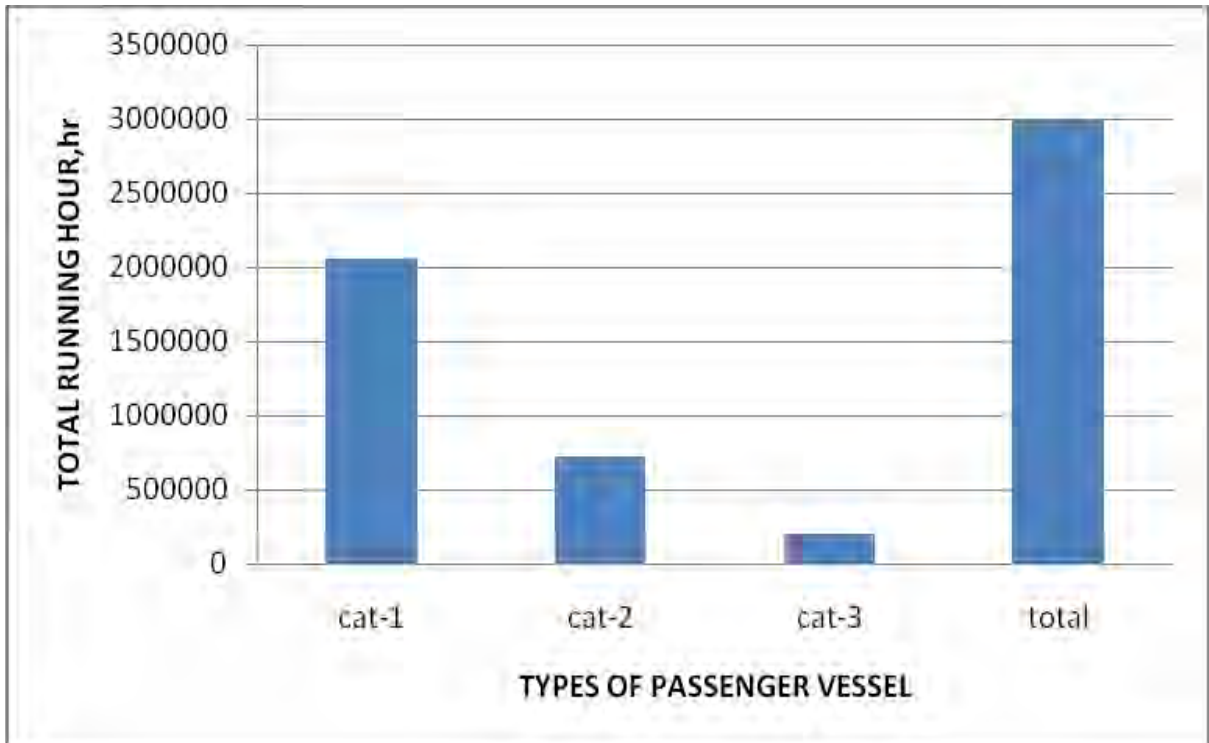


**Figure 3.3: Percentage of Bilges Discharged by Passenger Vessels**

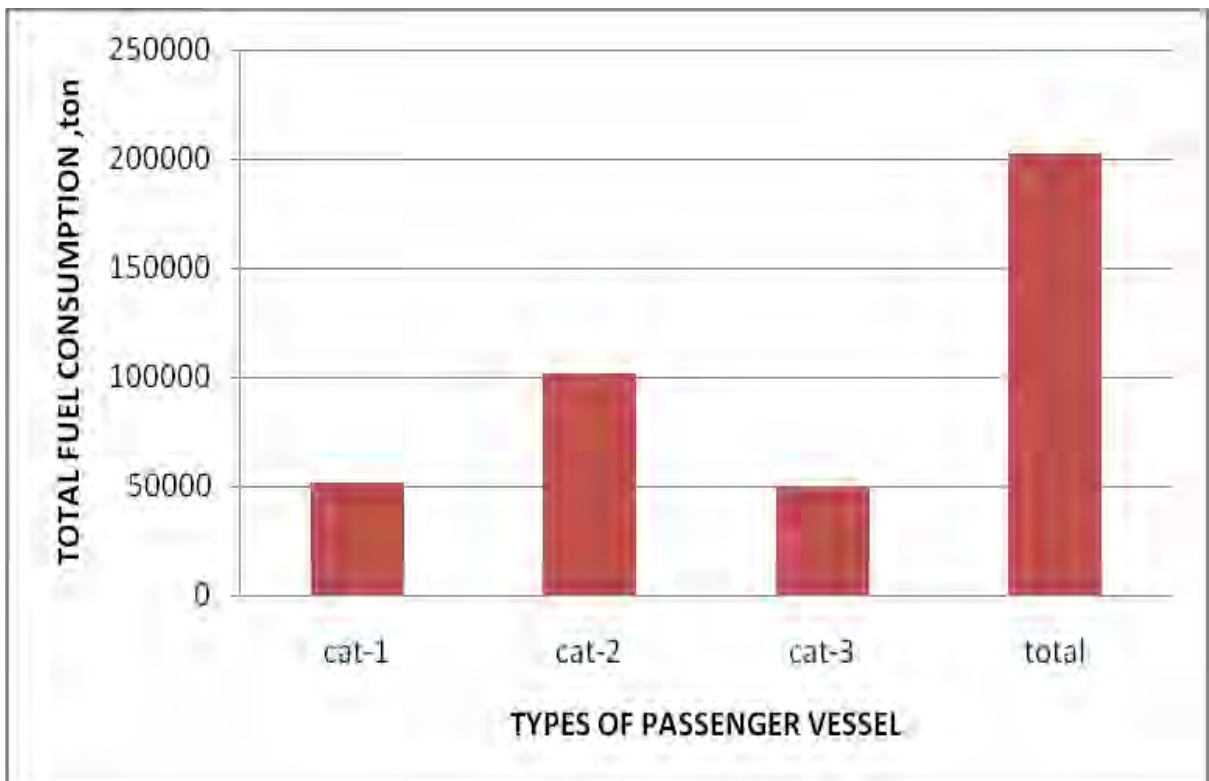
#### **3.3.4 Calculation of Running Hour, Fuel Consumption and Distance Covered by Passenger Vessels**

**Table 3.7: Summary of Calculation of Running Hour, Fuel Consumption and Distance Covered by Passenger Vessels Per Year**

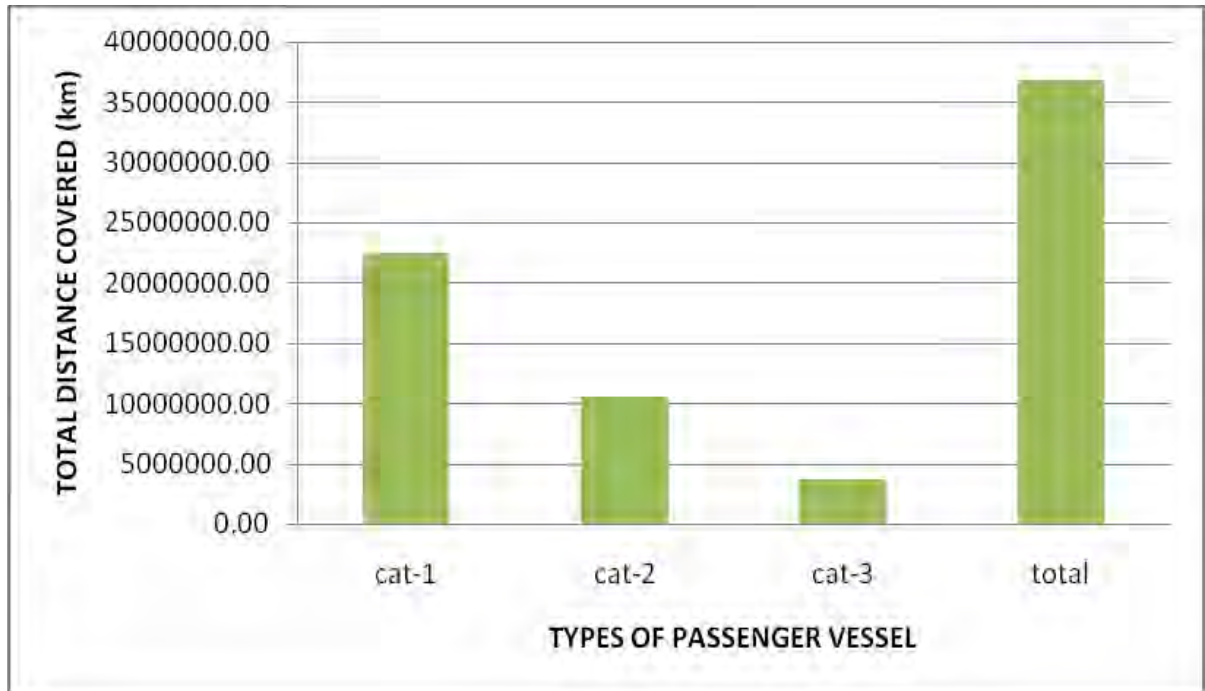
Type	Total No	Total Running Hour (Hr)	Total Fuel Consumption (Ton)	Total Distance Covered (Km)
Category -1 (Up to 30m)	779	2056560	51414 Ton	22519332
Category – 2 (30m to 50m)	220	726000	101640	10599600
Category – 3 (Above 50 m)	62	204600	49104	3733950
<b>Total</b>	<b>1061</b>	<b>2987160</b>	<b>202158</b>	<b>36852882</b>



**Figure 3.4: Summary of Calculation of Running Hour (Passenger Vessels)**



**Figure 3.5: Summary of Calculation of Fuel Consumption (Passenger Vessels)**



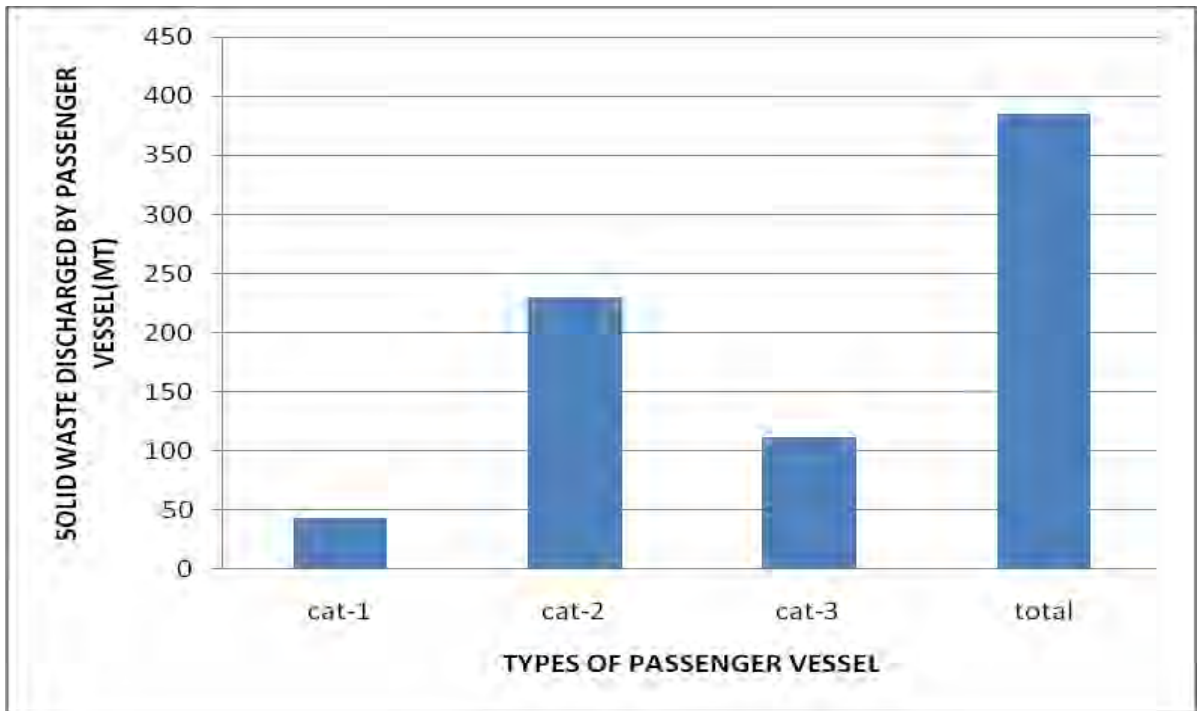
**Figure 3.6: Summary of Calculation of Distance Covered (Passenger Vessels)**

### 3.3.5 Calculation for Solid Waste

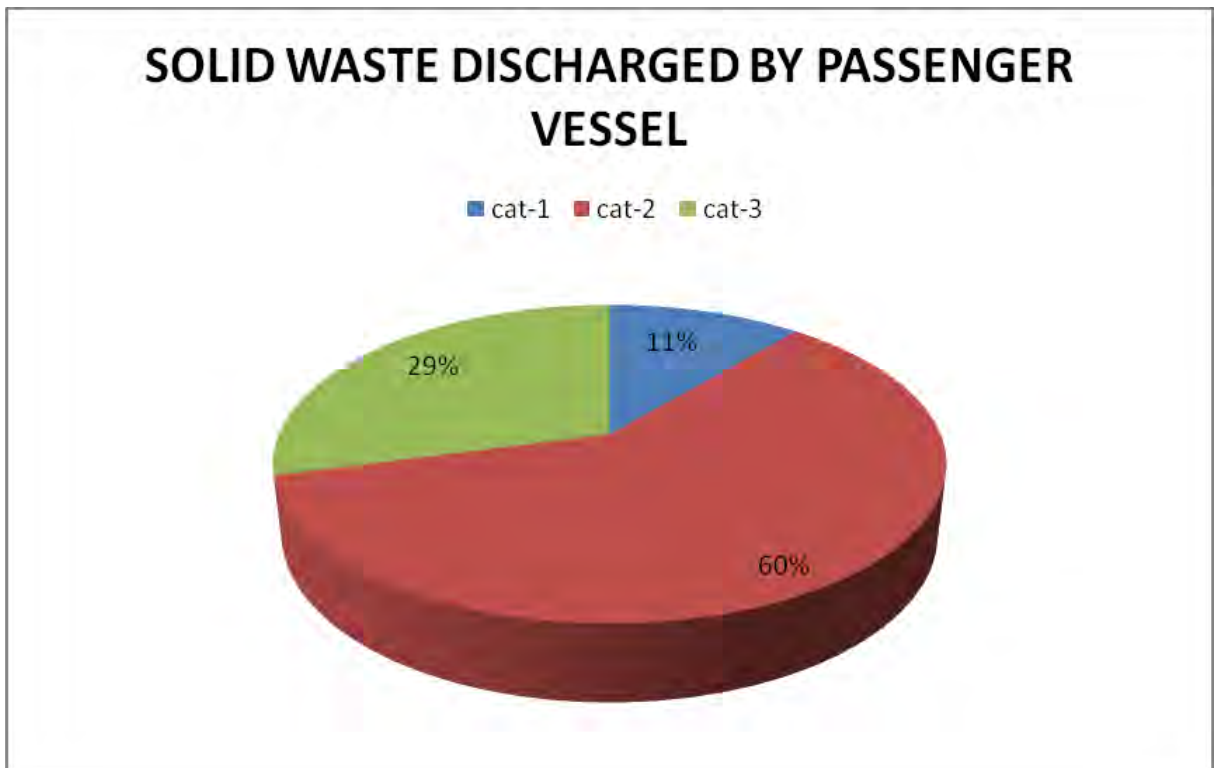
**Table 3.8: Summary of Calculation Solid Waste Discharged by Passenger Vessels Per Year**

Type	Total No	Solid Waste Thrown/yr (MT)	% of Solid Waste Thrown
Category -1 (Up to 30m)	779	42.85	11.13
Category – 2 (30m to 50m)	220	230	59.76
Category – 3 (Above 50 m)	62	112	29.11
<b>Total</b>	<b>1061</b>	<b>384.85</b>	<b>100</b>





**Figure 3.7: Summary of Calculation Solid Waste Discharged (Passenger Vessels)**



**Figure 3.8: Percentage of Solid Waste Discharged by Passenger Vessels**

### 3.4 Quantification of Marine Pollution by Cargo Ship.

3.4.1 The cargo ships of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Solid Waste (neglected as the quantity is very small)
- c. Emission of exhaust gases and pollutants by fuel consumption

The detail particulars of inland cargo for the calculation are shown below in the Table 3.9:

**Table 3.9: Details of Inland Cargo Vessels of Bangladesh**

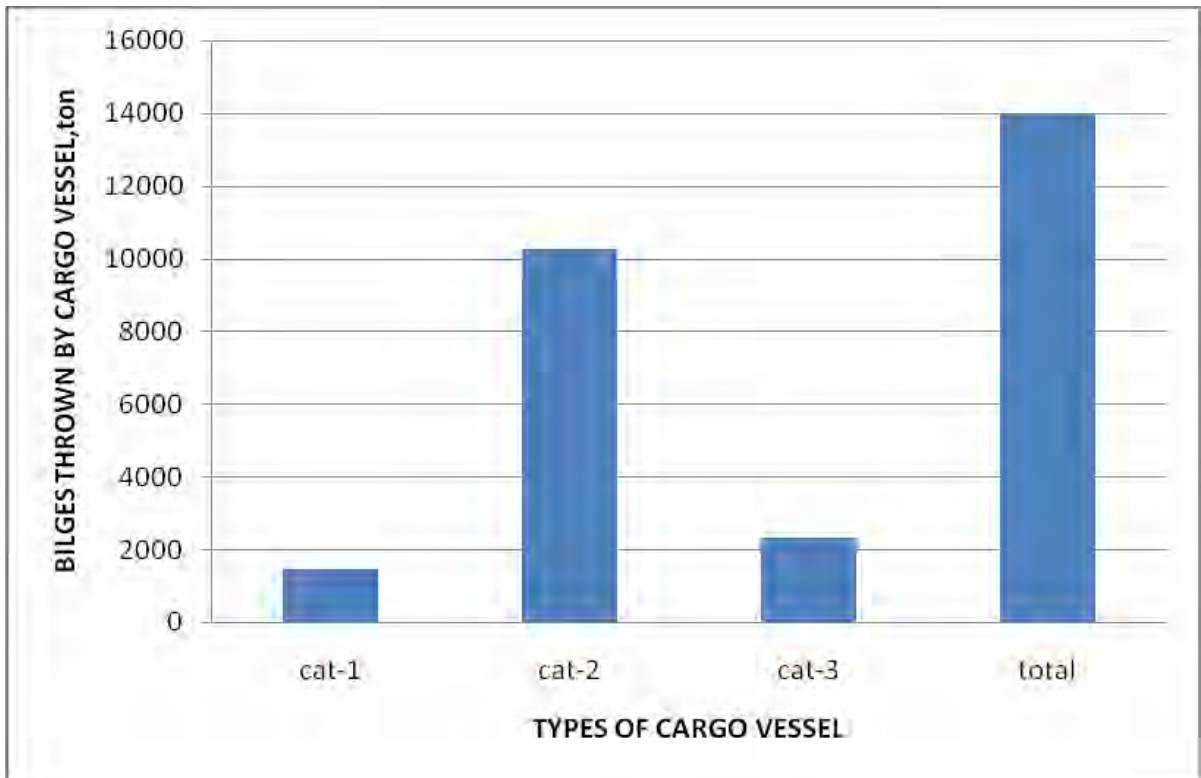
Cat (Length)	Total No	Engine Power (HP)	No of Engine	Fuel Cons (Ltr/hr)	Avg Running hr/month	Bilge/month /Ship (Ltr)
Cat – 1 (Up to 30m)	348	300-350	01	60	150	375
Cat – 2 (30-50m)	1554	300-350	02	60	120	600
Cat – 3 (Above 50m)	311	450-720	02	75	120	675

3.4.2 The detail calculation for total bilges, fuel consumption and distance covered by cargo vessels are shown in **Annex E**. However, the summary of the calculations in tabular form and figure are shown below in Table 3.10:

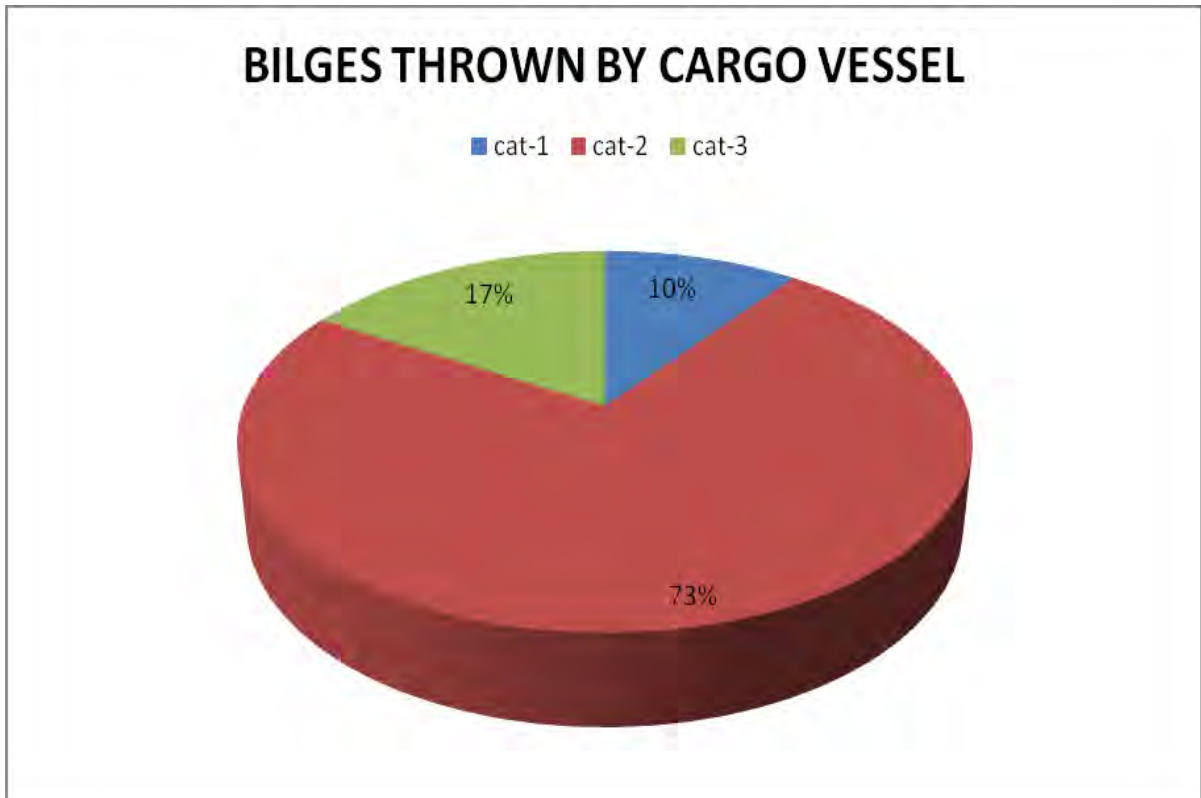
#### 3.4.3 Calculation for Bilge

**Table 3.10: Summary of Calculation of Bilges Thrown by Cargo Vessels per yr**

Type	Total No	Bilges Thrown/Yr (Ton)	% of Bilges Thrown
Category -1 (Up to 30m)	348	1435.5	10.25
Category – 2 (30m to 50m)	1554	10256.40	73.26
Category – 3 (Above 50 m)	311	2309.175	16.49
<b>Total</b>	<b>2213</b>	<b>14001.075</b>	<b>100</b>



**Figure 3.9: Summary of Calculation of Bilges (Cargo Vessels)**

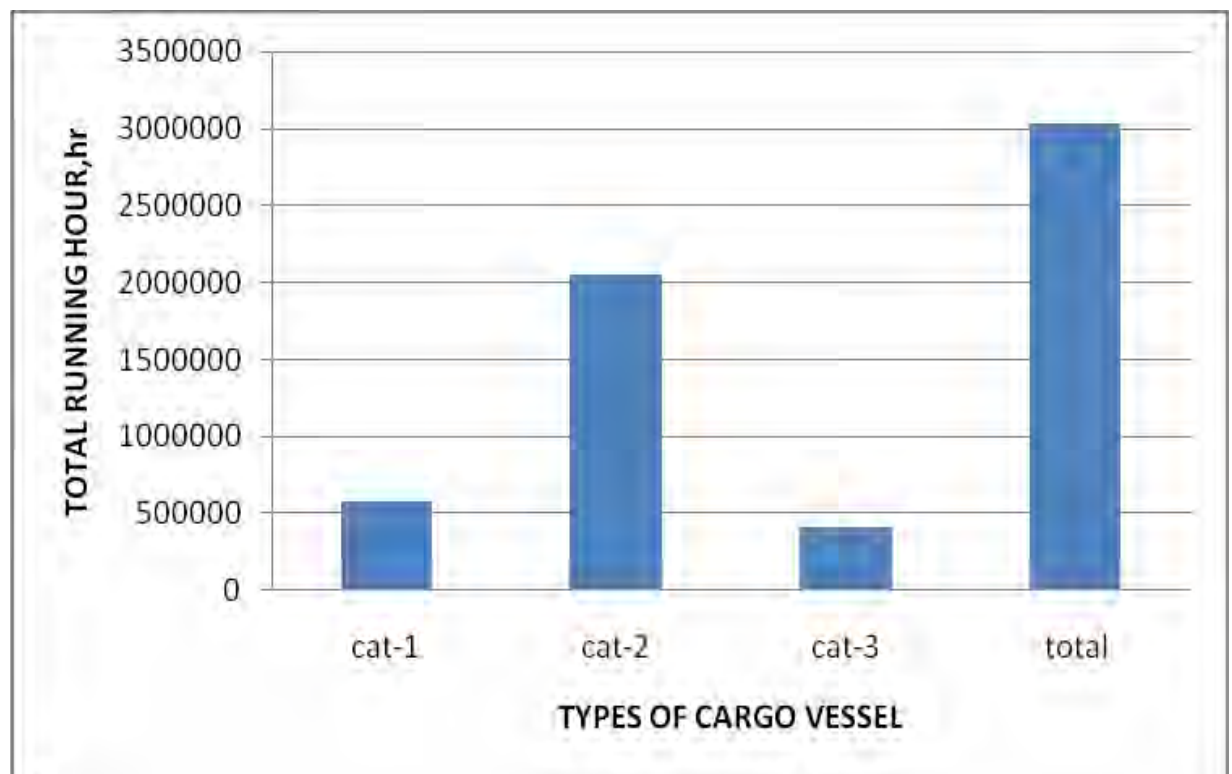


**Figure 3.10: Percentage of Bilges Discharged by Cargo Vessels**

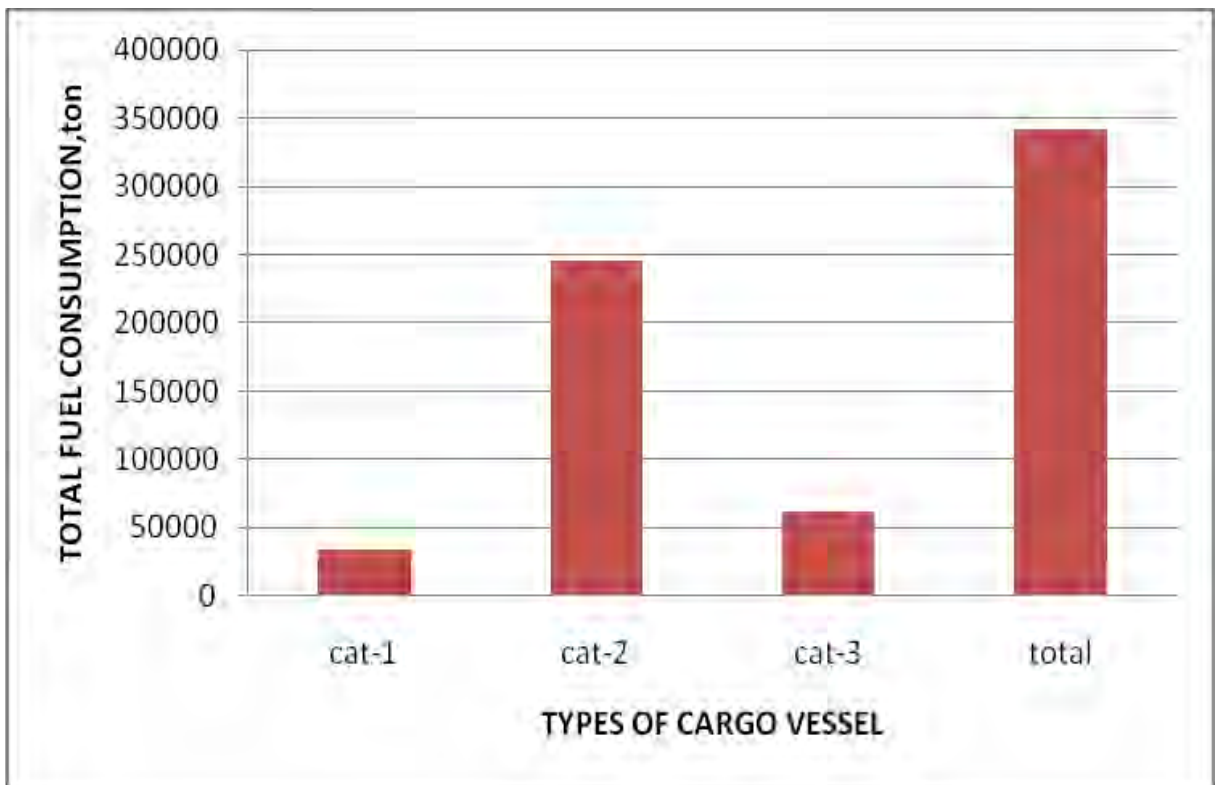
### 3.4.4 Calculation for Running Hour, Fuel Consumption and Distance Covered

**Table 3.11: Summary of Calculation of Running Hour, Fuel Consumption and Distance Covered by Cargo Vessels per Year**

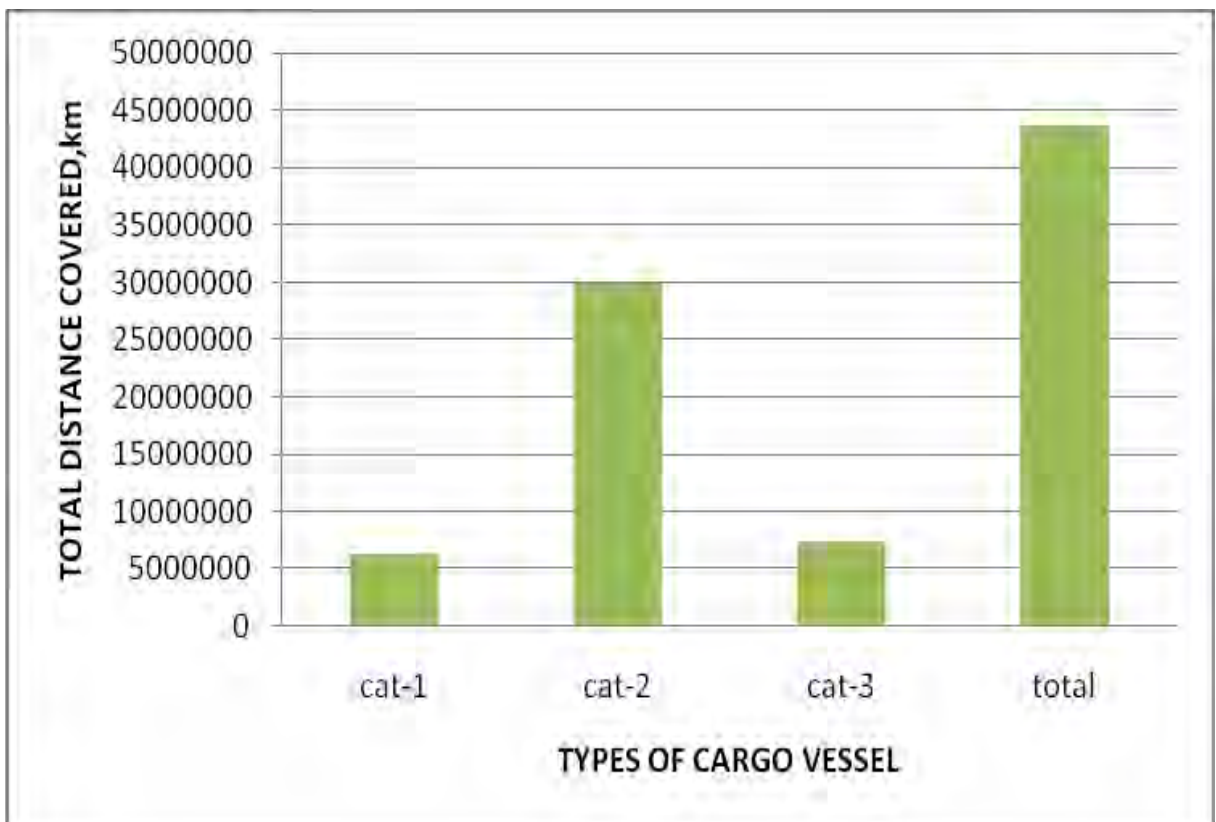
Type	Total No	Total Running Hour (Hr)	Total Fuel Consumption (Ton)	Total Distance Covered (Km)
Category -1 (Up to 30m)	348	574200	34452	6287490
Category - 2 (30m to 50m)	1554	2051280	246153.6	29948688
Category - 3 (Above 50 m)	311	410520	61578	7491990
<b>Total</b>	<b>2213</b>	<b>3036000</b>	<b>342183.6</b>	<b>43728168</b>



**Figure 3.11: Summary of Calculation of Running Hour (Cargo Vessels)**



**Figure 3.12: Summary of Calculation of Fuel Consumption (Cargo Vessels)**



**Figure 3.13: Summary of Calculation of Distance Covered (Cargo Vessels)**

### 3.5 Quantification of Marine Pollution by Oil Tanker.

3.5.1 The oil tankers of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Oily Water Mixture
- c. Ballast Water
- d. Solid Waste (neglected as the quantity is very small)
- e. Emission of exhaust gases and pollutants by fuel consumption

The detail particulars of inland oil tankers for the calculation are shown below in the Table 3.12:

**Table 3.12: Details of Inland Oil Tankers of Bangladesh**

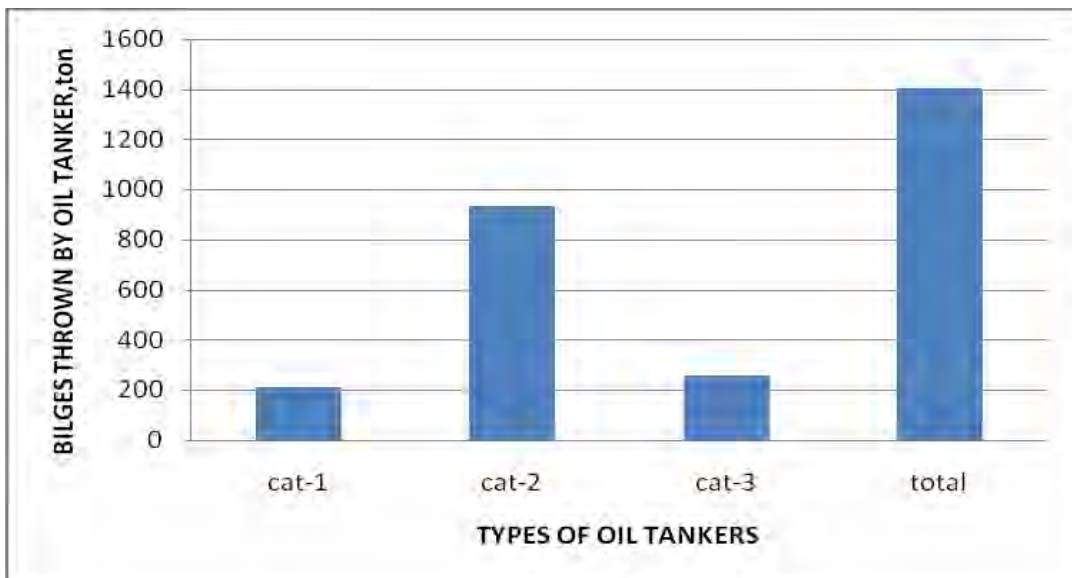
<b>Cat (Capacity, MT)</b>	<b>Total No</b>	<b>Engine Power (HP)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/hr)</b>	<b>Avg Running hr/month</b>	<b>Bilge/month /ship (Ltr)</b>
Cat – 1 (Up to 1000 )	43	275-300	02	60	90	450
Cat – 2 (1050 to 1750 )	136	550-720	02	75	113	625
Cat – 3 (Above 1750)	31	720	02	75	120	750

3.5.2 The detail calculation for total bilges, oily water mixture, ballast water, fuel consumption and distance covered by inland oil tankers are shown in **Annex E**. However, the summary of the calculations are shown below in Table 3.13:

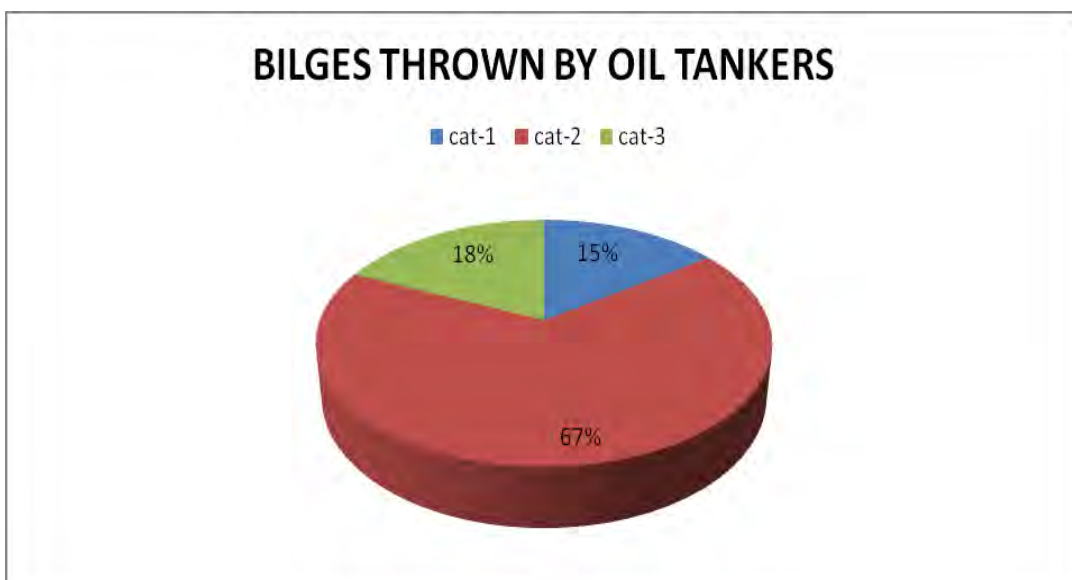
#### 3.5.3 Calculation for Bilge

**Table 3.13: Summary of Calculation of Bilges Thrown by Oil Tankers**

<b>Type</b>	<b>Total No</b>	<b>Bilges Thrown/yr (Ton)</b>	<b>% of Bilges Thrown</b>
Category-1(Up to 1000 MT)	43	212.85	15.16
Category – 2 (1050 to1750 MT)	136	935	66.61
Category – 3 (Above 1750 MT)	31	255.75	18.23
<b>Total</b>	<b>190</b>	<b>1403.60</b>	<b>100</b>



**Figure 3.14: Summary of Calculation of Bilges (Oil Tankers)**

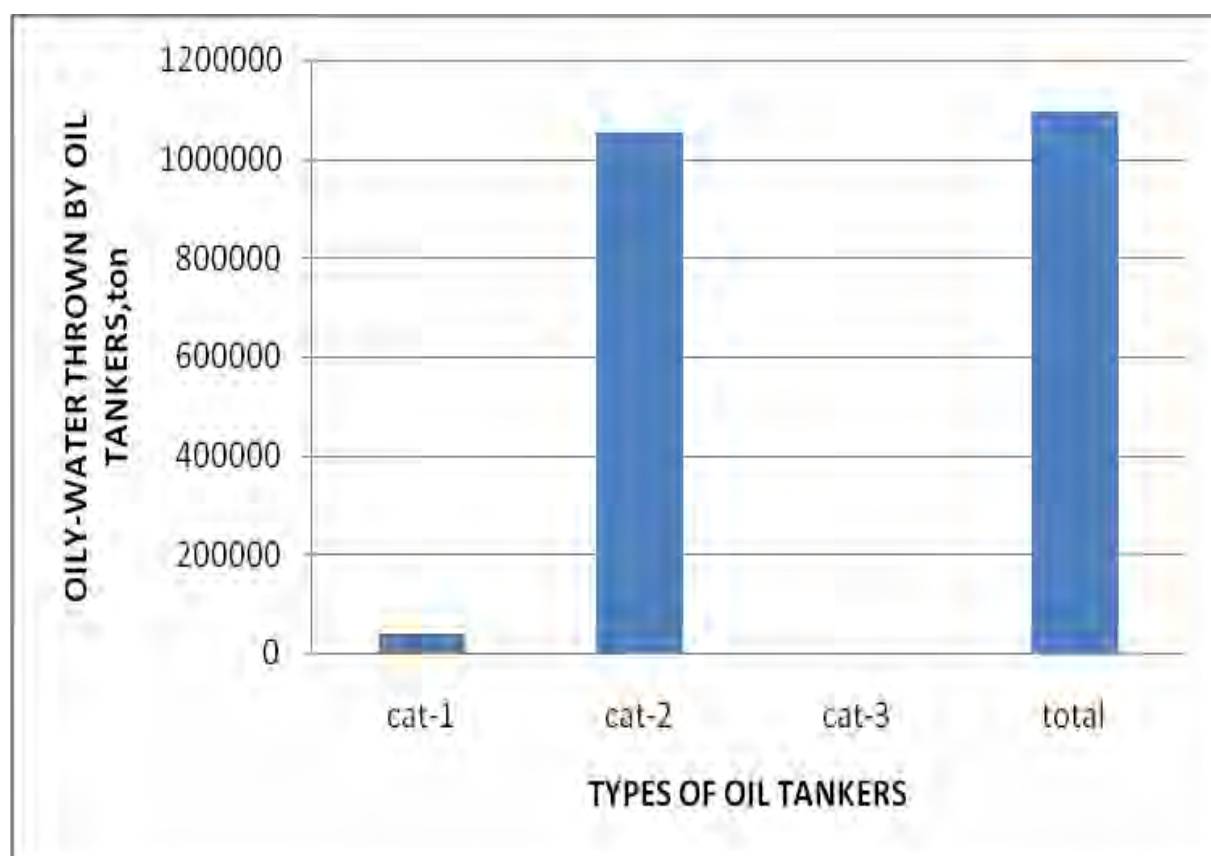


**Figure 3.15: Percentage of Bilges Discharged by Oil Tankers**

### 3.5.4 Calculation for Oily – Water Discharged

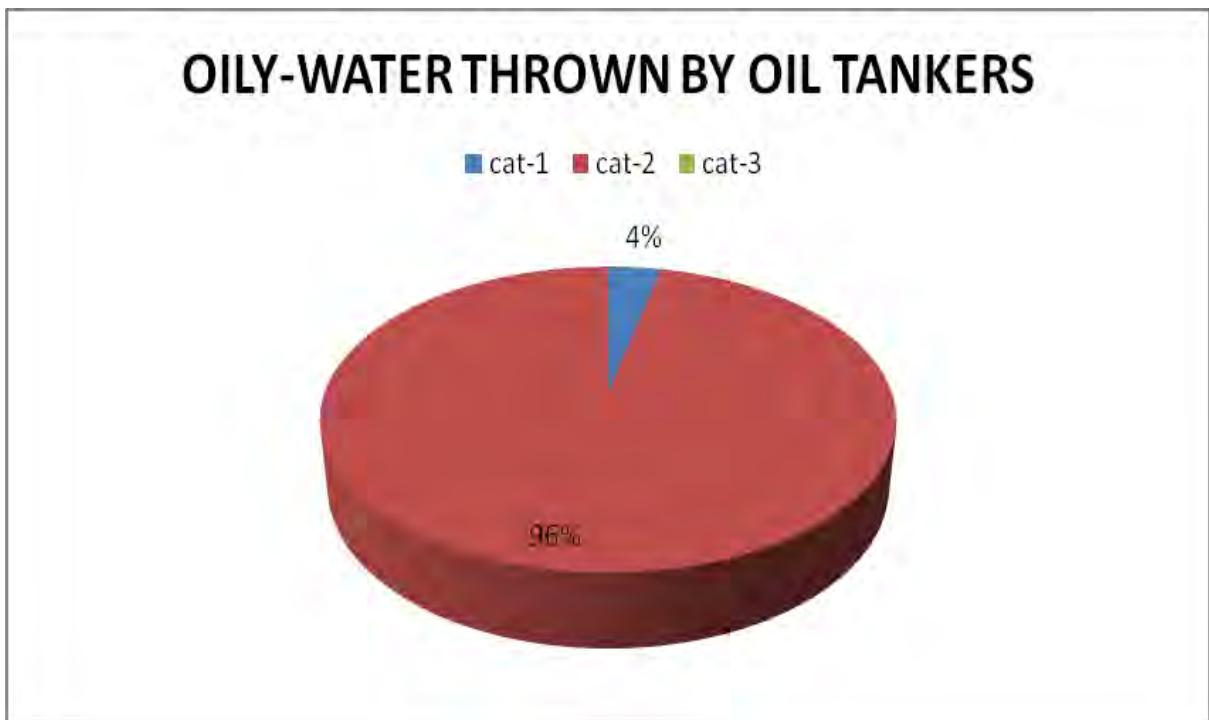
**Table 3.14: Summary of Calculation of Oily – Water Discharged by Oil Tankers**

Type	Total No	Oily – Water Thrown (Ton)	% of Oily-Water Thrown
Category-1(Up to 1000 MT)	43	39150	3.58
Category – 2 (1050 to1750 MT)	136	1054680	96.42
Category – 3 (Above 1750 MT)	31	-	
<b>Total</b>	<b>190</b>	<b>1093830</b>	<b>100</b>



**Figure 3.16: Summary of Calculation of Oily – Water Discharged (Oil Tankers)**



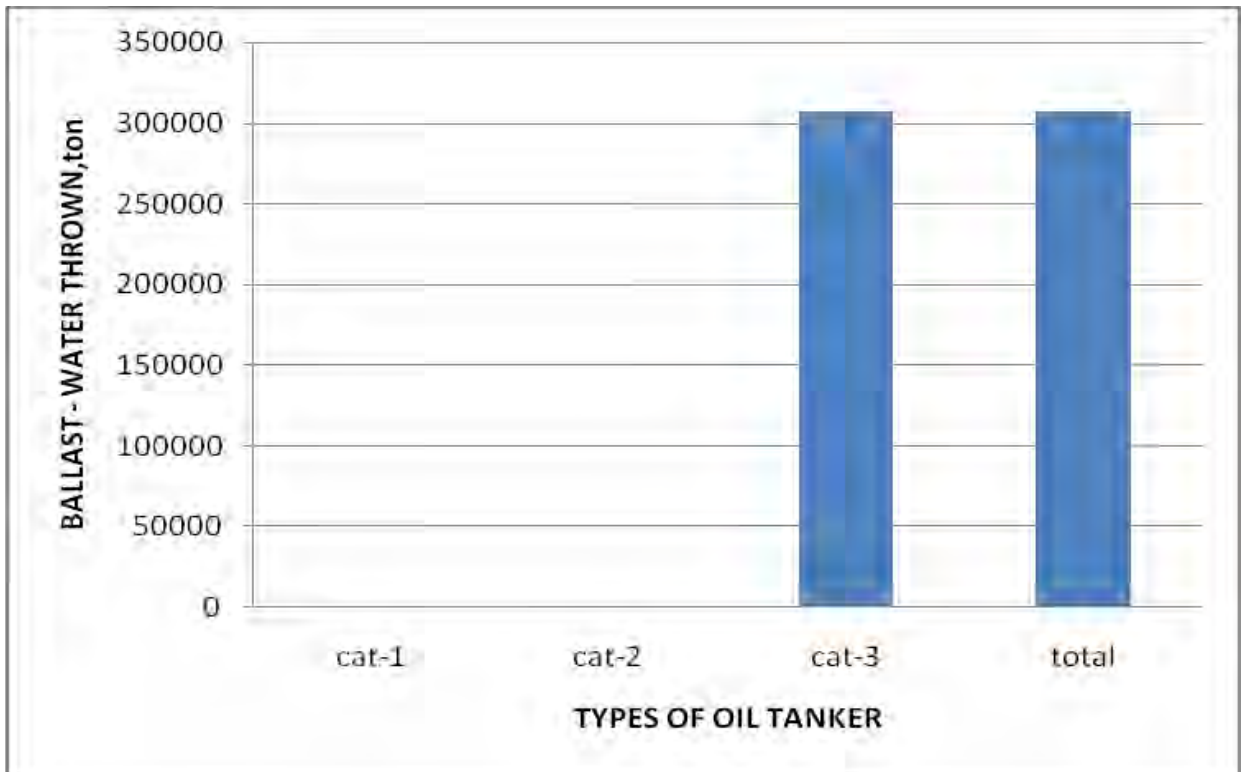


**Figure 3.17: Percentage of Oily – Water Discharged by Oil Tankers**

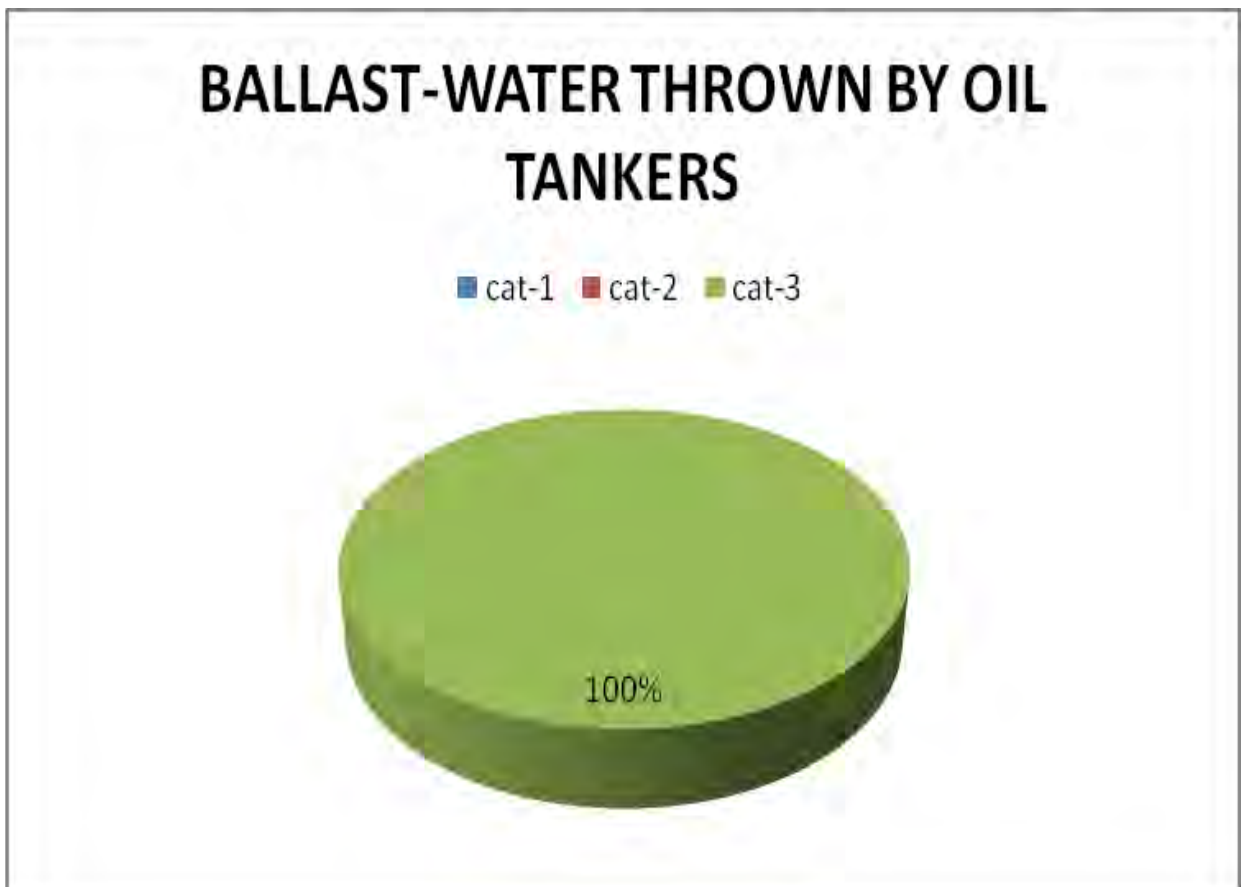
### 3.5.5 Calculation for Ballast Water Discharged

**Table 3.15: Summary of Calculation of Ballast Water Thrown by Oil Tankers per Year**

Type	Total No	Ballast – Water Thrown/Yr (Ton)	% of Ballast Water Thrown
Category-1(Upto 1000 MT)	43	-	
Category – 2 (1050 to1750 MT)	136	-	
Category – 3 (Above 1750 MT)	31	3,06,900 Ton	<b>100</b>
<b>Total</b>	<b>190</b>	3,06,900 Ton	<b>100</b>



**Figure 3.18: Summary of Calculation of Ballast Water Thrown (Oil Tankers)**

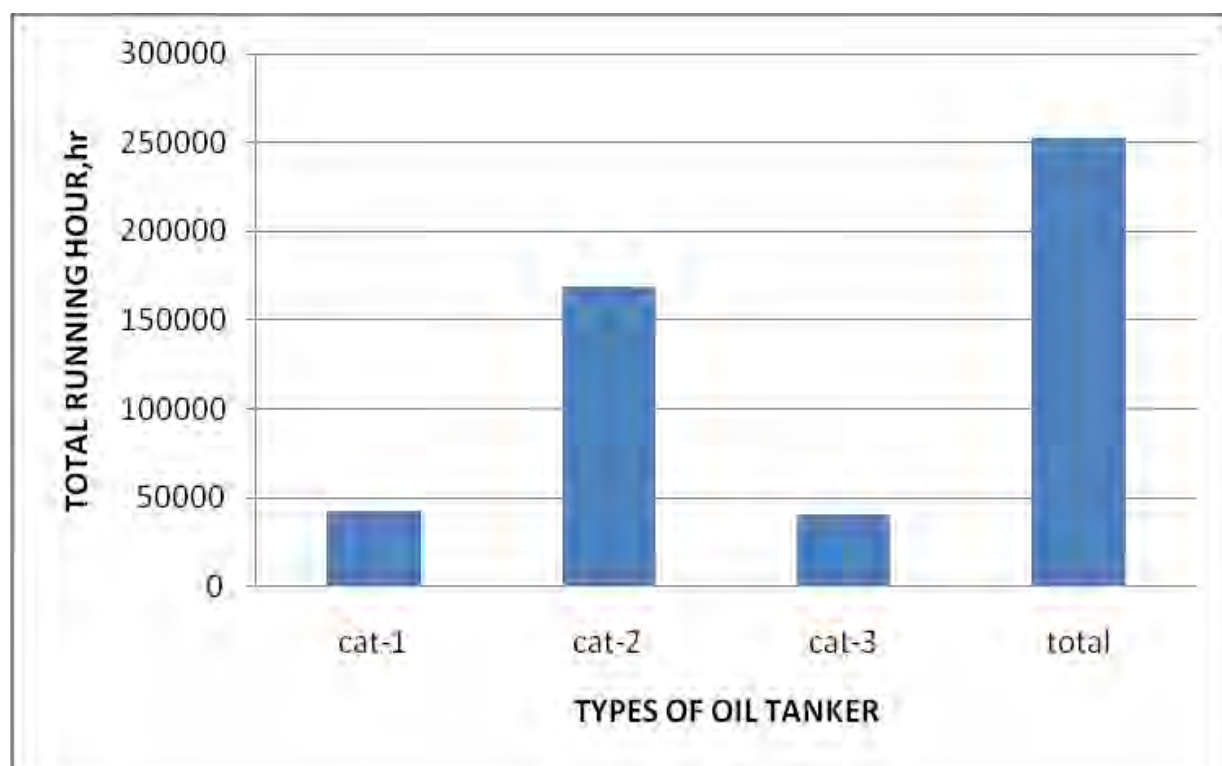


**Figure 3.19: Percentage of Ballast Water Discharged by Oil Tankers**

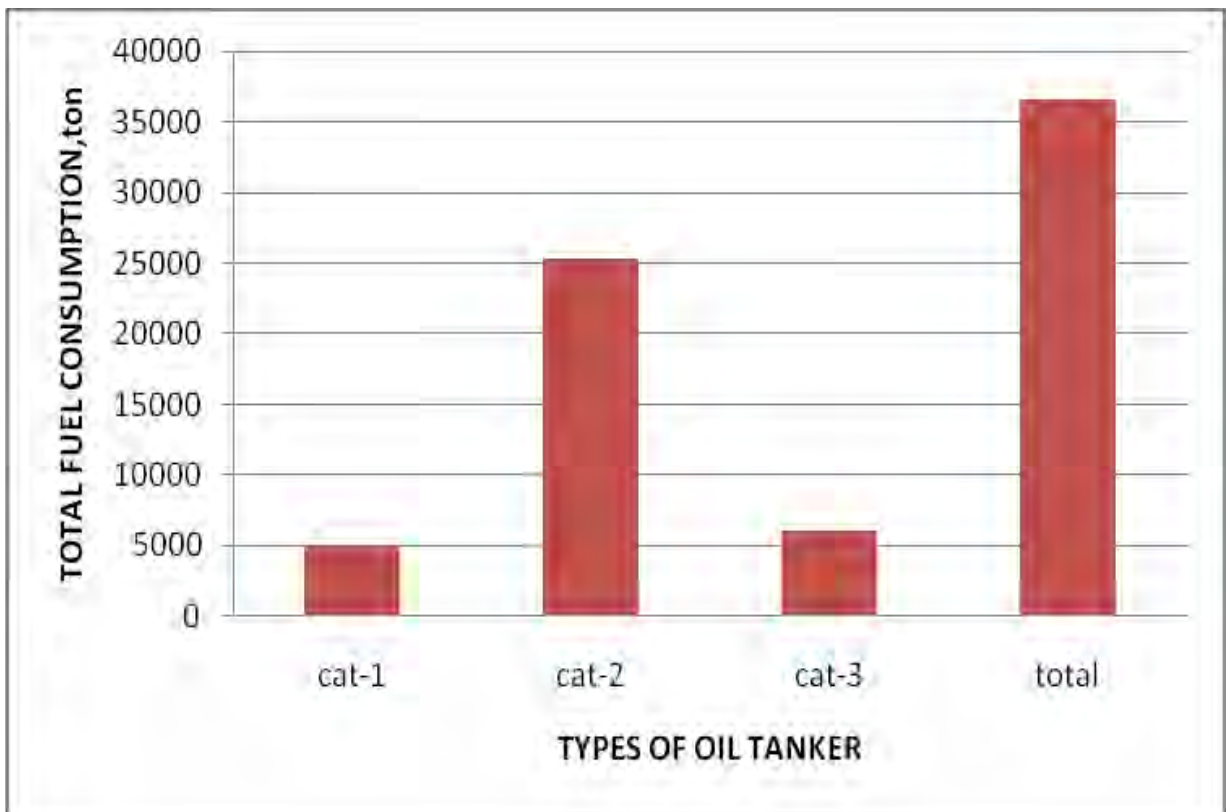
### 3.5.6 Calculation of Running Hour, Fuel Consumption and Distance Covered

**Table 3.16: Summary of Calculation of Running Hour, Fuel Consumption and Distance Covered by Oil Tankers per Year**

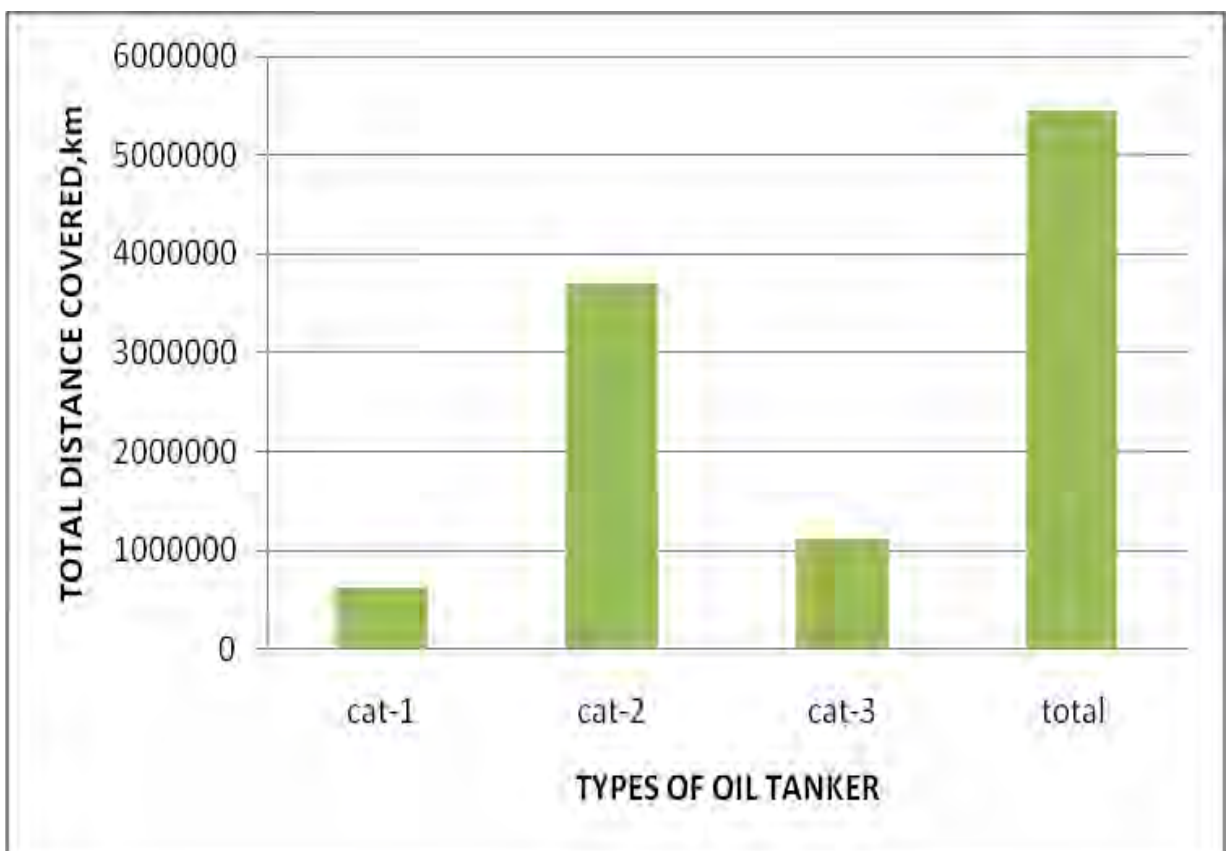
Type	Total No	Total Running Hour (Hr)	Total Fuel Consumption (Ton)	Total Distance Covered (Km)
Category -1 (Up to 1000 MT)	43	42570 Hr	5108.4 Ton	621522 km
Category – 2 (1050 to1750 MT)	136	169048 Hr	25357.20 Ton	3702151 km
Category – 3 (Above 1750 MT)	31	40920 Hr	6138 Ton	1120185 km
<b>Total</b>	<b>190</b>	<b>252538</b>	<b>36603.6</b>	<b>5443858</b>



**Figure 3.20: Summary of Calculation of Running Hour (Oil Tankers)**



**Figure 3.21: Summary of Calculation of Fuel Consumption (Oil Tankers)**



**Figure 3.22: Summary of Calculation of Distance Covered (Oil Tankers)**

### 3.6 Quantification of Marine Pollution by Sand Carrier.

3.6.1 The sand carriers of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Solid Waste (neglected as the quantity is very small)
- c. Emission of exhaust gases and pollutants by fuel consumption

The detail particulars of sand carriers for the calculation are shown below in the Table 3.17:

**Table 3.17: Details of Inland Sand Carriers of Bangladesh**

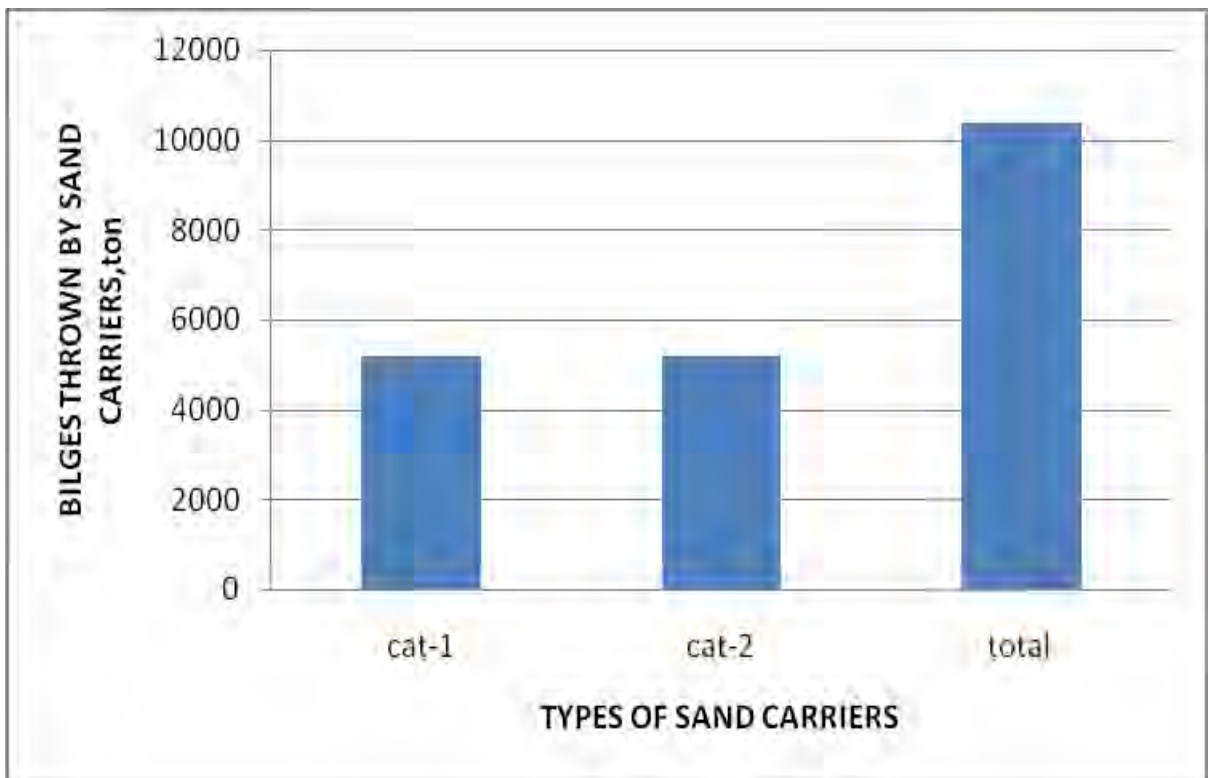
<b>Cat (Length)</b>	<b>Total No</b>	<b>Engine Power (HP)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/hr)</b>	<b>Avg Running hr/month</b>	<b>Bilge/month /Ship (Ltr)</b>
Cat – 1 (Up to 30m)	2065	85 - 165	02	60	30	228
Cat – 2 (Above 30m)	1346	210 - 300	01	60	55	350

3.6.2 The detail calculation for total bilges, fuel consumption and distance covered for sand carriers are shown in **Annex E**. However, the summary of the calculations are shown below in Table 3.18:

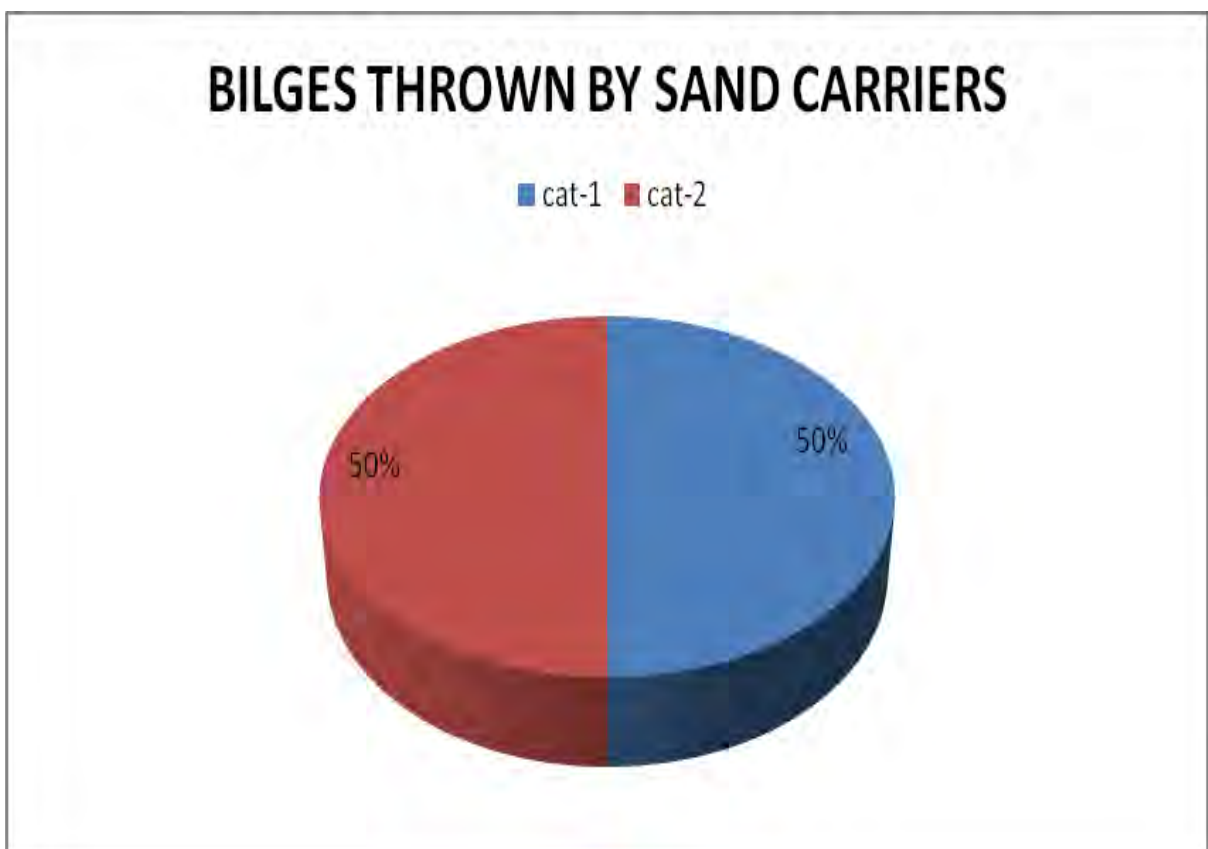
#### 3.6.3 Calculation for Bilge

**Table 3.18: Summary of Calculation of Bilges Thrown by Sand Carriers per Year**

<b>Type</b>	<b>Total No</b>	<b>Bilges Thrown (Ton)</b>	<b>% of Bilges Thrown</b>
Category -1 (Up to 30m)	2065	5179.02	49.99
Category – 2 (Above 30m)	1346	5182.10	50.01
<b>Total</b>	<b>3411</b>	<b>10361.12</b>	<b>100</b>



**Figure 3.23: Summary of Calculation of Bilges (Sand Carriers)**

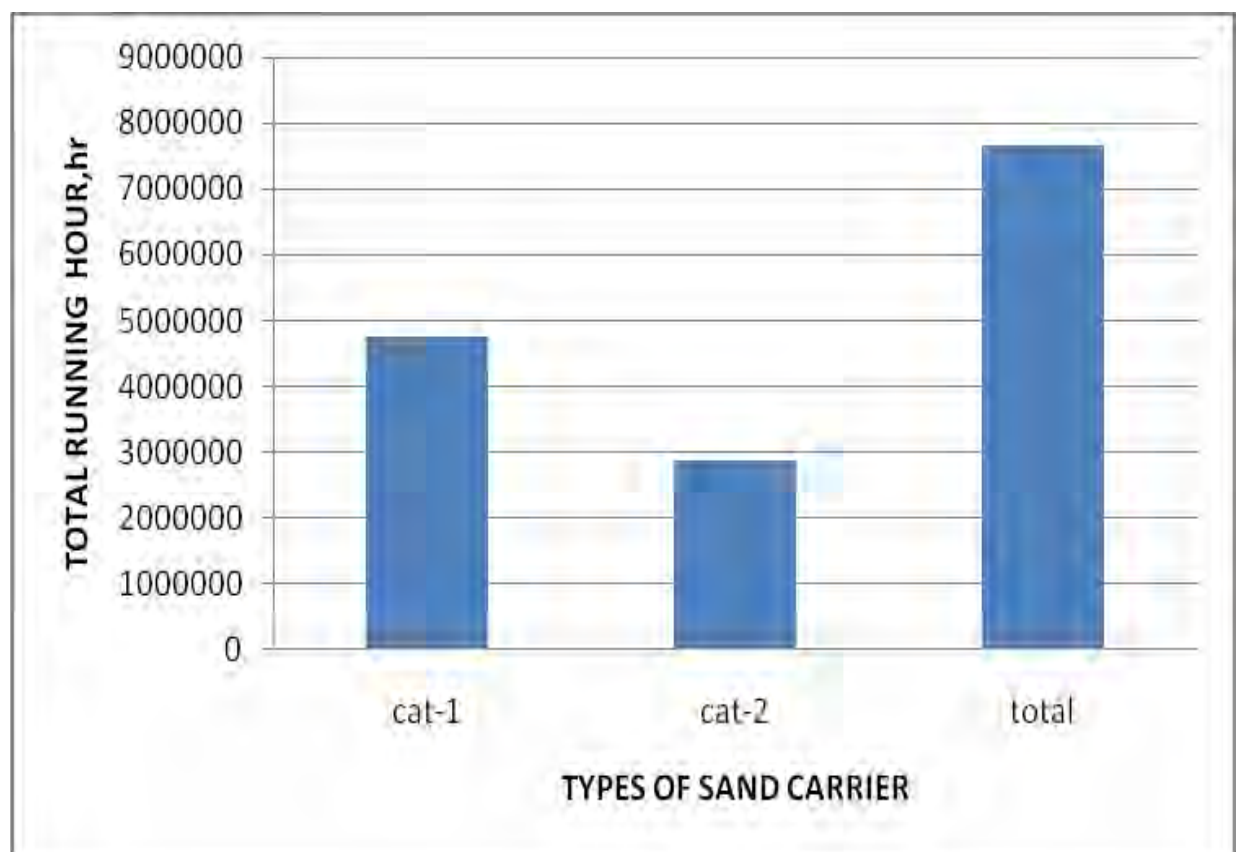


**Figure 3.24: Percentage of Bilges Discharged by Sand Carriers**

**3.6.4 Calculation for Running Hour, Fuel Consumption and Distance Covered**

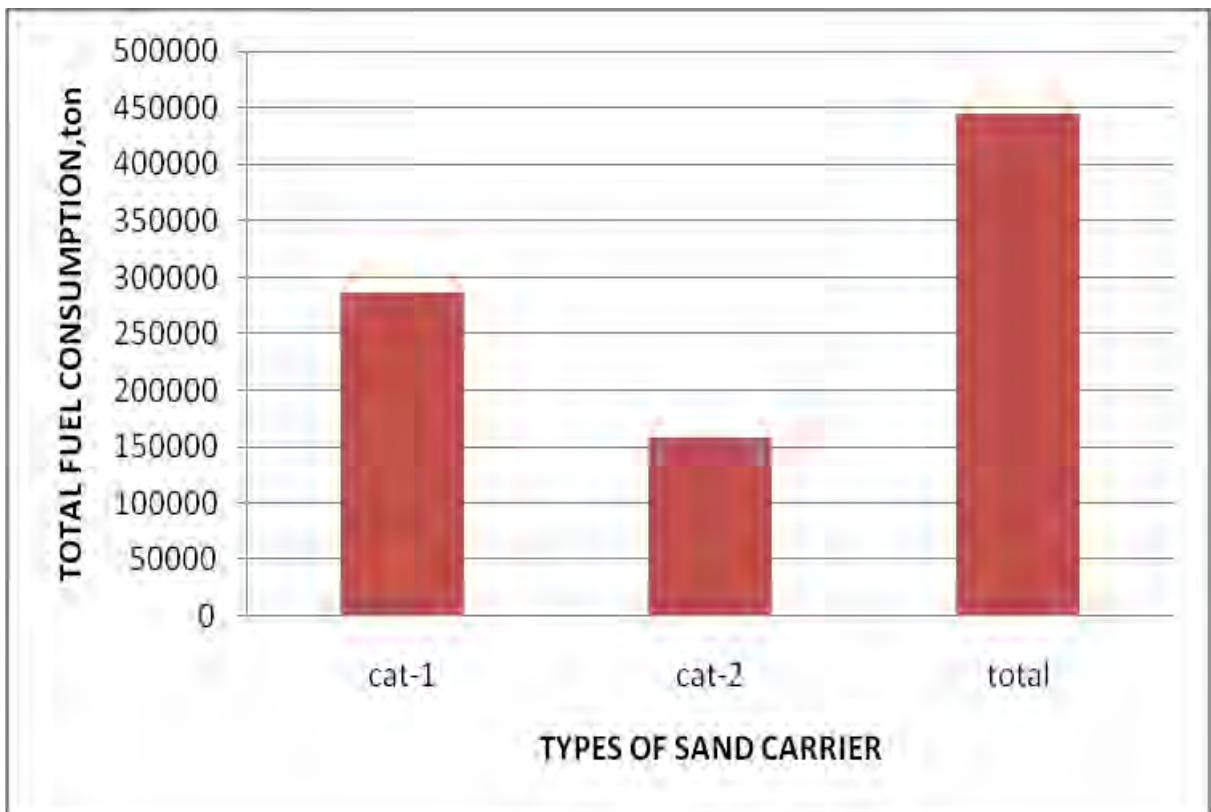
**Table 3.19: Summary of Calculation of Running Hour, Fuel Consumption and Distance Covered by Sand Carriers per Year**

Type	Total No	Total Running Hour (Hr)	Total Fuel Consumption (Ton)	Total Distance Covered (Km)
Category -1 (Up to 30m)	2065	4770150 Hr	286209	34822095 km
Category - 2 (Above 30 m)	1346	2887170 Hr	158794.35	26345426 km
<b>Total</b>	<b>3411</b>	<b>7657320</b>	<b>445003.35</b>	<b>61167521</b>

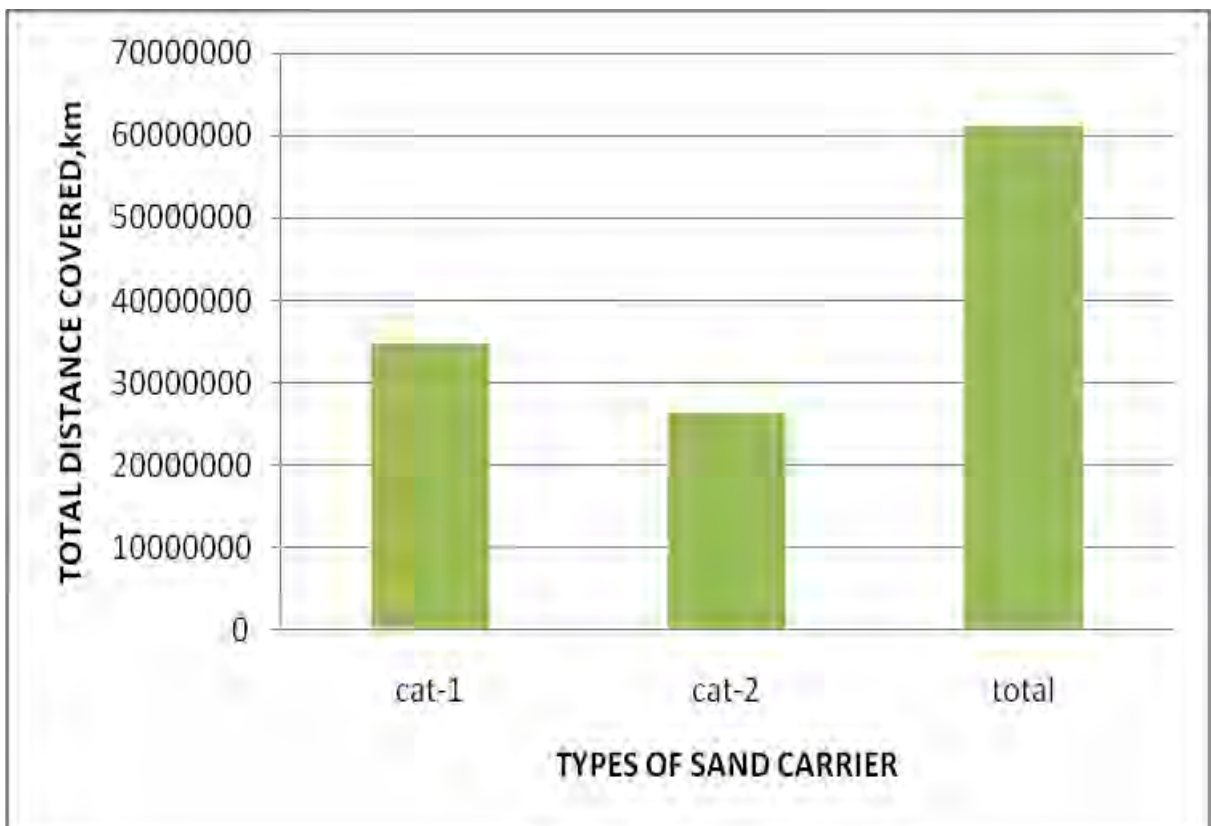


**Figure 3.25: Summary of Calculation of Running Hour (Sand Carriers)**





**Figure 3.26: Summary of Calculation of Fuel Consumption (Sand Carriers)**



**Figure 3.27: Summary of Calculation of Distance Covered (Sand Carriers)**



### 3.7 Trend Analysis.

3.7.1 The trend analysis to find out the number of vessels for 2025 and 2050 is carried out basing on the following data mentioned in table 3.20:

**Table 3.20 Vessels Registered with DOS**

Type of Vessel	Total Number of Vessels								
	<u>Dec</u> <u>2001</u>	<u>Dec</u> <u>2003</u>	<u>Dec</u> <b>2005</b>	<u>Dec</u> <b>2007</b>	<u>Dec</u> <u>2009</u>	<u>Dec</u> <u>2010</u>	<u>Dec</u> <u>2011</u>	<u>Dec</u> <u>2012</u>	<u>Dec</u> <u>2013</u>
Passenger Vessels	2124	2147	2253	2310	2162	2188	2209	984	1061
Cargo Vessels	1574	1706	1865	1983	2088	2217	2430	2048	2213
Oil Tanker	101	106	126	143	160	175	190	210	260
Sand Carrier	1946	2154	2346	2650	2893	3505	4175	3654	3411

3.7.2 The result of trend analysis is mentioned below in table 3.21:

**Table 3.21 Number of Vessels Projected for 2050**

Ser	Type of Vessel	Present Number of Vessel	Number of Vessel by 2025	Number of Vessel by 2050
1	Passenger Vessel	1061	1778	2190
2	Cargo Vessels	2213	3367	5251
3	Oil Tanker	260	370	521
4	Sand Carrier	3411	4152	6165

3.7.3 The result shows that the number of vessels will be more than twice by 2050 which will cause huge discharge into water which intern will affect much more on

environment pollution. The impact of pollutants in 2050 will be double then the present value.

3.8 **Summary.** Marine pollution has become a concern in each country, especially in Bangladesh as the pollutants are increasing gradually with no of population, time and no of vessels on river route. All the passenger ship, cargo ship, sand carrier and oil tankers do not follow the discharge regulations considering her contribution to environment pollution is very less or negligible. But the overall calculation shows the quantity of pollutants as a whole is a great amount (shown below in Table 3.23) which is a matter of big concern.

**Table 3.22: Summary of Pollutants Quantity/Year**

Type	Cat	Bilges Discharged (Ton)	Sewage Discharged (MT)	Oily water (Ton)	Ballast water (Ton)	Fuel Burnt (Ton)
Passenger Vessel	Cat -1	3856.050	42.845	-	-	51414
	Cat -2	1815.00	229.9	-	-	101640
	Cat -3	647.90	111.98	-	-	49104
	<b>Total</b>	<b>6318.95</b>	<b>384.73</b>	-	-	<b>202158</b>
Cargo Vessel	Cat -1	1435.50	-	-	-	34452
	Cat -2	10256.40	-	-	-	246453.6
	Cat -3	2309.175	-	-	-	61578
	<b>Total</b>	<b>14001.075</b>	-	-	-	<b>3424836</b>
Oil Tanker	Cat -1	212.85	-	39150	-	5108.40
	Cat -2	935	-	1054680	-	25357.20
	Cat -3	255.75	-	-	306900	6138
	<b>Total</b>	<b>1403.60</b>	-	<b>1093830</b>	<b>306900</b>	<b>36603.60</b>
Sand Carrier	Cat -1	5179.02	-	-	-	286209
	Cat -2	5182.10	-	-	-	158794.35
	<b>Total</b>	<b>10361.12</b>	-	-	-	<b>632669</b>

## CHAPTER- 4

### ANALYSIS OF IMPACTS OF POLLUTANTS ON ENVIRONMENT

4.1 **General.** This chapter has initially explained about the computer software used to find out the impacts of pollutants, various important terminologies related to the programme followed by the impact of pollutants discharged per year by inland vessels (passenger vessels, cargo vessels, oil tankers and sand carriers) of Bangladesh.

#### 4.2 **Computer Software for Impact analysis.**

4.2.1 **SimaPro.** To find out the impact of pollutants on environment the computer software namely SimaPro 7 was used. It is the latest generation of the world's most widely used [Life Cycle Assessment](#) (LCA) software. However, it can be used to find out the environmental impact of marine pollutants. SimaPro is a professional tool that helps to analyze the environmental aspects of products or services. It does so in a systematic and consistent way, so that the best outputs are found. The inputs for SimaPro has been calculated through ground survey, collected data from various sources, interviews and articles from various journals.

4.2.2 **Impact Assessment.** The impact assessment can be expressed as a —quantitative and/or qualitative process to characterize and assess the effects of the environmental intervention identified in the inventory table”. According to these authors, —the impact assessment component consists in principle of the following three or four elements: classification, characterization, (normalization,) and valuation”; normalization and valuation are sometimes merged. Valuation is proposed changed to weighting by and this terminology has been adapted by the SETAC-Europe working group. The impact assessment containing the following main issues [13]:

- a. Category definition
- b. Classification
- c. Characterization
- d. Valuation/weighting

The elements are explained in relation to the Draft ISO standard CD 14042.1[14]. However, the impact assessment is composed of several individual elements. The distinction into different element is necessary for several reasons:

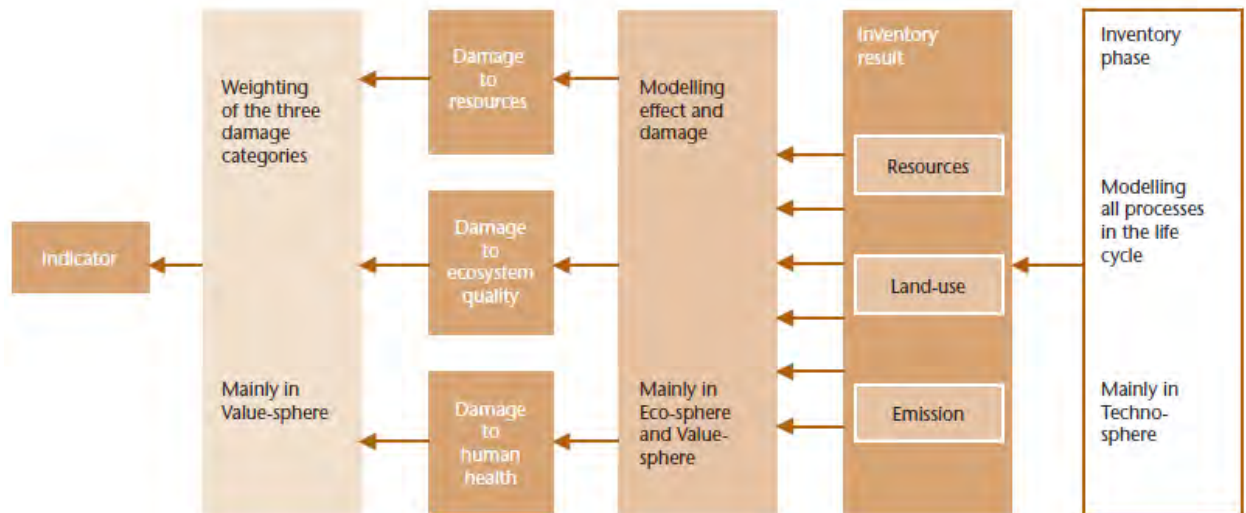
- a. Each element represents a different specific procedure;
- b. All elements are not required for all applications;
- c. Methods, assumptions and value choices can be made more transparent and can be documented and reviewed;
- d. The effect of methods, assumptions and value choices on the results can be demonstrated.

4.2.3 **Eco indicator 99 (I)**. From various methods of SimaPro, Eco indicator 99 (I) was used to find out the environmental impact of discharging pollutants from inland water vessels. Eco-indicator 99 uses the damage-oriented approach. The development of the Eco-indicator 99 methodology started with the design of the weighting procedure. Traditionally in LCA the emissions and resource extractions are expressed as 10 or more different impact categories, like acidification, ozone layer depletion, ecotoxicity and resource extraction. For a panel of experts or non-experts it is very difficult to give meaningful weighting factors for such a large number and rather abstract impact categories. It was concluded that the panel should not be asked to weight the impact categories but the different types of damage that are caused by these impact categories. Eco indicator 99 (I) assess the seriousness of three damage categories:

- a. Damage to Human Health, expressed as the number of year life lost and the number of years lived disabled. These are combined as Disability Adjusted Life Years (DALYs), an index that is also used by the World bank and WHO.
- b. Damage to Ecosystem Quality, express as the loss of species over an certain area, during a certain time
- c. Damage to Resources, expressed as the surplus energy needed for future extractions of minerals and fossil fuels.

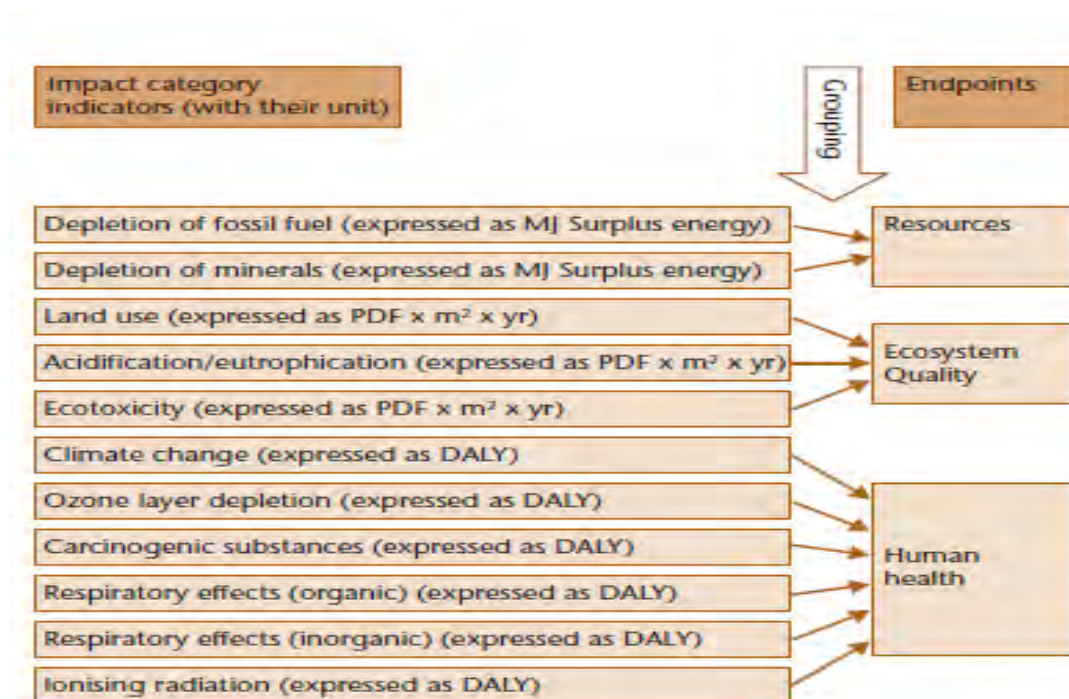
4.2.4 **Concept of Echo-Indicator 99 (I)**. In order to be able to use the weights for the three damage categories a series of complex damage models had to be developed which is shown in **Annex F**. In order to calculate the Eco- indicator score three steps are needed:

- a. Inventory of all relevant emissions, resource extractions and land use.
- b. Calculation of damages these flows cause to human health, ecosystem quality and resources.
- c. Weighting of these three damage categories.



**Figure 4.1: The Concept of Echo-Indicator 99 (I)**

**4.2.5 Principle of Damage Assessment.** The Eco-indicator values for a certain impact are expressed as a sum of impacts for each of the three categories. Each of the impact categories are expressed in one unit. Impact on human health is expressed as DALY, Disability Adjusted Life Years, that is the number of years of life lost and the number of years lived disabled. Impact on ecosystem quality is expressed as the loss of species over a certain area during a certain time  $PDF \times m^2 \times year$  ( $PDF = \text{Potentially Disappeared Fraction}$ ). Depletion of resources is expressed as surplus energy needed for future extractions of minerals and fossil fuels. The principle of damage assessment is shown in Figure 4.2 below:



**Figure 4.2: Principle of Damage Assessment in Eco-indicator 99 (I)**

4.2.6 **Eco-indicator for Human Health**. The health of any human individual, being a member of the present or a future generation, may be damaged either by reducing the duration of his or her life by premature death, or by causing a temporary or permanent reduction of body functions (disabilities). The environmental sources for such damages include:

- a. Infectious diseases, cardiovascular and respiratory diseases, as well as forced displacement due to the climate change.
- b. Cancer as a result of ionizing radiation.
- c. Cancer and eye damages due to ozone layer depletion.
- d. Respiratory diseases and cancer due to toxic chemicals in air, drinking water and food.

These types of damages represent important threats to Human Health caused by emissions from product systems. The damage category is, however, far from complete. For instance, health damage from emissions of heavy metals such as Cd and Pb, of endocrine disrupters etc. as well as health damages from allergenic substances, noise and odor are not yet modeled in Eco-indicator 99.

4.2.7 **Eco-indicator for Ecosystem Quality**. Ecosystems are very complex, and it is very difficult to determine all damage inflicted upon them. An important difference compared with Human Health is that it is not really concerned with the individual organism, plant or animal. The species diversity is used as an indicator for Ecosystem Quality. The ecosystem damage can be expressed as a percentage of species that are threatened or that disappear from a given area during a certain time. For ecotoxicity, Eco-indicator 99 uses a method recently developed in the Netherlands for the Dutch Environmental Outlook. This method determines the Potentially Affected Fraction (PAF) of species in relation to the concentration of toxic substances. The PAFs are determined on the basis of toxicity data for terrestrial and aquatic organisms like microorganisms, plants, worms, algae, amphibians, mollusks, crustaceans and fish. The PAF expresses the percentage of species that is exposed to a concentration above the No Observed Effect Concentration (NOEC). A higher concentration caused a larger number of species that are affected. Being based on NOEC, a PAF does not necessarily correspond to an observable damage. Even a high PAF value of 50% or even 90% does not have to result in a really observable effect. PAF should be interpreted as toxic stress and not as a measure to model disappearance or extinction of species.

4.2.8 **Eco-indicator for Resources**. In the case of non-renewable resources (minerals and fossil fuels), it is obvious that there is a limit on the human use of these resources, but it is rather arbitrary to give data on the total quantity per resource existing in the accessible part of the earth crust. The sum of the known and easily exploitable deposits is quite small in comparison with current yearly extractions. If one includes occurrences of very low concentrations or with very difficult access, the resource figures become huge. It is difficult to fix convincing boundaries for including or not-including occurrences between the two extremes, as quantity and quality are directly linked. To tackle this problem, the Eco-indicator methodology does not consider the quantity of resources as such, but rather the qualitative structure of resources.

4.2.9 **Calculation of Damage by Eco-indicator 99 (I)**. For the calculation of damages four steps are needed, such as:

- a. **Fate analysis**. When a chemical substance is released it finds its way through the environmental compartments air, water and soil. Where the substance will go and how long it will stay depends on the properties of the substance and the compartments. In fate analysis models the transfer between compartments and the degradation of substances is modeled. As a result the concentration in air, water, soil and food can be calculated.
- b. **Exposure**. Based on the calculated concentrations it can be determined that how much of a substance is really taken in by people and by plants or other life forms.
- c. **Effect analysis**. Once the exposure of a substance is known it is possible to predict the types and frequencies of diseases and other effects.
- d. **Damage analysis**. The predicted diseases can now be expressed into damage unit. It can calculate how many years of life lost and how many years to live disable. Damage to higher species like birds and mammals could not be calculated but damage to plants and lower organisms are calculated. For most substances the damages are calculated on a European scale.

#### 4.3 **Important Terminologies and Definitions**.

4.3.1 Few important terminologies and definitions related to Sima pro are mentioned below:

- a. **BUWAL database**. Database from the Swiss Agency for the Environment, Forests and Landscape.

b. **Damage analysis**. To find out the total damage a chemical substance can cause (how many people, the severity of the disease)

c. **Ecoinvent**. The Swiss centre for Life Cycle Inventories. It is responsible for extending, updating and to preserve the high quality of the Ecoinvent 2000 database. The data in this database derives from different LCI databases, mainly BUWAL and ETH-ESU 96, and covers many areas.

d. **Impact category**. Class representing environmental issues of concern to which LCI results may be assigned (ISO 14040).

e. **Characterization**. The main aim of characterization is to model categories in terms of indicators, and, if possible, have to provide a basis for the aggregation of the inventory input and output within the category. This is also done in terms of the indicator to represent an overall change or loading to that category. The result of characterization is that the combination of category should have a specific model for the relationship between the input and output data and the indicator. The model should be based on scientific knowledge, where possible, but may have simplifying assumptions and value-choices. The representativeness and accuracy of each model depends on several factors, such as spatial and temporal compatibility of the category, with the inventory. The relationship between the inventory input and output data and the category indicator is normally strong (or within reach). The relationship between the indicator and endpoint(s) is usually weaker and may be mainly qualitative.

Characterization is mainly a quantitative step based on scientific analysis of the relevant processes. The characterization has assigned the relative contribution of each input and output to the selected impact categories. The potential contribution of each input and output to the environmental impacts has to be estimated. For some of the environmental impact categories there is consensus about equivalency factors to be used in the estimation of the total impact (e.g. global warming, ozone depletion potentials etc.) whereas equivalence factors for other environmental impacts are not available at consensus level (e.g. biotic resources, land use etc.).



f. **Weighting**. The previous element, characterization, result in quantitative statement on different impact categories e.g. global warming, stratospheric ozone depletion and ecotoxicological effects. Comparison of these categories is not immediately possible. Therefore, the life cycle impact assessment includes as a fourth element a valuation/weighting of the impact categories against each other. Weighting aims to rank, weight, or possible, aggregate the results of different life cycle impact assessment categories in order to arrive at the relative importance of these different results. The weighting process is not technical, scientific, or objectives these various impact assessment results e.g., indicators for greenhouse gases or resource depletion, are not directly comparable. However, weighting may be assisted by applying scientifically based analytical techniques. Weighting may be considered to address three basic aspects:

- (1) To express the relative preference of an organization or group of stakeholders based on policies, goals, or aims, and personal or group opinions or beliefs common to the group;
- (2) To ensure that process is visible, documentable, and reportable, and
- (3) To establish the relative importance of the results is based on the state of knowledge about these issues.

Weighting is a qualitative step or quantitative step not necessarily based on natural science but often on political or ethical values. Weighting has previously been referred to as valuation.

g. **Weighting factor**. A factor that is coupled at a certain impact category, which is determined by a panel based on subjective opinions and reflects the importance of the category.

h. **Normalisation**. A procedure to show to what extent an impact category contributes to the overall environmental problem.

j. **DALY, PDF\*m<sup>2</sup>yr, MJ surplus, Pt, and UBP**. The unit DALY represents Disability Adjusted Life Years, PDF\*m<sup>2</sup>yr stands for Potentially Disappeared Fraction, while MJ surplus is about the surplus of energy required to extract the same amount of minerals for next generation due to

depletion of these minerals.  $Pt$  = yearly environmental load of one. The Eco-invent implementation contains seven specific impact categories, with for each substance a final UBP (environmental loading points) score as characterization factor.

4.3.2 **Emissions**. Characterization factors are calculated at end-point level (damage). The damage model for emissions includes fate analysis, exposures, effects analysis and damage analysis. This model is applied for the following impact categories:

- a. **Carcinogens**. Carcinogenic effects due to emissions of carcinogenic substances to air, causing respiratory effects. Damage is expressed in Disability Adjusted Life Years (DALY)/kg emission.
- b. **Respiratory organics**. Respiratory effects resulting from summer smog, due to emissions of organic substances to air, causing respiratory effects. Damage is expressed in Disability Adjusted Life Years (DALY)/kg emission.
- c. **Climate change**. Damage, expressed in DALY/kg emission, due to increased radiation.
- d. **Ozone layer**. Damage, expressed in DALY/kg emission, due to increased UV radiation as a result of emission of ozone depleting substances to air.
- e. **Eco toxicity**. Damage to ecosystem quality, as a result of emission of eco toxic substances to air, water and soil. Damage is expressed in Potentially Affected Fraction (PDF)\* $m^2$ \*year/kg emission.
- f. **Acidification/Eutrophication**. Damage to ecosystem quality, as a result of emission of acidifying substances to air. Damage is expressed in Potentially Disappeared Fraction (PDF)\* $m^2$ \*year/kg emission.
- g. **Radiation**. Damage, expressed in DALY/kg emission, resulting from radioactive radiation.
- h. **Land use**. Land use (in manmade systems) has impact on species diversity. Based on field observations, a scale is developed expressing species diversity per type of land use. Species diversity depends on the type of land use and the size of the area. Both regional effects and local effects are taken into account in the impact category: - **Land use**

Damage as a result of either conversion of land or occupation of land. Damage is expressed in Potentially Disappeared Fraction (PDF)\*m<sup>2</sup>\*year/m<sup>2</sup> or m<sup>2</sup>a.

- j. **Resource depletion.** Mankind will always extract the best resource first, leaving the lower quality resources for the future extraction. The damage of resources will be experienced by future generation, as they will have to use more effort to extract remaining resources. This extra effort is expressed as —surplus energy”
- k. **Minerals.** Surplus energy per kg mineral or ore, as a result of decreasing ore grades.
- l. **Fossil fuels.** Surplus energy per extracted MJ, kg or m<sup>3</sup> fossil fuel, as a result of lower quality resources.

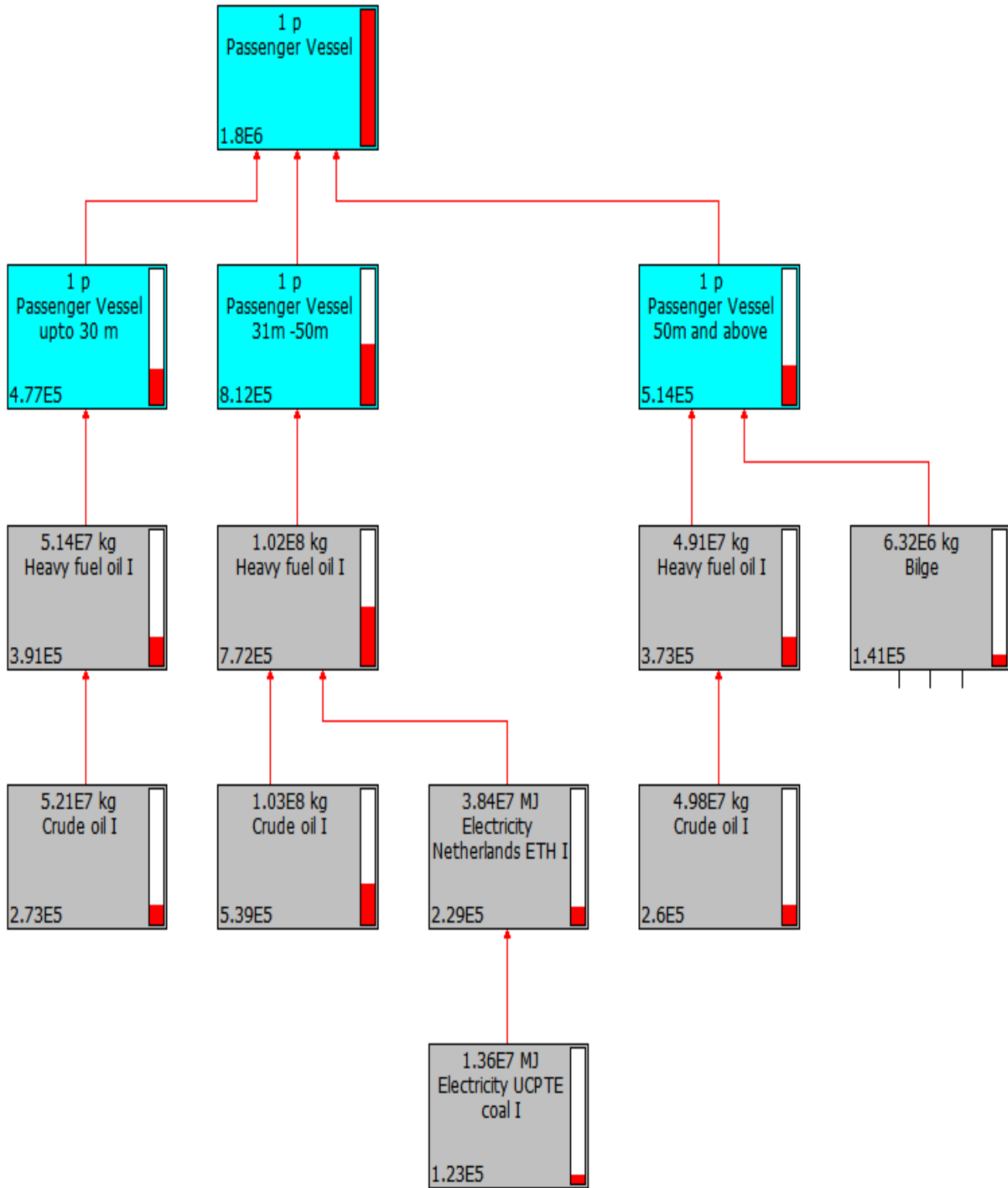
#### 4.4 **Impact Analysis of Pollutant Thrown by Passenger Vessels.**

4.4.1 Bangladesh heavily depends upon the passenger vessels for human transportation as it is relatively easier and cheapest transportation system of the country. The accessibility through river to different areas is more than the highways. Moreover, the roads are overburdened with huge no of transports and poor traffic arrangements. This dependability will increase more and more in future due to poor road condition and comfort in ship journey. Presently more than one thousand of registered passenger vessels are plying in various routes of the country which is likely to increase further in near future. However, a practical on ground survey showed that the passenger ships of inland routes are polluting the marine environment by discharging bilges, solid Waste and by emission of exhaust gases. The quantity of pollutants was calculated in chapter four and summarized as shown in Table 4.1:

**Table 4.1: Total Pollutants Thrown by Passenger Ships/Yr**

<b>Category</b>	<b>Bilges Discharged (Ton)</b>	<b>Sewage Discharged (MT)</b>	<b>Fuel Burnt (Ton)</b>
Passenger Vessels (Cat 1,2 & 3)	6318.95	384.73	202158

4.4.2 These pollutants were provided as input to find out the impact on environment using Sima pro software. Eco indicator 99 I method was used to find out the impacts. The environmental impact model of passenger vessels is shown in Figure 4.3.



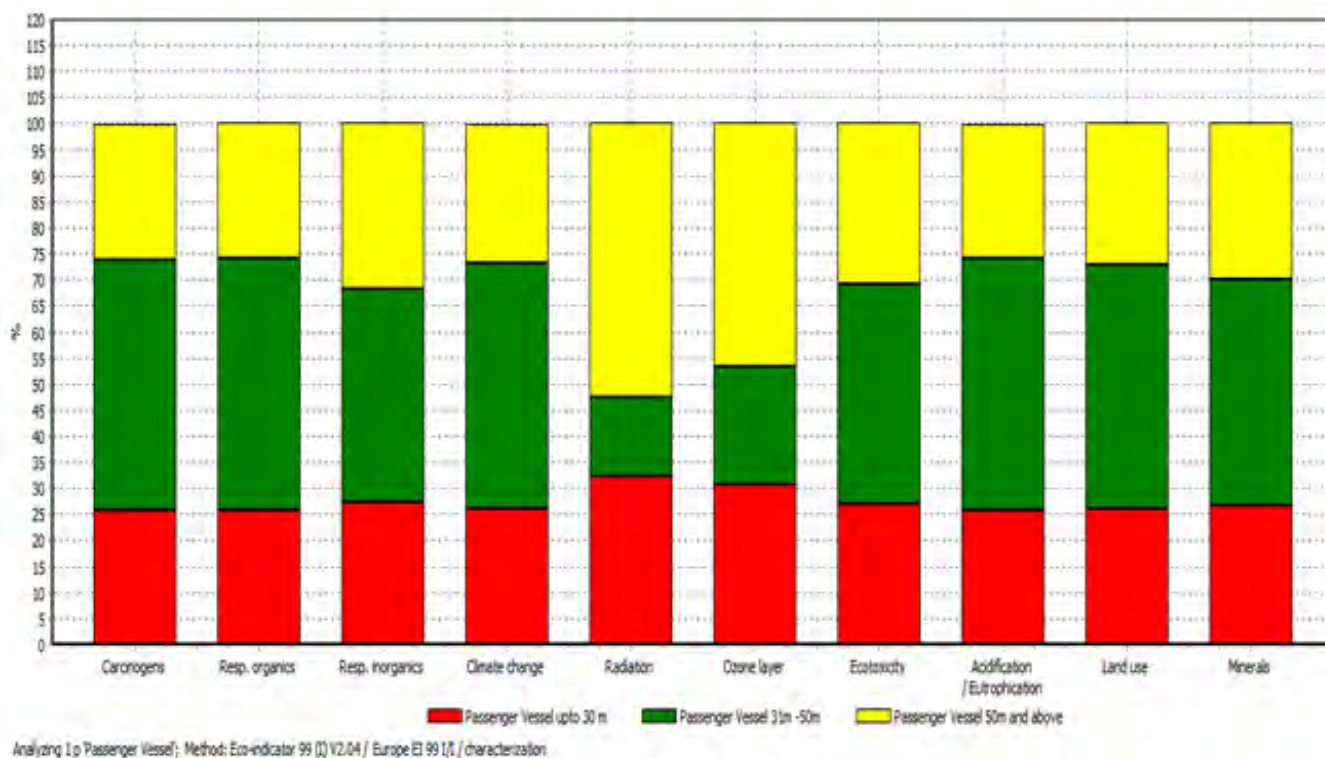
**Figure 4.3: Impact Model of Inland Passenger Vessels**

4.4.3 The outputs of impact of discharging pollutants by inland passenger vessels are shown below in Table 4.2, Table 4.3 and Table 4.4:

a. **Characterization.**

**Table 4.2: Impacts of Pollutants Thrown By Passenger Vessels/Yr (Characterization)**

Impact category	Unit	Passenger Vessel upto 30 m	Passenger Vessel 31m -50m	Passenger Vessel 50m and above	Total Impact
Carcinogens	DALY	0.26898	0.500292	0.271175	1.040447
Resp. organics	DALY	0.120211	0.225854	0.120168	0.466233
Resp. in organics	DALY	2.435926	3.666693	2.848543	8.951163
Climate change	DALY	3.132387	5.681791	3.215581	12.02976
Radiation	DALY	0.000468	0.00022	0.000766	0.001454
Ozone layer	DALY	0.001406	0.001038	0.002134	0.004578
Ecotoxicity	PAF*m2yr	337355.9	528083.9	385263.4	1250703
Acidification/ Eutrophication	PDF*m2yr	784935.7	1465192	789021.5	3039149
Land use	PDF*m2yr	129692	232356.4	134792.9	496841.4
Minerals	MJ surplus	20534.43	33287.68	22937.56	76759.67

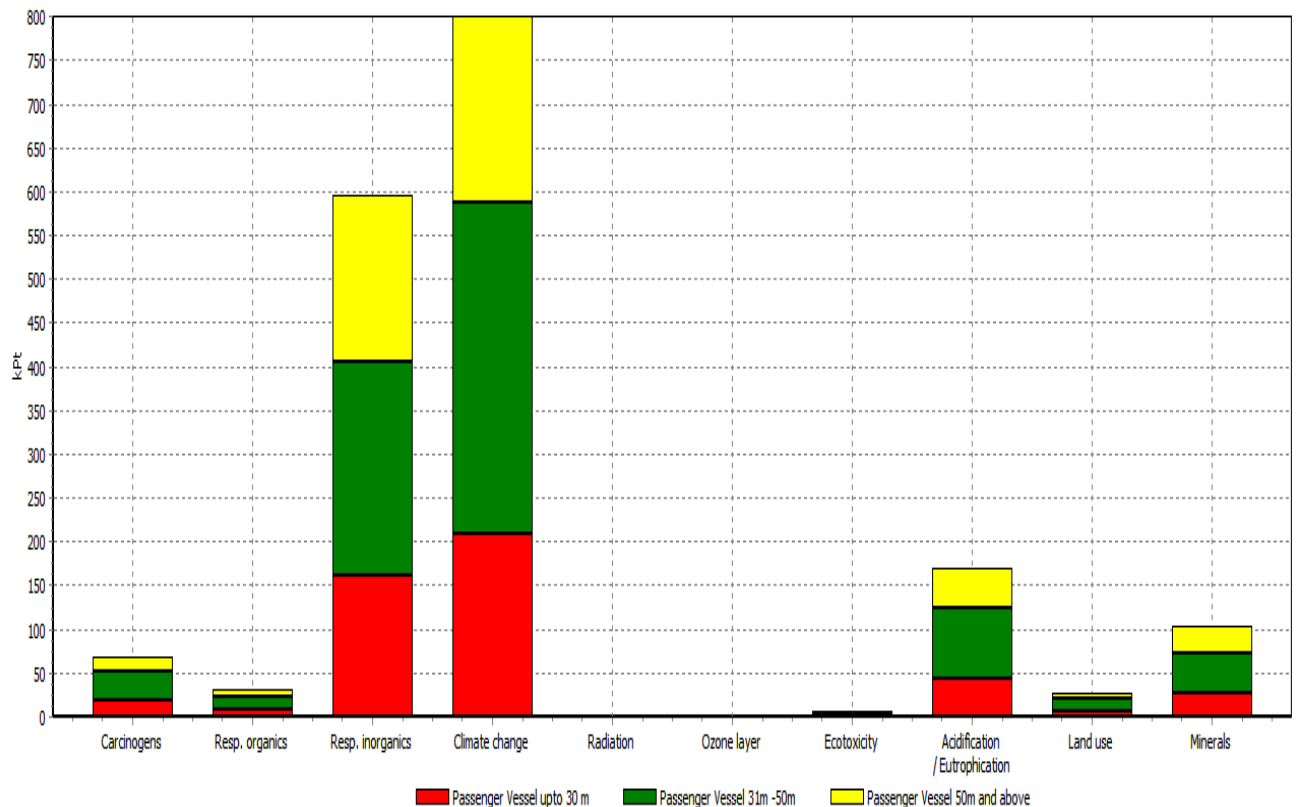


**Figure 4.4 Impacts of Pollutants Thrown by Passenger Vessels/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Characterization)'**

b. Weighting.

**Table 4.3: Impacts of Pollutants Thrown By Passenger Vessels/Yr (Weighting)**

Impact category	Unit	Passenger Vessel upto 30 m	Passenger Vessel 31m -50m	Passenger Vessel 50m and above	Total Impact
Carcinogens	Pt	17900.6	33294.44	18046.72	69241.76
Resp. organics	Pt	8000.036	15030.56	7997.186	31027.78
Resp. inorganics	Pt	162110.9	244018.4	189570.6	595699.9
Climate change	Pt	208460.4	378123.2	213996.9	800580.5
Radiation	Pt	31.11248	14.6516	50.9858	96.74988
Ozone layer	Pt	93.58045	69.06623	142.0113	304.658
Ecotoxicity	Pt	1872.325	2930.866	2138.212	6941.403
Acidification/ Eutrophication	Pt	43563.93	81318.16	43790.69	168672.8
Land use	Pt	7197.907	12895.78	7481.009	27574.7
Minerals	Pt	27434	44472.34	30644.58	102550.9



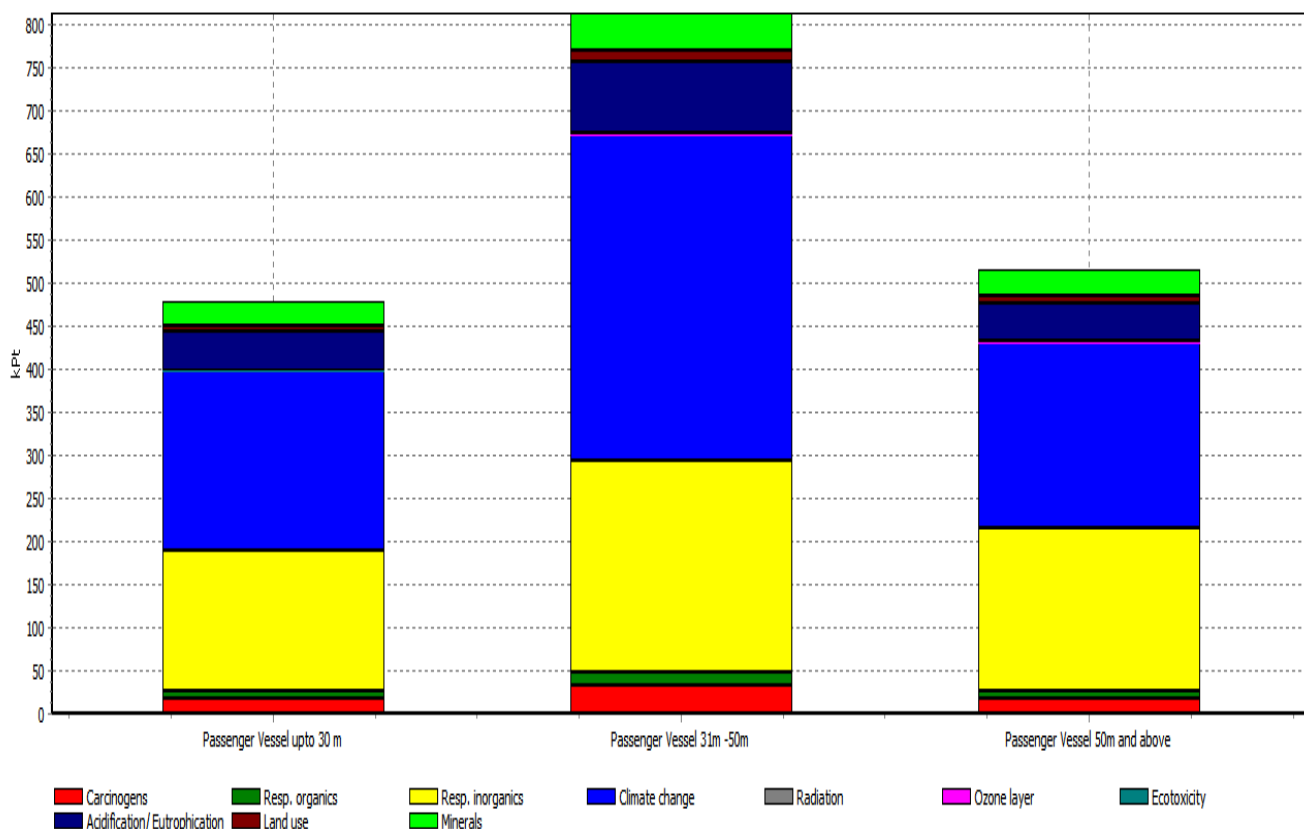
Analyzing 1 p 'Passenger Vessel'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / weighting

**Figure 4.5: Impacts of Pollutants Thrown by Passenger Vessels/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Weighting)'**

c. Single score.

**Table 4.4: Impacts of Pollutants Thrown By Passenger Vessels/Yr (Single Score)**

Impact category	Unit	Passenger Vessel up to 30 m	Passenger Vessel 31m -50m	Passenger Vessel 50m and above	Total Impact
Carcinogens	Pt	17900.6	33294.44	18046.72	69241.76
Resp. organics	Pt	8000.036	15030.56	7997.186	31027.78
Resp. inorganics	Pt	162110.9	244018.4	189570.6	595699.9
Climate change	Pt	208460.4	378123.2	213996.9	800580.5
Radiation	Pt	31.11248	14.6516	50.9858	96.74988
Ozone layer	Pt	93.58045	69.06623	142.0113	304.658
Ecotoxicity	Pt	1872.325	2930.866	2138.212	6941.403
Acidification/ Eutrophication	Pt	43563.93	81318.16	43790.69	168672.8
Land use	Pt	7197.907	12895.78	7481.009	27574.7
Minerals	Pt	27434	44472.34	30644.58	102550.9



Analyzing 1 p 'Passenger Vessel'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / single score

**Figure 4.6: Impacts of Pollutants Thrown by Passenger Vessels/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Single Score)'**

#### 4.5 **Impact Analysis of Pollutant Thrown by Cargo Ship.**

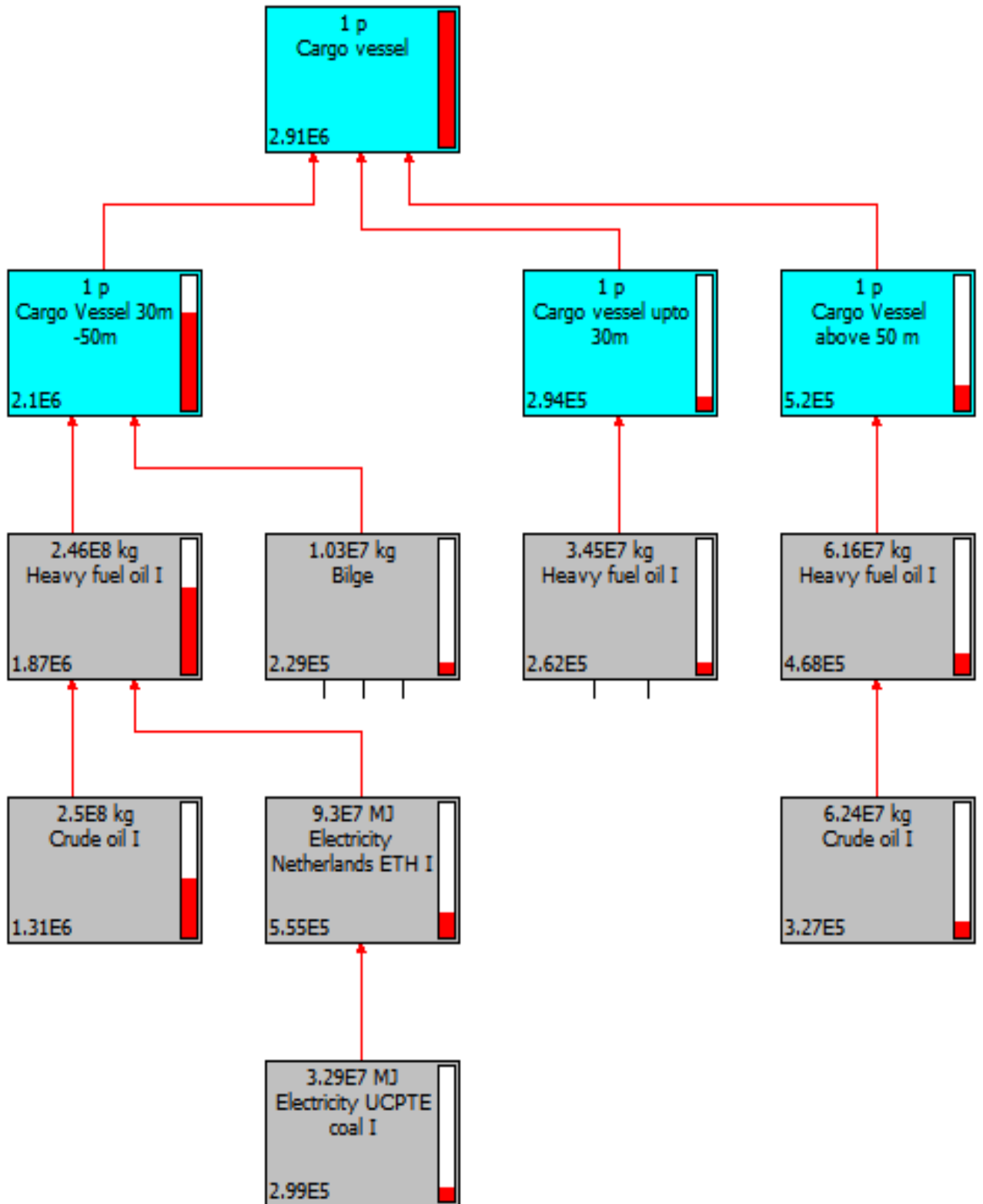
4.5.1 Cargo vessels are used for carrying various kinds of commodities like food, food grains, Jute & jute goods, cement and clinker from one corner to other corners of the country. Due to cheaper fair rate and larger carrying capacity, it is the most popular means of carrying cargos. The fleet consists of 2,200 units and makes average three or four trips per month. However, the cargo ships of inland routes are polluting the marine environment by discharging bilges and by emission of exhaust gases. The quantity of pollutants was calculated in chapter four and summarized as shown in Table 4.5:

**Table 4.5: Total Pollutants Thrown by Cargo Ships/Yr**

<b>Category</b>	<b>Bilges Discharged (Ton)</b>	<b>Sewage Discharged (MT)</b>	<b>Fuel Burnt (Ton)</b>
Cargo Vessel	14001.075	-	3424836

4.5.2 These pollutants were provided as input to find out the impact on environment using Sima pro software, Eco indicator 99 (I) v2.04. The environmental impact model of Cargo vessels is shown below in Figure 4.7.





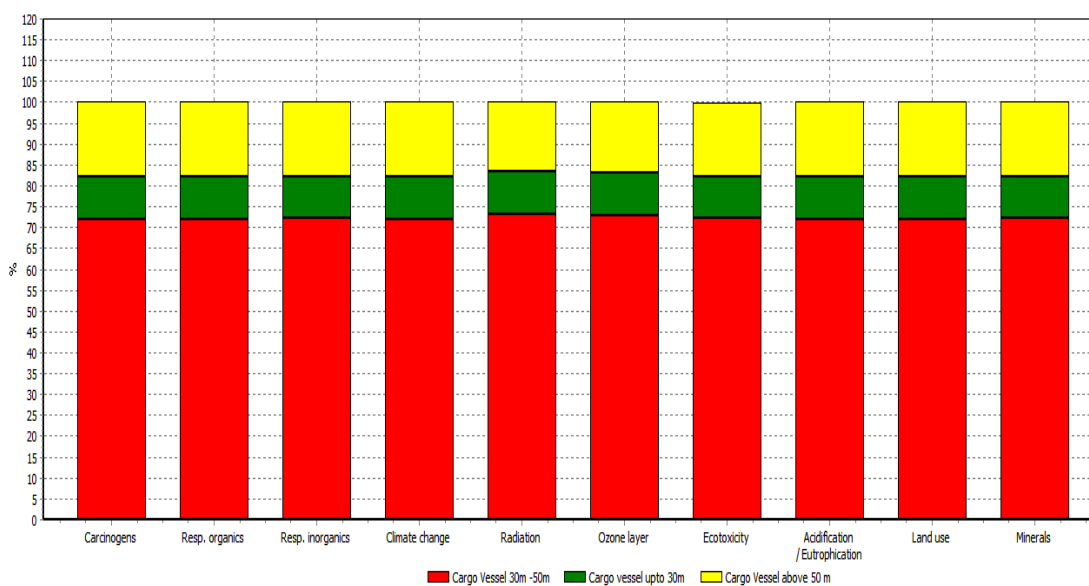
**Figure 4.7: Impact Model of Inland Cargo Vessels**

4.5.3 The outputs of impact of discharging pollutants by inland cargo vessels are shown below in Table 4.6, Table 4.7 and Table 4.8:

a. **Characterization.**

**Table 4.6: Impacts of Pollutants Thrown By Cargo Vessels/Yr (Characterization)**

Impact category	Unit	Cargo vessel up to 30m	Cargo Vessel 30m -50m	Cargo Vessel above 50 m	Total Impact
Carcinogens	DALY	0.17402	1.243339	0.309645	1.727004
Resp. organics	DALY	0.078218	0.558854	0.139282	0.776354
Resp. inorganics	DALY	1.404871	10.03756	2.460223	13.90265
Climate change	DALY	2.001301	14.29895	3.554847	19.8551
Radiation	DALY	0.000174	0.001243	0.00028	0.001697
Ozone layer	DALY	0.000598	0.004271	0.000991	0.00586
Ecotoxicity	PAF*m2yr	198586.4	1418866	348809.2	1966261
Acidification/ Eutrophication	PDF*m2yr	508835.3	3635540	905643.4	5050019
Land use	PDF*m2yr	82145.07	586912.4	145759.9	814817.4
Minerals	MJ surplus	12311.26	87961.83	21681.39	121954.5



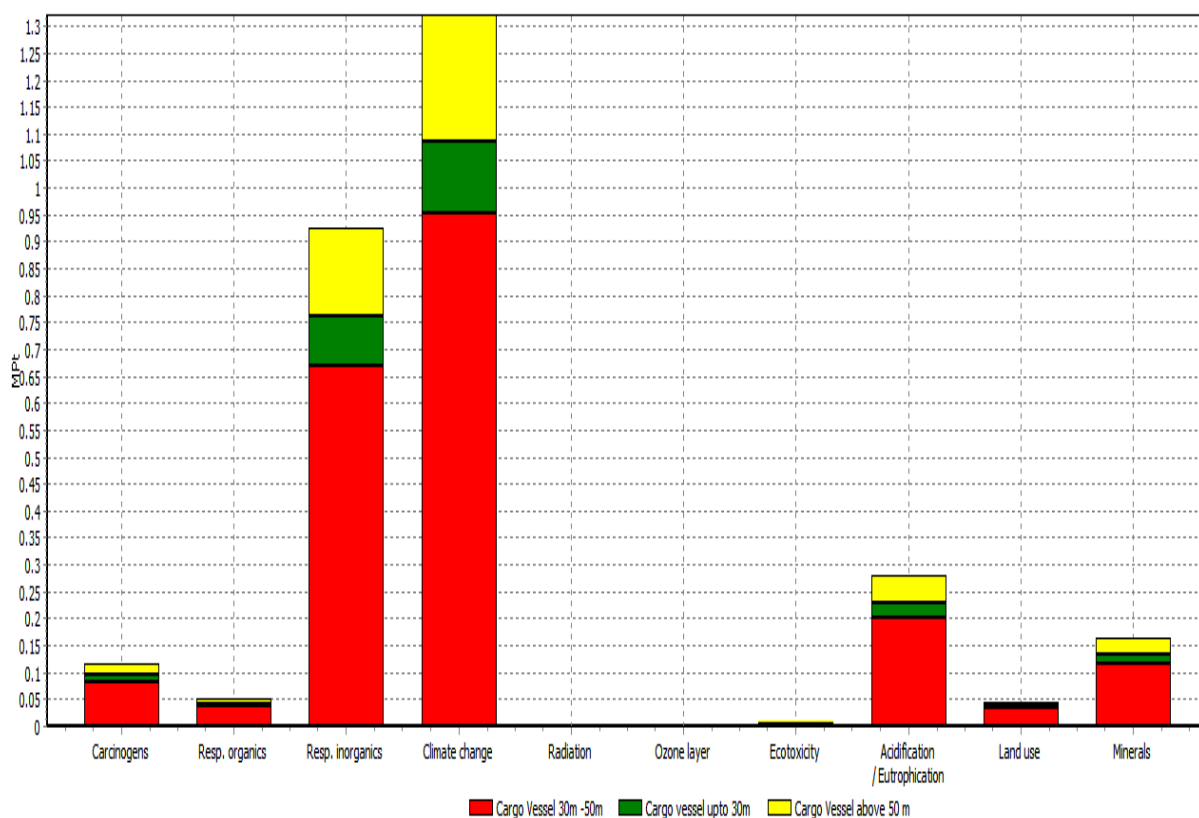
Analyzing 1 p 'Cargo vessel'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / characterization

**Figure 4.8 Impacts of Pollutants Thrown by Cargo Vessels/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Characterization)'**

b. Weighting.

**Table 4.7: Impacts of Pollutants Thrown By Cargo Vessels/Yr (Weighting)**

Impact category	Unit	Cargo vessel up to 30m	Cargo Vessel 30m -50m	Cargo Vessel above 50 m	Total Impact
Carcinogens	Pt	11581	82744.24	20606.89	114932.1
Resp. organics	Pt	5205.408	37191.75	9269.236	51666.39
Resp. inorganics	Pt	93494.15	667999.6	163727.9	925221.6
Climate change	Pt	133186.6	951595	236575.1	1321357
Radiation	Pt	11.58175	82.74964	18.63065	112.962
Ozone layer	Pt	39.77774	284.2051	65.97482	389.9577
Ecotoxicity	Pt	1102.155	7874.705	1935.891	10912.75
Acidification/ Eutrophication	Pt	28240.36	201772.5	50263.21	280276.1
Land use	Pt	4559.051	32573.64	8089.677	45222.36
Minerals	Pt	16447.84	117517	28966.34	162931.2



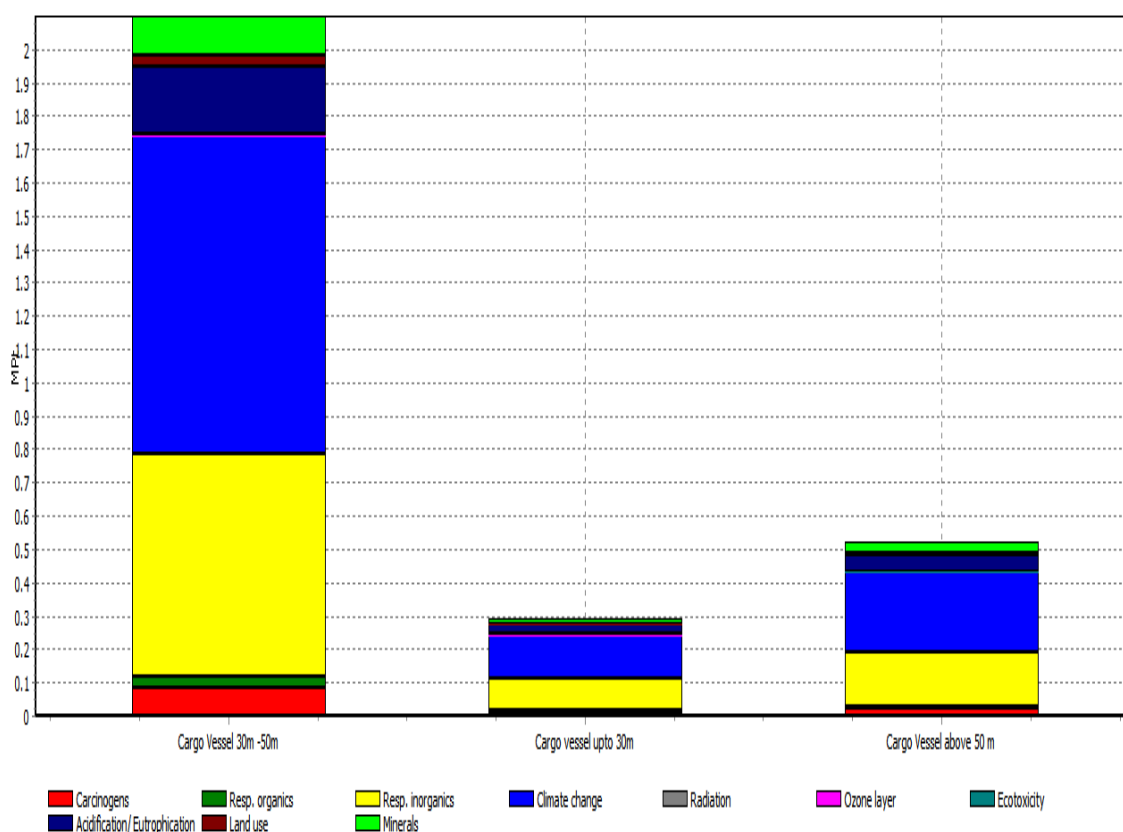
Analyzing 1 p 'Cargo vessel'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I / weighting

**Figure 4.9 Impacts of Pollutants Thrown by Cargo Vessels/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Weighting)'**

c. Single score.

**Table 4.8: Impacts of Pollutants Thrown By Cargo Vessels/Yr (Single Score)**

Impact category	Unit	Cargo vessel up to 30m	Cargo Vessel 30m -50m	Cargo Vessel above 50 m	Total Impact
Carcinogens	Pt	11581	82744.24	20606.89	114932.1
Resp. organics	Pt	5205.408	37191.75	9269.236	51666.39
Resp. inorganics	Pt	93494.15	667999.6	163727.9	925221.6
Climate change	Pt	133186.6	951595	236575.1	1321357
Radiation	Pt	11.58175	82.74964	18.63065	112.962
Ozone layer	Pt	39.77774	284.2051	65.97482	389.9577
Ecotoxicity	Pt	1102.155	7874.705	1935.891	10912.75
Acidification/ Eutrophication	Pt	28240.36	201772.5	50263.21	280276.1
Land use	Pt	4559.051	32573.64	8089.677	45222.36
Minerals	Pt	16447.84	117517	28966.34	162931.2



Analyzing 1 p 'Cargo vessel'; Method: Eco-indicator 99 (I) V2.04 / Europe Et 99 I/I / single score

**Figure 4.10: Impacts of Pollutants Thrown by Cargo Vessels/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Single Score)'**

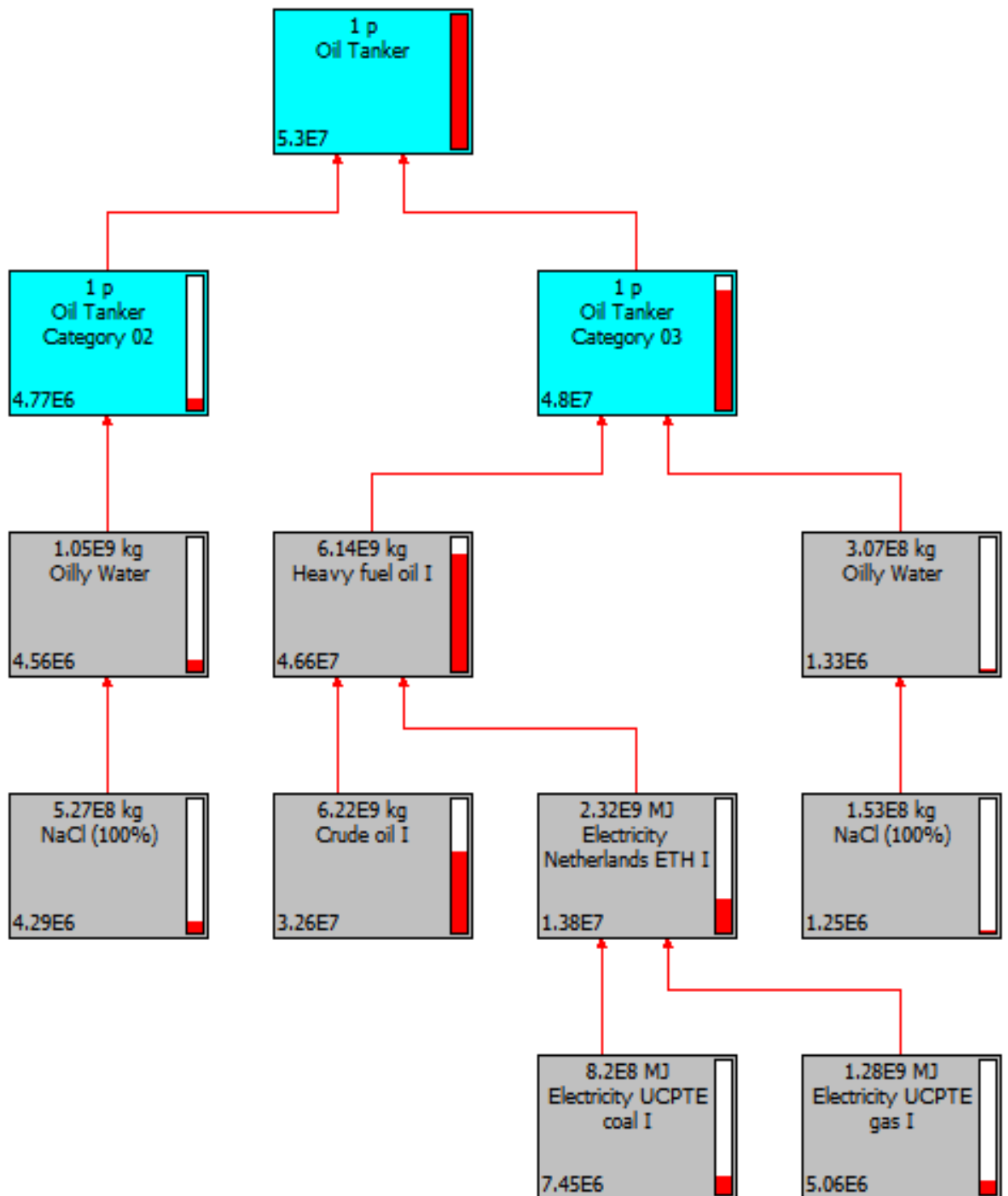
#### 4.6 **Impact Analysis of Pollutant Thrown by Oil Tanker.**

4.6.1 In Bangladesh, around 80% of total fuel is carried through riverine routes. The oil tankers of inland routes are polluting the marine environment by discharging bilges, oily water mixture, ballast Water, solid waste (neglected as the quantity is very small), and emission of exhaust gases and pollutants by burning fuel. The quantity of pollutants was calculated in chapter four and summarized as shown in Table 4.9:

**Table 4.9: Total Pollutants Thrown by Oil Tankers/Yr**

<b>Category</b>	<b>Bilges Discharged (Ton)</b>	<b>Sewage Discharged (MT)</b>	<b>Oily water (Ton)</b>	<b>Ballast water (Ton)</b>	<b>Fuel Burnt (Ton)</b>
Oil Tanker	1403.60	-	1093830	306900	36603.60

4.6.2 These pollutants were provided as input to find out the impact on environment using Sima pro software, Eco indicator 99 (I) v2.04. The environmental impact model of oil tanker is shown below in Figure 4.11.



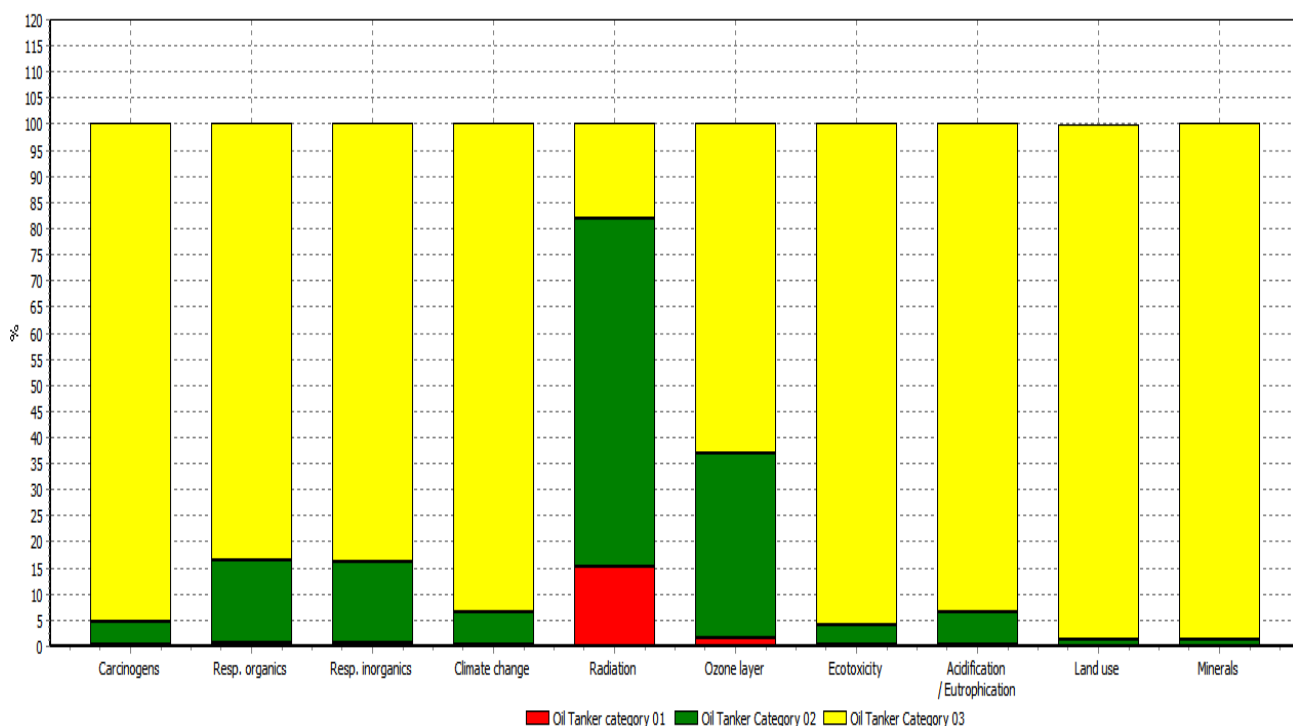
**Figure 4.11: Impact Model of Inland Oil Tankers**

4.6.3 The outputs of impact of discharging pollutants by inland oil tankers are shown below in Table 4.10, Table 4.11 and Table 4.12:

a. **Characterization.**

**Table 4.10: Impacts of Pollutants Thrown By Oil Tankers/Yr (Characterization)**

Impact category	Unit	Oil Tanker cat-1	Oil Tanker Cat -2	Oil Tanker Cat-3	Total Impact
Carcinogens	DALY	0.07107	1.346888	29.97451	31.39247
Resp. organics	DALY	0.110061	2.709855	14.18827	17.00819
Resp. inorganics	DALY	1.628501	39.26917	210.8587	251.7564
Climate change	DALY	1.085395	22.70829	340.6392	364.4329
Radiation	DALY	2.58E-05	0.000113	3.1E-05	0.00017
Ozone layer	DALY	0.000814	0.019938	0.03553	0.056281
Ecotoxicity	PAF*m2yr	66563.59	1143196	29561672	30771431
Acidification/ Eutrophication	PDF*m2yr	284078.5	5993092	88479653	94756824
Land use	PDF*m2yr	15063.62	137636.2	13599559	13752259
Minerals	MJ surplus	2222.902	19614.95	1874643	1896481



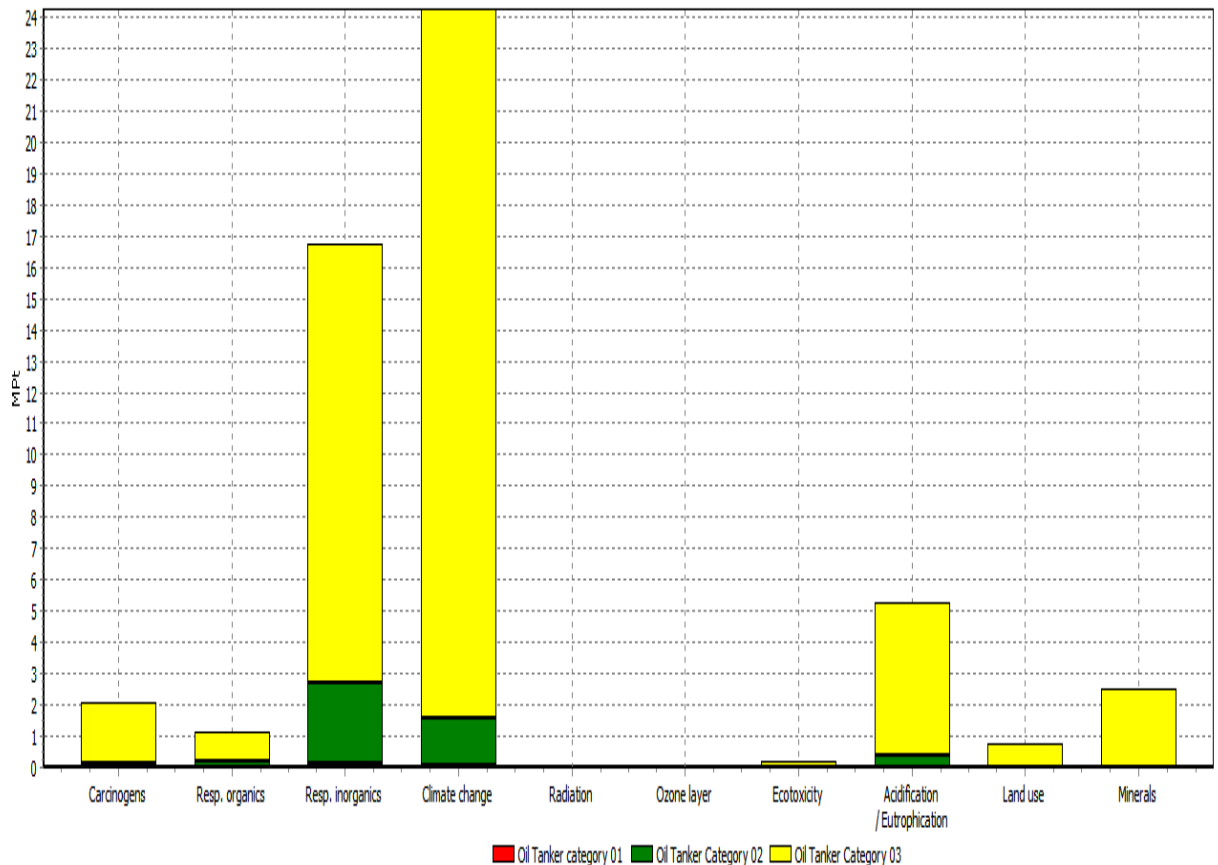
Analyzing 1 p 'Oil Tanker'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / characterization

**Figure 4.12: Impacts of Pollutants Thrown by Oil Tankers/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Characterization)'**

b. **Weighting.**

**Table 4.11: Impacts of Pollutants Thrown By Oil Tankers/Yr (Weighting)**

Impact category	Unit	Oil Tanker cat-1	Oil Tanker Cat-2	Oil Tanker Cat-3	Total Impact
Carcinogens	Pt	4729.693	89635.4	1994804	2089169
Resp. organics	Pt	7324.528	180340.8	944229.5	1131895
Resp. inorganics	Pt	108376.7	2613363	14032647	16754387
Climate change	Pt	72233.03	1511237	22669538	24253008
Radiation	Pt	1.717295	7.543671	2.063416	11.32438
Ozone layer	Pt	54.15461	1326.855	2364.523	3745.533
Ecotoxicity	Pt	369.4279	6344.735	164067.3	170781.4
Acidification/ Eutrophication	Pt	15766.36	332616.6	4910621	5259004
Land use	Pt	836.0307	7638.808	754775.5	763250.4
Minerals	Pt	2969.797	26205.57	2504523	2533698



Analyzing 1 p 'Oil Tanker'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / weighting

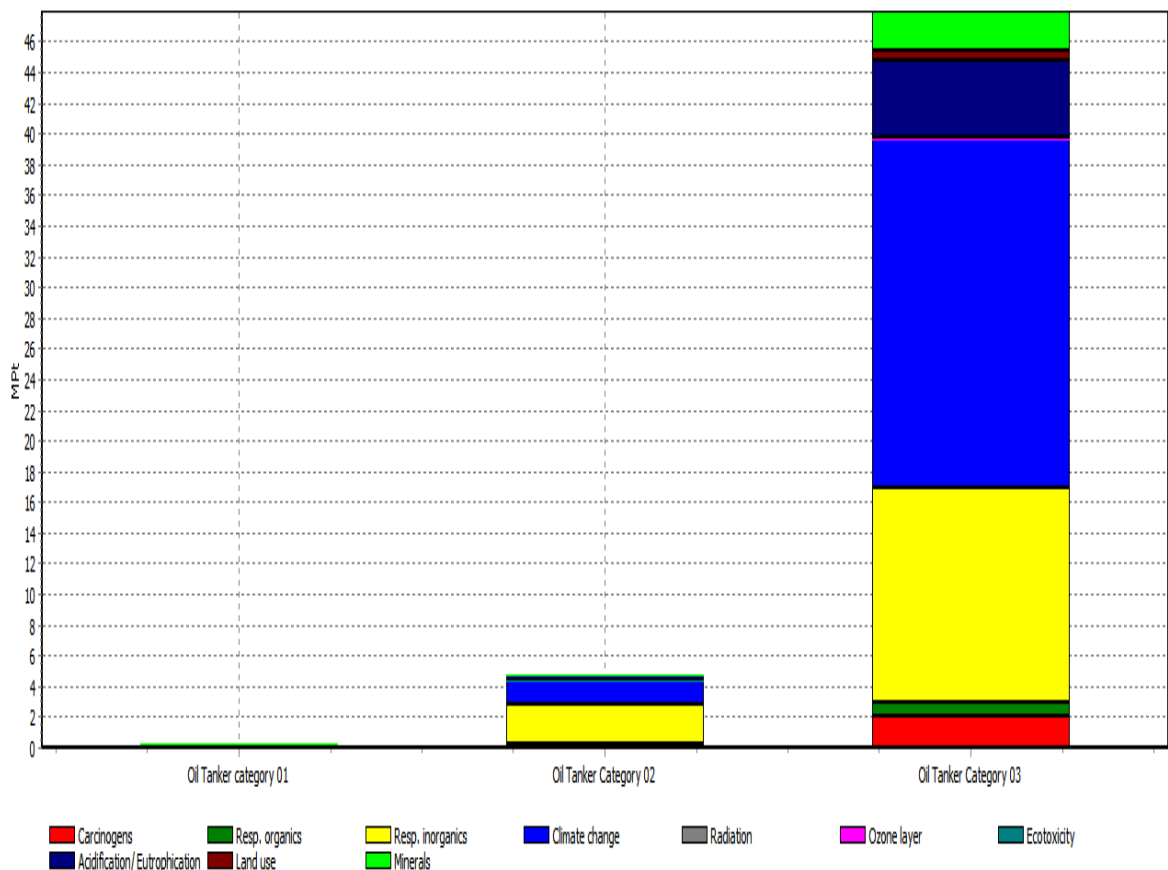
**Figure 4.13: Impacts of Pollutants Thrown by Oil Tankers/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Weighting)'**



c. Single Score.

**Table 4.12: Impacts of Pollutants Thrown By Oil Tankers/Yr (Single Score)**

Impact category	Unit	Oil Tanker Cat-1	Oil Tanker Cat-2	Oil Tanker Cat-3	Total Impact
Carcinogens	Pt	4729.693	89635.4	1994804	2089169
Resp. organics	Pt	7324.528	180340.8	944229.5	1131895
Resp. inorganics	Pt	108376.7	2613363	14032647	16754387
Climate change	Pt	72233.03	1511237	22669538	24253008
Radiation	Pt	1.717295	7.543671	2.063416	11.32438
Ozone layer	Pt	54.15461	1326.855	2364.523	3745.533
Ecotoxicity	Pt	369.4279	6344.735	164067.3	170781.4
Acidification/ Eutrophication	Pt	15766.36	332616.6	4910621	5259004
Land use	Pt	836.0307	7638.808	754775.5	763250.4
Minerals	Pt	2969.797	26205.57	2504523	2533698



Analyzing 1 p 'Oil Tanker'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I / single score

**Figure 4.14: Impacts of Pollutants Thrown by Oil Tankers/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Single Score)'**

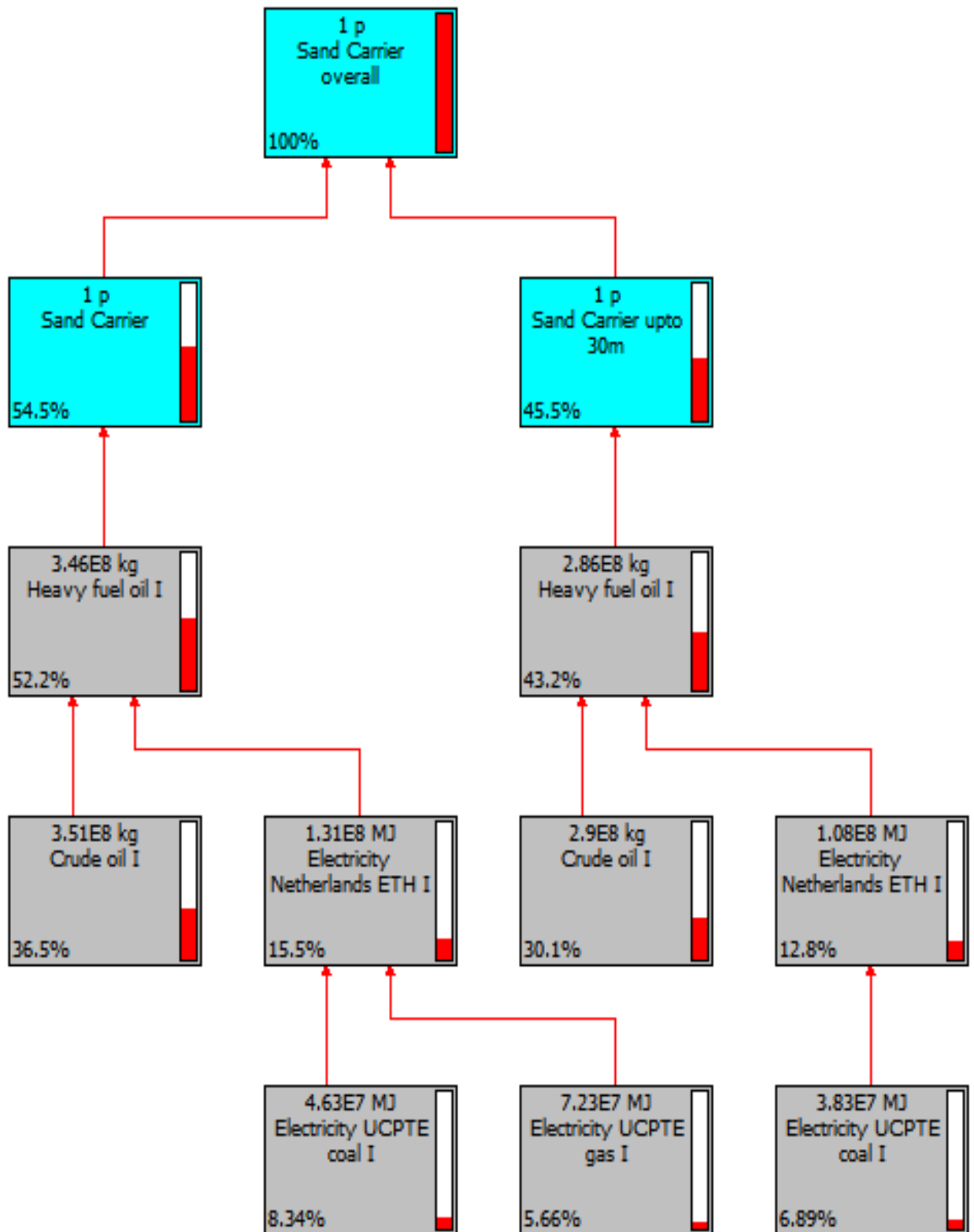
#### 4.7 **Impact Analysis of Pollutant Thrown by Sand Carrier.**

4.7.1 The sand carriers of inland routes are polluting the marine environment by discharging the bilges, Solid Waste (neglected as the quantity is very small), Emission of exhaust gases and pollutants. The quantity of pollutants was calculated in chapter four and summarized as shown in Table 4.13:

**Table 4.13: Total Pollutants Thrown by Sand Carriers/Yr**

<b>Category</b>	<b>Bilges Discharged (Ton)</b>	<b>Sewage Discharged (MT)</b>	<b>Fuel Burnt (Ton)</b>
Sand Carrier	10361.12	-	632669

4.7.2 These pollutants were provided as input to find out the impact on environment using Sima pro software, Eco indicator 99 (I) v2.04. The environmental impact model of sand carrier is shown below in Table 4.15.



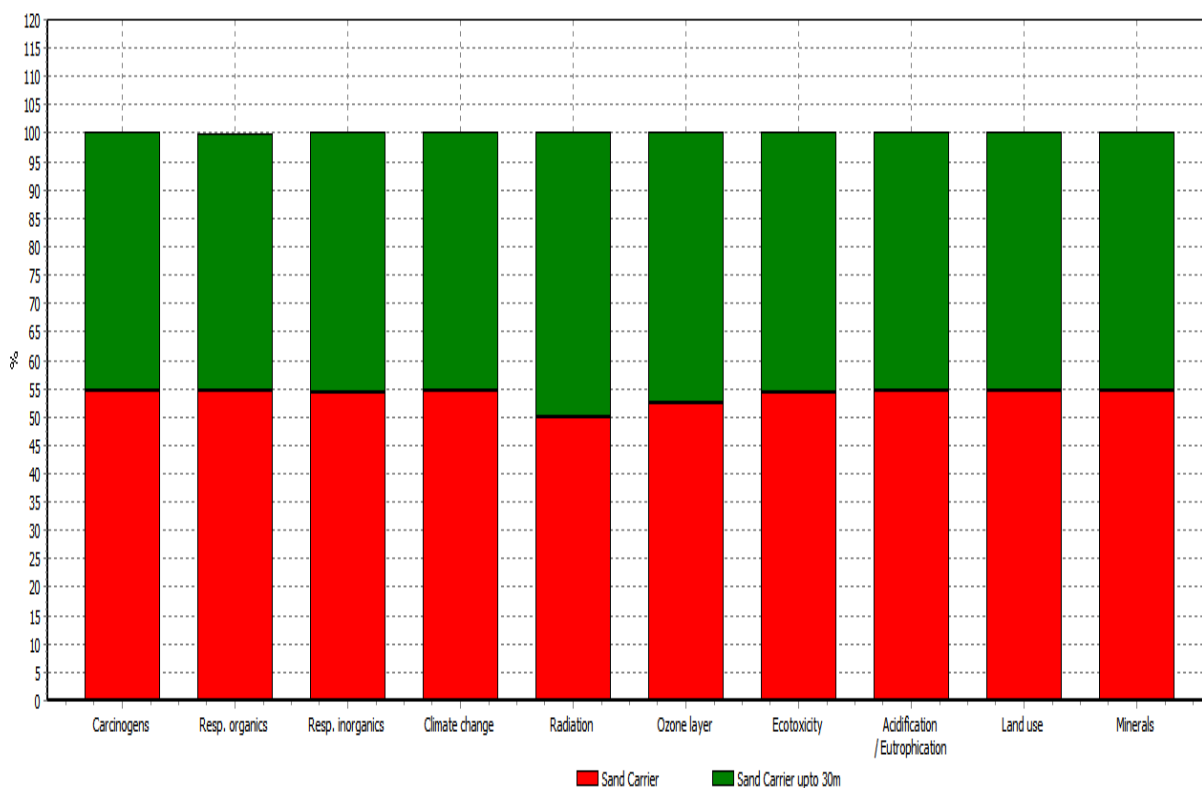
**Figure 4.15: Impact Model of Inland Sand Carriers**

4.7.3 The outputs of impact of discharging pollutants by inland sand carriers are shown below in Table 4.14, Table 4.15 and Table 4.16:

a. Characterization.

**Table 4.14: Impacts of Pollutants Thrown By Sand Carriers/Yr (Characterization)**

Impact category	Unit	Sand Carrier up to 30m	Sand Carrier above 30m	Total Impact
Carcinogens	DALY	1.409122	1.699876	3.108998
Resp. organics	DALY	0.63609	0.767789	1.403879
Resp. inorganics	DALY	10.33569	12.29633	22.63202
Climate change	DALY	16.04228	19.3254	35.36769
Radiation	DALY	0.000628	0.000628	0.001256
Ozone layer	DALY	0.002942	0.003235	0.006177
Ecotoxicity	PAF*m2yr	1488425	1775764	3264189
Acidification/ Eutrophication	PDF*m2yr	4126521	4979003	9105524
Land use	PDF*m2yr	654478.9	787754.4	1442233
Minerals	MJ surplus	93776.74	112148.6	205925.3



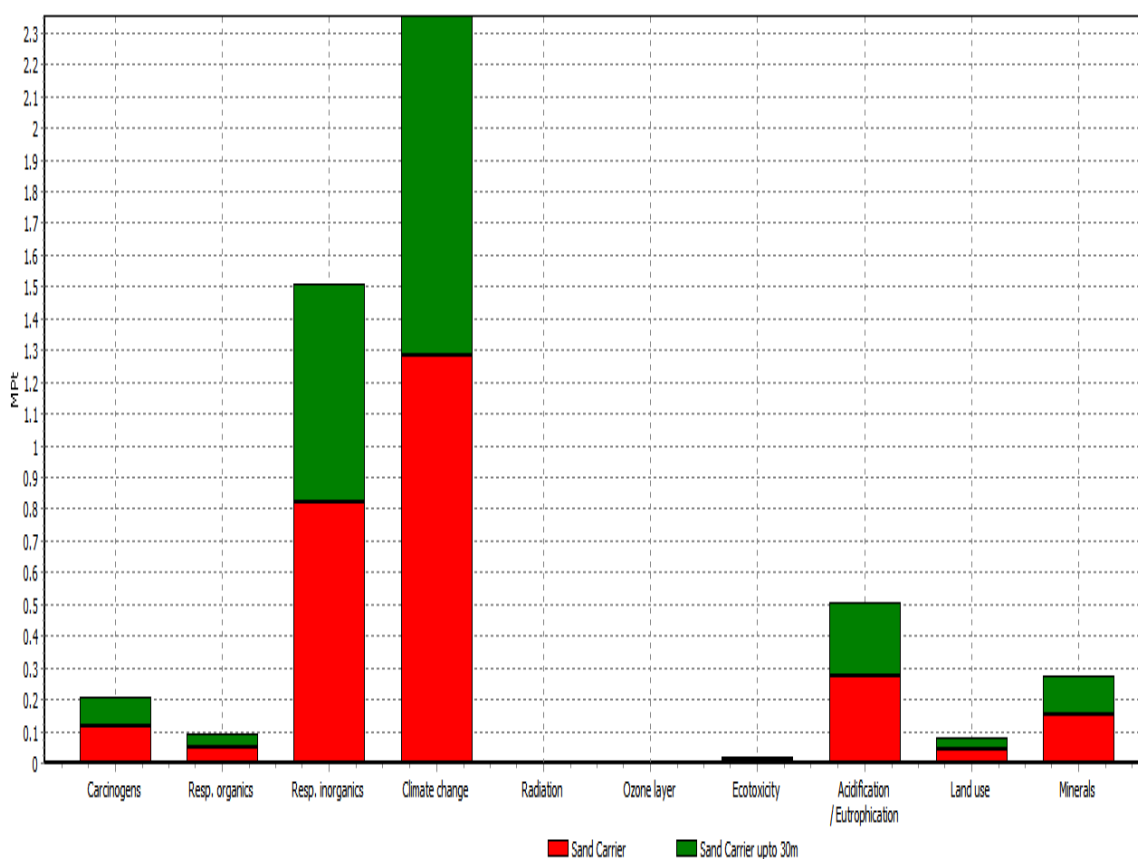
Analyzing 1 p 'Sand Carrier overall'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I / characterization

**Figure 4.16: Impacts of Pollutants Thrown by Sand Carriers/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Characterization)'**

b. Weighting.

**Table 4.15: Impacts of Pollutants Thrown By Sand Carriers/Yr (Weighting)**

Impact category	Unit	Sand Carrier Up to 30m	Sand Carrier above 30 m	Total Impact
Carcinogens	Pt	93777.08	113126.7	206903.8
Resp. organics	Pt	42331.8	51096.33	93428.14
Resp. inorganics	Pt	687839.9	818320.9	1506161
Climate change	Pt	1067614	1286106	2353719
Radiation	Pt	41.78484	41.80969	83.59453
Ozone layer	Pt	195.7704	215.279	411.0494
Ecotoxicity	Pt	8260.76	9855.489	18116.25
Acidification/ Eutrophication	Pt	229021.9	276334.7	505356.6
Land use	Pt	36323.58	43720.37	80043.95
Minerals	Pt	125285.7	149830.5	275116.3



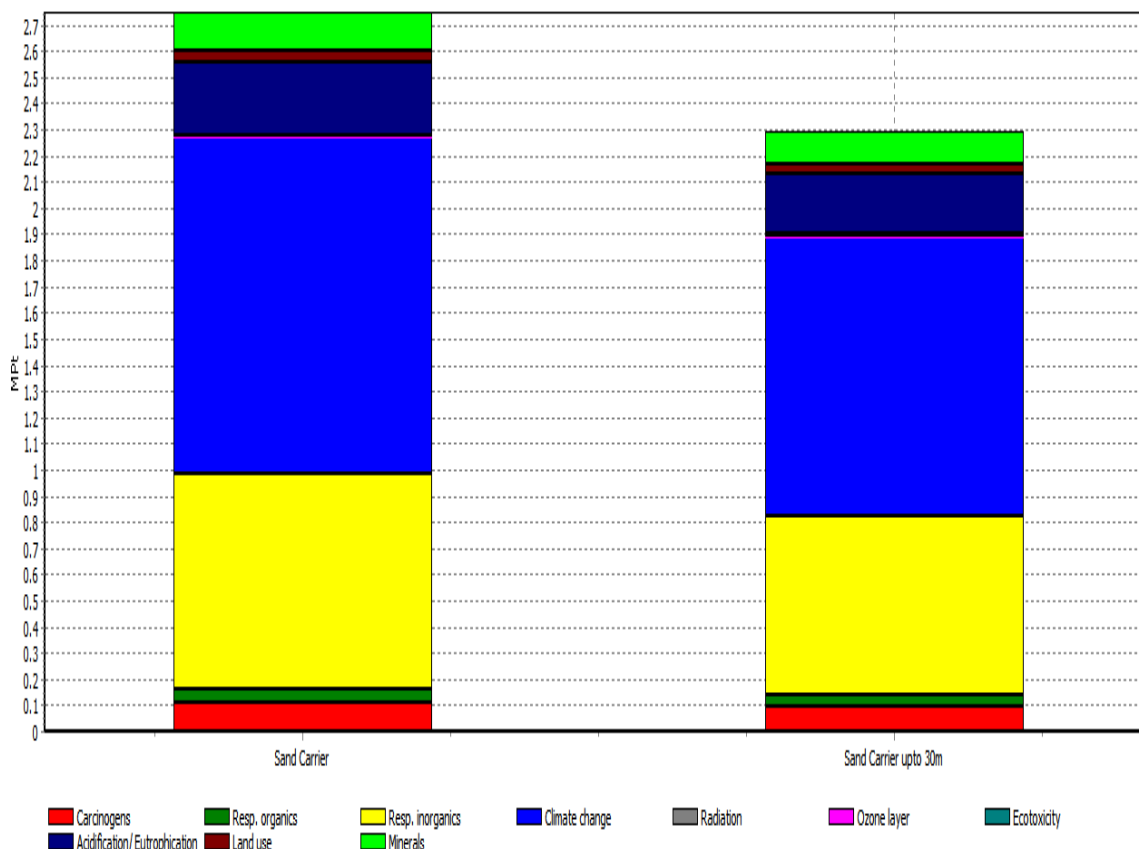
Analyzing 1.p 'Sand Carrier overall'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / weighting

**Figure 4.17: Impacts of Pollutants Thrown by Sand Carriers/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Weighting)'**

c. Single Score.

**Table 4.16: Impacts of Pollutants Thrown By Sand Carriers/Yr (Single Score)**

Impact category	Unit	Sand Carrier up to 30m	Sand Carrier above 30m	Total
Carcinogens	Pt	93777.08	113126.7	206903.8
Resp. organics	Pt	42331.8	51096.33	93428.14
Resp. inorganics	Pt	687839.9	818320.9	1506161
Climate change	Pt	1067614	1286106	2353719
Radiation	Pt	41.78484	41.80969	83.59453
Ozone layer	Pt	195.7704	215.279	411.0494
Ecotoxicity	Pt	8260.76	9855.489	18116.25
Acidification/ Eutrophication	Pt	229021.9	276334.7	505356.6
Land use	Pt	36323.58	43720.37	80043.95
Minerals	Pt	125285.7	149830.5	275116.3



Analyzing 1.p 'Sand Carrier overall'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / single score

**Figure 4.18: Impacts of Pollutants Thrown by Sand Carriers/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Single Score)'**

4.8 **Comparison of Impacts for Discharges by Different Types of Vessels and Comments.**

4.8.1 A summary of comparison of total impacts of discharging of pollutants are shown below in Table 4.17 and Table 4.18:

a. **Comparison of Impacts for Discharges by Characterization.**

**Table 4.17: Comparison of Impacts of Pollutants Discharged (Characterization)**

Impact category	Unit	Impact of Passenger vessel	Impact of Cargo Vessel	Impact of Oil Tanker	Impact of Sand Carrier
Carcinogens	DALY	1.040447	1.727004	31.39247	3.108998
Resp. organics	DALY	0.466233	0.776354	17.00819	1.403879
Resp. in organics	DALY	8.951163	13.90265	251.7564	22.63202
Climate change	DALY	12.02976	19.8551	364.4329	35.36769
Radiation	DALY	0.001454	0.001697	0.00017	0.001256
Ozone layer	DALY	0.004578	0.00586	0.056281	0.006177
Ecotoxicity	PAF*m2yr	1250703	1966261	30771431	3264189
Acidification/ Eutrophication	PDF*m2yr	3039149	5050019	94756824	9105524
Land use	PDF*m2yr	496841.4	814817.4	13752259	1442233
Minerals	MJ surplus	76759.67	121954.5	1896481	205925.3

b. **Comparison of Impacts for Discharges by Weighting.**

**Table 4.18: Comparison of Impacts of Pollutants Discharged (Weighting)**

Impact category	Unit	Impact of Passenger Vessels	Impact of Cargo Vessels	Impact of Oil Tanker	Impact of Sand carrier
Carcinogens	Pt	69241.76	114932.1	2089169	206903.8
Resp. organics	Pt	31027.78	51666.39	1131895	93428.14
Resp. inorganics	Pt	595699.9	925221.6	16754387	1506161
Climate change	Pt	800580.5	1321357	24253008	2353719
Radiation	Pt	96.74988	112.962	11.32438	83.59453
Ozone layer	Pt	304.658	389.9577	3745.533	411.0494
Ecotoxicity	Pt	6941.403	10912.75	170781.4	18116.25
Acidification/ Eutrophication	Pt	168672.8	280276.1	5259004	505356.6
Land use	Pt	27574.7	45222.36	763250.4	80043.95
Minerals	Pt	102550.9	162931.2	2533698	275116.3

4.8.2 The results of impacts of discharging pollutants (through characterization, weighting and single score) by passenger vessels, cargo vessels, oil tankers and sand carriers were compared above. The result shows that the impact of pollutants

discharged by oil tanker is much higher than the other vessels, followed by sand carriers, cargo vessels and at last the passenger vessels. Major concern is damage to human health as the major impact is carcinogens which cause cancer in human body. Then it damages the eco system quality which is expressed through climate change and radiations which are the well discussed points in present days. However, the impacts also include the damage to the resources which is expressed through land uses and minerals.

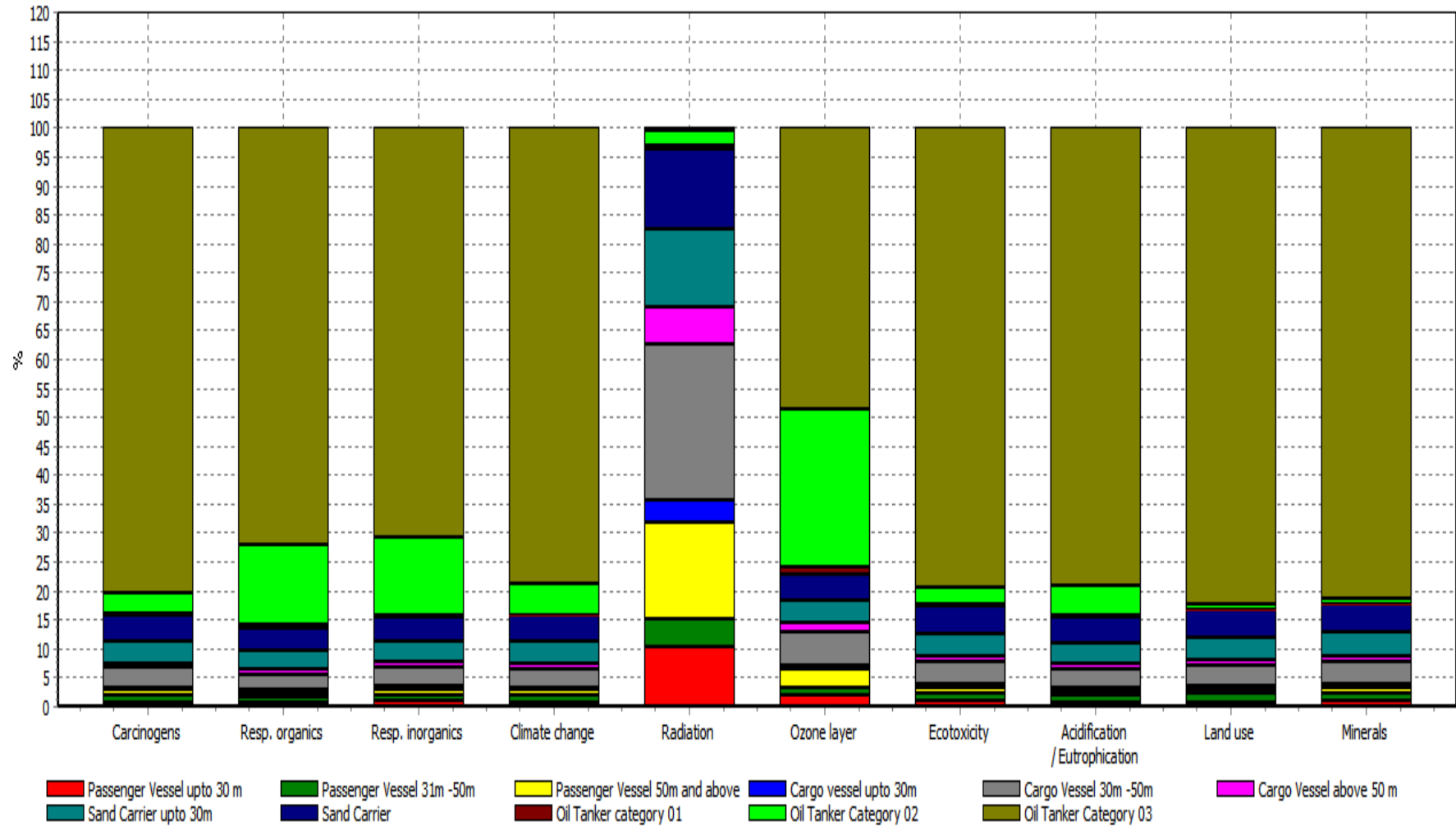
#### 4.9 **Overall Impact on Environment.**

4.9.1 The overall impact of pollutants (combination of impacts) together considering all types of ships are shown below in Table 4.19, Table 4.20 and Table 4.21.



**Table 4.19: Overall Impacts of Pollutants /Yr (Characterization)**

Impact category	Unit	Total	Passenger Vessel upto 30 m	Passenger Vessel 31m -50m	Passenger Vessel 50m and above	Cargo vessel upto 30m	Cargo Vessel 30m - 50m	Cargo Vessel above 50 m	Sand Carrier upto 30m	Sand Carrier above 30m	Oil Tanker cat-1	Oil Tanker Cat-2	Oil Tanker Cat-3
Carcinogens	DALY	37.268	0.2689	0.5002	0.271175	0.1740	1.243339	0.309645	1.409122	1.699876	0.07107	1.346888	29.97451
Resp. organics	DALY	19.654	0.1202	0.2258	0.120168	0.0782	0.558854	0.139282	0.63609	0.767789	0.110061	2.709855	14.18827
Resp. inorganics	DALY	297.24	2.4359	3.6666	2.848543	1.404871	10.03756	2.460223	10.33569	12.29633	1.628501	39.26917	210.8587
Climate change	DALY	431.68	3.1323	5.6817	3.215581	2.001301	14.29895	3.554847	16.04228	19.3254	1.085395	22.70829	340.6392
Radiation	DALY	0.0045	0.0004	0.0002	0.000766	0.000174	0.001243	0.00028	0.000628	0.000628	2.58E-05	0.000113	3.1E-05
Ozone layer	DALY	0.0728	0.0014	0.0010	0.002134	0.000598	0.004271	0.000991	0.002942	0.003235	0.000814	0.019938	0.03553
Ecotoxicity	PAF*m2yr	37252585	337355.9	528083.9	385263.4	198586.4	1418866	348809.2	1488425	1775764	66563.59	1143196	29561672
Acidification/ Eutrophication	PDF*m2yr	1.12E+08	784935.7	1465192	789021.5	508835.3	3635540	905643.4	4126521	4979003	284078.5	5993092	88479653
Land use	PDF*m2yr	16506151	129692	232356.4	134792.9	82145.07	586912.4	145759.9	654478.9	787754.4	15063.62	137636.2	13599559
Minerals	MJ surplus	2301120	20534.43	33287.68	22937.56	12311.26	87961.83	21681.39	93776.74	112148.6	2222.902	19614.95	1874643

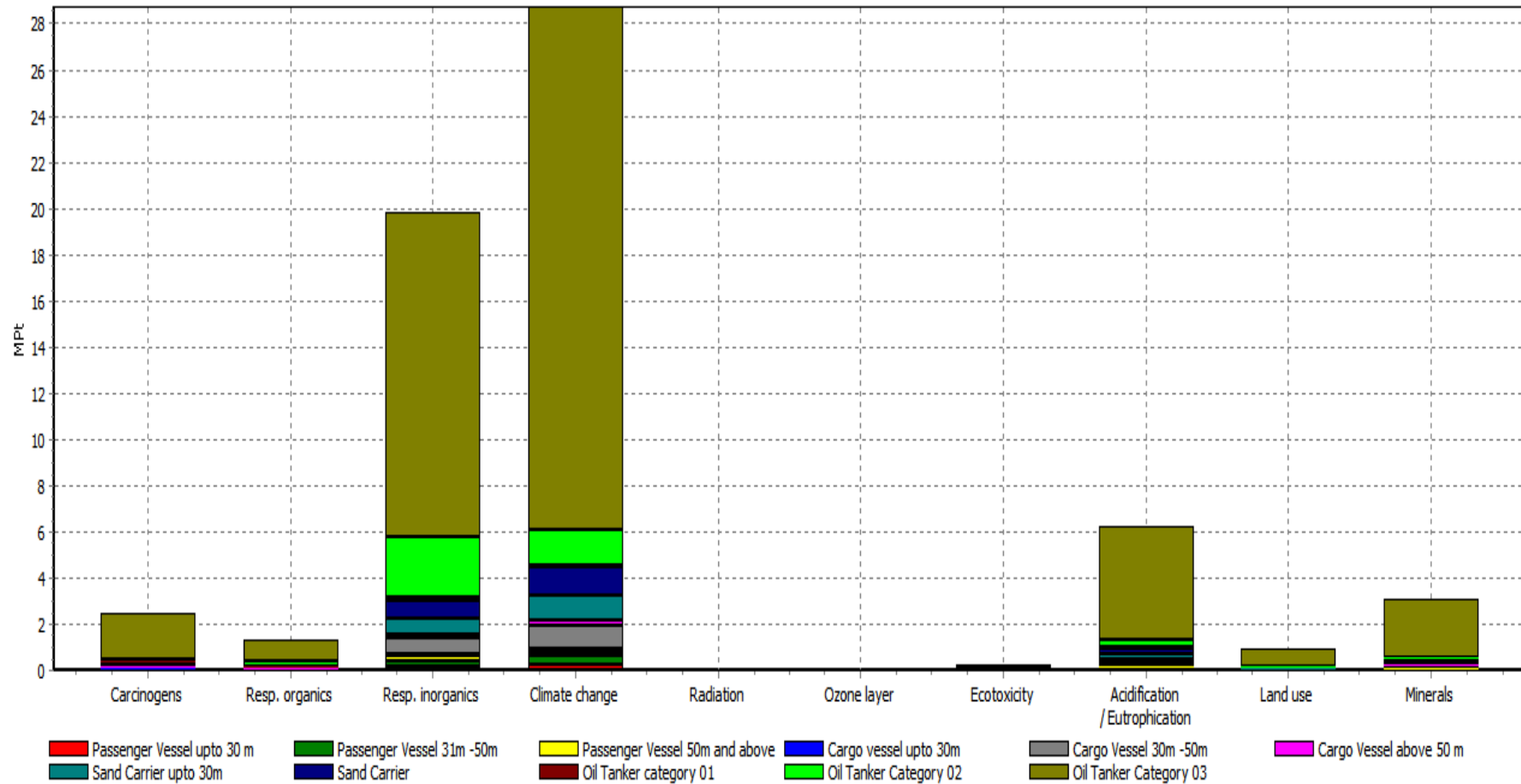


Analyzing 1 p 'Impact of Marine Pollution In Bangladesh'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / characterization

**Figure 4.19: Overall Impacts of Pollutants/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Characterization)'**

**Table 4.20: Overall Impacts of Pollutants /Yr (Weighting)**

Impact category	Unit	Total	Passenger Vessel upto 30 m	Passenger Vessel 31m -50m	Passenger Vessel 50m and above	Cargo vessel upto 30m	Cargo Vessel 30m - 50m	Cargo Vessel above 50 m	Sand Carrier upto 30m	Sand Carrier	Oil Tanker category 01	Oil Tanker Category 02	Oil Tanker Category 03
Total	Pt	62714002	476664.7	812167.5	513858.9	293867.9	2099635	519518.8	2290692	2748648	212661.5	4768716	47977571
Carcinogens	Pt	2480246	17900.6	33294.44	18046.72	11581	82744.24	20606.89	93777.08	113126.7	4729.693	89635.4	1994804
Resp. organics	Pt	1308017	8000.036	15030.56	7997.186	5205.408	37191.75	9269.236	42331.8	51096.33	7324.528	180340.8	944229.5
Resp. inorganics	Pt	19781469	162110.9	244018.4	189570.6	93494.15	667999.6	163727.9	687839.9	818320.9	108376.7	2613363	14032647
Climate change	Pt	28728664	208460.4	378123.2	213996.9	133186.6	951595	236575.1	1067614	1286106	72233.03	1511237	22669538
Radiation	Pt	304.6308	31.11248	14.6516	50.9858	11.58175	82.74964	18.63065	41.78484	41.80969	1.717295	7.543671	2.063416
Ozone layer	Pt	4851.198	93.58045	69.06623	142.0113	39.77774	284.2051	65.97482	195.7704	215.279	54.15461	1326.855	2364.523
Ecotoxicity	Pt	206751.8	1872.325	2930.866	2138.212	1102.155	7874.705	1935.891	8260.76	9855.489	369.4279	6344.735	164067.3
Acidification/ Eutrophication	Pt	6213309	43563.93	81318.16	43790.69	28240.36	201772.5	50263.21	229021.9	276334.7	15766.36	332616.6	4910621
Land use	Pt	916091.4	7197.907	12895.78	7481.009	4559.051	32573.64	8089.677	36323.58	43720.37	836.0307	7638.808	754775.5
Minerals	Pt	3074297	27434	44472.34	30644.58	16447.84	117517	28966.34	125285.7	149830.5	2969.797	26205.57	2504523

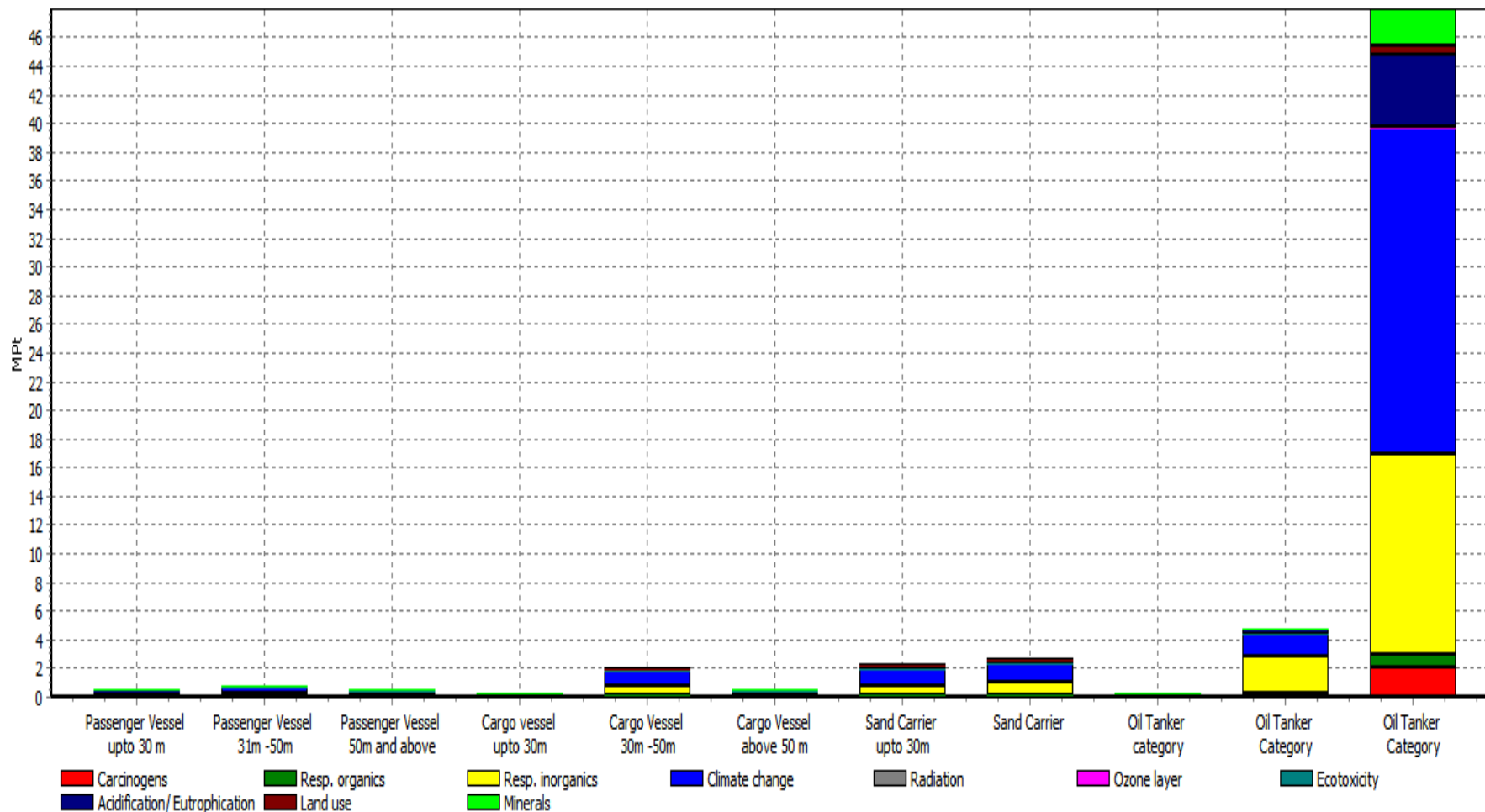


Analyzing 1 p 'Impact of Marine Pollution In Bangladesh'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / weighting

**Figure 4.20: Overall Impacts of Pollutants/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Weighting)'**

**Table 4.21: Overall Impacts of Pollutants /Yr (Single Score)**

Impact category	Unit	Total	Passenger Vessel upto 30 m	Passenger Vessel 31m -50m	Passenger Vessel 50m and above	Cargo vessel upto 30m	Cargo Vessel 30m - 50m	Cargo Vessel above 50 m	Sand Carrier upto 30m	Sand Carrier	Oil Tanker category 01	Oil Tanker Category 02	Oil Tanker Category 03
Total	Pt	62714002	476664.7	812167.5	513858.9	293867.9	2099635	519518.8	2290692	2748648	212661.5	4768716	47977571
Carcinogens	Pt	2480246	17900.6	33294.44	18046.72	11581	82744.24	20606.89	93777.08	113126.7	4729.693	89635.4	1994804
Resp. organics	Pt	1308017	8000.036	15030.56	7997.186	5205.408	37191.75	9269.236	42331.8	51096.33	7324.528	180340.8	944229.5
Resp. inorganics	Pt	19781469	162110.9	244018.4	189570.6	93494.15	667999.6	163727.9	687839.9	818320.9	108376.7	2613363	14032647
Climate change	Pt	28728664	208460.4	378123.2	213996.9	133186.6	951595	236575.1	1067614	1286106	72233.03	1511237	22669538
Radiation	Pt	304.6308	31.11248	14.6516	50.9858	11.58175	82.74964	18.63065	41.78484	41.80969	1.717295	7.543671	2.063416
Ozone layer	Pt	4851.198	93.58045	69.06623	142.0113	39.77774	284.2051	65.97482	195.7704	215.279	54.15461	1326.855	2364.523
Ecotoxicity	Pt	206751.8	1872.325	2930.866	2138.212	1102.155	7874.705	1935.891	8260.76	9855.489	369.4279	6344.735	164067.3
Acidification/ Eutrophication	Pt	6213309	43563.93	81318.16	43790.69	28240.36	201772.5	50263.21	229021.9	276334.7	15766.36	332616.6	4910621
Land use	Pt	916091.4	7197.907	12895.78	7481.009	4559.051	32573.64	8089.677	36323.58	43720.37	836.0307	7638.808	754775.5
Minerals	Pt	3074297	27434	44472.34	30644.58	16447.84	117517	28966.34	125285.7	149830.5	2969.797	26205.57	2504523



Analyzing 1 p 'Impact of Marine Pollution In Bangladesh'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / single score

**Figure 4.21: Overall Impacts of Pollutants/Yr according to method 'Eco-Indicator 99 (I) V 2.04 (Single Score)'**

## **CHAPTER- 5**

### **INSTITUTIONAL SET UP AND REGULATION TO PREVENT MARINE POLLUTION IN BANGLADESH**

5.1 **General.** Different organizations under the Ministry of Shipping (MOS) in Bangladesh, which are responsible for policy formulation, planning, implementation, initiation of legal proceedings, and setting up of the regulatory framework for the safety of inland vessels as well as marine environment will be examined in this chapter. The rules and penalty for protection of inland water from pollution (Inland waterways ordinance 1976) will also be highlighted in this chapter.

#### **5.2 Institutional Capacity and Regulatory Framework**

5.2.1 The IWT sector is under the jurisdiction of Ministry of the Shipping. The regulatory function is performed by three agencies:

- a. Department of Shipping (DOS),
- b. Bangladesh Inland Water Transport Authority (BIWTA) and
- c. Bangladesh Inland Water Transport Corporation (BIWTC)

5.2.2 **Department of Shipping (DOS).** The Department of Shipping (DOS) has been established under the Bangladesh merchant-shipping ordinance, 1983 (XXVI of 1983). This organisation is responsible for all inland and sea going vessels and their training and supporting institutions.

The key persons of the DOS, who are responsible for the environmental pollution, safety and related issues of the inland passenger vessels, are as follows:

- a. Register & Surveyor of Inland Ships, Dhaka, Narayanganj, Barisal, Khulna
- b. Surveyor of inland ships, Dhaka, Narayanganj, Barisal, Khulna
- c. Inspectorate of Inland Ships, Dhaka
- d. Special Officer Marine Safety
- e. Marine Court, Dhaka.

In addition, there is a marine court to oversee the deviations and if any complain is raised for safety related matters and environmental pollution cases. Presently, the only Marine Court is located in the premises of the DOS, Dhaka. The court is dealing with cases raised by DOS and/or port inspectors regarding vessels' defects,

overloading, pollution etc. The court is also setting the accident cases such as groundings and collisions. The court has power to impose penalty and /or imprisonment on the master, driver, and other members of the crew and/or owner.

**5.2.3 BIWTA. BIWTA's main responsibilities is to Maintenance, development and operation of inland river ports, landing/ferry ghats and terminal facilities in such ports or ghats and ensuring navigability of the routes through dredging operation.**

5.2.4 **BIWTC.** BIWTC is a service oriented commercial organization in the public sector. Since its creation, it has been playing a vital role in the inland and coastal water ways by carrying of passengers, cargo and vehicles.

### 5.3 Regulation to Prevent Marine Pollution in Bangladesh

5.3.1 Marine pollution and its impact have become major concern throughout the world as well as in Bangladesh. Bangladesh is one of the most vulnerable countries to experience worst impact of climate change. Inland waterways ordinance 1976 is the complete reference for inland shipping operation. The extract related to prevention of ship borne marine pollution from Inland waterways ordinance 1976 (Chapter V- Protection of Inland Water from Pollution & Chapter VI - Penalty and Procedure) is mentioned below:

#### **Protection of Inland Water from Pollution.**

- a. No inland ship or a facility plying or operating in or around inland waterways shall be used without registration and sanitation facilities as may be prescribed and no inland ship activity shall be conducted to cause pollution of inland water.
- b. Every inland ship shall be granted yearly renewable pollution prevention certificate(s) by the surveyor after getting the application along with prescribed fee(s) from the owner or master of the inland ship.
- c. Every inland ship carrying more than 12 persons including passenger, master, officer and members of the crew of the inland ship, shall have potable water and sanitation system approved by the Department of Shipping.
- d. The discharge of oily mixture and sewage into inland water is prohibited except when:
  - (1) The inland ship is discharging comminuted and disinfected sewage using a system approved by the Department of Shipping;



or

(2) the inland ship has in operation an approved sewage treatment plant or a retention tank of adequate capacity which has been certified by the Department of Shipping;

or

(3) the discharging of sewerage, oil or oily mixture into inland water necessary for the purpose of securing the safety of a inland ship or saving life on board;

or

(4) the discharge into inland water of oil, oily mixture or sewage resulting from damage to an inland ship or its equipment, provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimizing the discharge;

or

(5) the discharge for the purpose of combating specific pollution incidents in order to minimize the damage from pollution, subject to the approval of the Department of Shipping.

5.3.2 **Pollution prevention certificate(s) to be carried on board.** Pollution prevention certificate(s) mentioned in section 60A be carried on board the ship, at all times, by the owner or master and shall be open to inspection by a person authorized by the Government or the Department of Shipping.

5.4 **Penalty and Procedure.** Penalty for Contravention of regulations are:

a. Any person who contravenes the provision of section 60A shall be punishable with imprisonment for a term which may extend to one year, or with fine which may extend to Taka one lakh, or with both, and with recovery as compensation for the actual damage caused in any form, including the cost of clean up or containment or mitigation measures required.

c. The extent of environmental damages and other relevant expenses shall be determined by a committee appointed by the Government for this purpose.

5.5 **International Conventions for the Prevention of Marine Pollution (MARPOL 73/78)**

5.5.1 The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. The MARPOL Convention was adopted on 2 November 1973 at IMO. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977. As the 1973 MARPOL Convention had not yet entered into force, the 1978 MARPOL Protocol absorbed the parent Convention. The combined instrument entered into force on 2 October 1983. In 1997, a Protocol was adopted to amend the Convention and a new Annex VI was added which entered into force on 19 May 2005. MARPOL has been updated by amendments through the years.

5.5.2 The Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical Annexes. Special Areas with strict controls on operational discharges are included in most Annexes.

**Annex I Regulations for the Prevention of Pollution by Oil (entered into force 2 October 1983)**

Covers prevention of pollution by oil from operational measures as well as from accidental discharges; the 1992 amendments to Annex I made it mandatory for new oil tankers to have double hulls and brought in a phase-in schedule for existing tankers to fit double hulls, which was subsequently revised in 2001 and 2003.

**Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk (entered into force 2 October 1983)**

Details the discharge criteria and measures for the control of pollution by noxious liquid substances carried in bulk; some 250 substances were evaluated and included in the list appended to the Convention; the discharge of their residues is allowed only to reception facilities until certain concentrations and conditions (which vary with the category of substances) are complied with.

In any case, no discharge of residues containing noxious substances is permitted within 12 miles of the nearest land.

### **Annex III Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form (entered into force 1 July 1992)**

Contains general requirements for the issuing of detailed standards on packing, marking, labelling, documentation, stowage, quantity limitations, exceptions and notifications.

For the purpose of this Annex, —harmful substances” are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code) or which meet the criteria in the Appendix of Annex III.

### **Annex IV Prevention of Pollution by Sewage from Ships (entered into force 27 September 2003)**

Contains requirements to control pollution of the sea by sewage; the discharge of sewage into the sea is prohibited, except when the ship has in operation an approved sewage treatment plant or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance of more than three nautical miles from the nearest land; sewage which is not comminuted or disinfected has to be discharged at a distance of more than 12 nautical miles from the nearest land.

### **Annex V Prevention of Pollution by Garbage from Ships (entered into force 31 December 1988)**

Deals with different types of garbage and specifies the distances from land and the manner in which they may be disposed of; the most important feature of the Annex is the complete ban imposed on the disposal into the sea of all forms of plastics.

### **Annex VI Prevention of Air Pollution from Ships (entered into force 19 May 2005)**

Sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SO<sub>x</sub>, NO<sub>x</sub> and particulate matter. A

chapter adopted in 2011 covers mandatory technical and operational energy efficiency measures aimed at reducing greenhouse gas emissions from ships.

5.6 **Summary.** The DOS and BIWTA both have certain limitations to complete the assigned tasks in respect of inland passenger vessels. Limited number of employee has negative effect on successful completion of prescribed work. Marine court is over burdened with lots of unsolved cases. Mobile court appears functional, but its activities do not cast much effective result on the vessel owners, as its activities are mostly Dhaka centred. BIWTA has insufficient know how and tools to judge the vessels' design before construction. Environmental pollution and Marine pollution is highly neglected by all concern though the 1976 ordinance has clearly prohibited the ship borne discharge and kept provisions for penalty. International Conventions for the Prevention of Marine Pollution also has a set of rules to stop the ship borne marine pollution.

## CHAPTER- 6

### ANALYSIS OF PREVENTIVE MEASURES AND ITS FINANCIAL IMPACTS

6.1 **General.** Ship borne marine pollution has significant impact on environment (shown in chapter 4). In future the number of vessels will increase more which will cast more adverse effect on our environment. So it is the best time to take the preventive measures to reduce the pollution as well as its impact. However, this chapter has initially explained the preventive measures to reduce the marine pollution from ships. Then the financial involvement for implication the measures has been discussed.

#### 6.2 **Preventive Measures of Marine Pollution.**

6.2.1 Before going to the preventive measures, an overview of sources of marine pollution by inland transportation in Bangladesh is highlighted in Table 6.1 below:

**Table 6.1: Sources of Marine Pollution in IWT of Bangladesh**

<b>Type of Ship</b>	<b>No of ship (as on Dec 2013)</b>	<b>Pollutants</b>
Passenger Ship	1061	a. Bilge b. Solid waste c. Air pollution
Cargo Ship	2213	a. Bilge b. Solid waste (Negligible) c. Air pollution
Oil Tanker	260 (in use 210)	a. Bilge b. Oily water c. Ballast water b. Solid waste (Negligible) c. Air pollution
Sand Carrier	3411	a. Bilge b. Solid waste (Negligible) c. Air pollution

6.2.2 Marine pollution causes the impacts like climate change, destruction of fishing zone, eco toxicity, Eutrophication, radiation, acidification and effect on respiratory organics. Coastal Scientists believe that prevention is better than cure since the effects of marine pollution may be irreversible and we may therefore be creating

everlasting damage to the marine ecosystem. There are various methods of pollution prevention but relatively the best technique includes:

- a. **Technical Framework.** The technical framework recommends the combination of two technical solutions for ship waste treatment: stationary waste reception facilities (such as green terminals in ports) and self-propelled waste collection vessels. As our concern is only the inland water transportation, stationary waste reception facilities will be the best probable solution. In this respect, the frameworks for our inland transportation network should be provided with following structures as shown in Table 6.2:

**Table 6.2: Proposed Technical Framework for Pollution Prevention**

<b>Type</b>	<b>Category</b>	<b>Pollutants</b>	<b>Measures</b>	<b>Port Arrangement</b>
Passenger Vessel	Cat – 1(Up to 30m) & Cat– 2(30m to 50m)	a. Bilge b. Solid waste	a. Storage Tank b. Pump	a. Storage Tank b. Pump
	Cat – 3(Above 50m)		a.Sewage Tank b. Bilge Tank c. Pump	
Cargo Vessel	All categories	a. Bilge b. Solid waste	a. Storage Tank b. Pump	a. Storage Tank b. Pump
Sand Carrier	All categories	a. Bilge b. Solid waste	a. Storage Tank b. Pump	a. Storage Tank b. Pump
Oil Tanker	All categories	a. Bilge b. Oily water c. Solid waste	a. Storage Tank b. Centrifuge (oily water separator) c. Pump	a. Storage Tank b. Pump

Bilges & solid waste has to be collected in a tank on board each vessel which will be discharged as and when required to the major river port pontoons. For the passenger vessels above fifty meter, there will be separate bilge and sewage tanks. After the collection in port pontoons, the waste will be processed by treatment plant of port and discharged to the water. Pumps will be used to discharge the waste products from the ships as well as from the ports. Centrifuge will be used to separate the fuel/oil from water and then the water will be discharged into the river where as the fuel will be stored in tanks of the ship. In this method, the cost of ship borne installation will be within considerable limit as well as the port arrangement will be done under

government budget. Ships may pay annual fees to makeup the government budget in this regard. As the purification will be under government body, there will be lesser chances to through the pollutants as untreated one which may occur if placed under a private body.

b. **Legal Frame works**. Environmental laws can make it tougher for people to pollute the marine environment. In accordance with 1976 ordinance, the discharge of bilges, oily mixture and sewage into inland water is prohibited and every inland ship of Bangladesh shall be granted yearly renewable pollution prevention certificate(s) by the surveyor after getting the application along with prescribed fee(s). Moreover, Any person who contravenes the provision of the 1976 ordinance, shall be punishable with imprisonment for a term which may extend to one year, or with fine which may extend to Taka one lakh, or with both, and with recovery as compensation for the actual damage caused in any form, including the cost of clean up or containment or mitigation measures required. But in practical case, the surveyor and the governing authority found reluctant in executing the above provisions. The owners and the Ship builders should also bother about the rules and provide the necessary facilities on board ship to prevent the marine pollution. Government has to come forward to build adequate facilities for proper discharges and executions of rules and regulations so that the people will be compelled to abide by the rules to prevent ship borne marine pollution.

c. **General Awareness**. Making people aware of the problem is the first step for solving it. The ship owner, designer and the ship builder must consider the adverse impact of marine pollution. So they must provide some means to make the ship borne discharges (like bilges, garbage, oily water mixture, ballast water and the sewage) environment friendly before throwing into water. There are laid down rules for discharges from ships and the penalties for ignoring the rules in Inland waterways ordinance 1976. But no such implication was found during the study. Moreover, it was found that most of the related peoples are ignorant about these rules and regulations. So steps should be taken to aware the related persons as well as the mass people. Greater public awareness can make a positive impact to reduce the ship borne marine pollution.

d. **Coordination**. A complete agreement has to be made among the ship owner, ship builder, designer and the related government bodies to

prevent the ship borne marine pollutions. While an agreement is a vehicle for establishing national harmonization, the guarantee for implementation lies in ensuring cooperation. This necessitates the appointment of a coordinating body. However, the coordination among the marine bodies will work positively to eradicate marine pollution from our country.

e. **Monitoring.** The operation of control mechanisms must be ensured with a clearly defined division of tasks. We have regulations but neglected by the ship owners due to proper monitoring facilities due lack of conscious people. Now a days environment has become a important issue, which will obviously help the government bodies to execute the safety regulations to stop illegal discharges in inland water.

f. **Economics.** Most environment experts agree that the best way to tackle pollution through something called polluter pays principle. This means that whoever causes pollution should have to pay to clean it up, one way or another. Polluter pays can operate in all kinds of ways. It could mean that vessel owners should have to take out insurance that covers the cost of oil spill cleanups, for example. Ultimately the polluter pays principle is designed to deter people from polluting by making it less expensive for them to behave in an environmentally responsible way.

### 6.3 **Methods of reduction of the Emissions to reduce air pollution.**

6.3.1 The emissions from ship can be reduced by two methods- reduction of the produced emissions or by counter action method that is more expensive with more hazardous and the reduction of the production of the emissions or preventive method that can be done by reducing the fuel consumption. The preventive method is more efficient but not easy task like as counter action methods. The produced emissions can be reduced by absorbing the emissions and the absorption tasks can be done by various ways such as by using special types of chimney that can absorb and convert the emissions. This method is relatively expensive task than preventive method. The fuel consumption can be reduced by optimizing the ship design and hull maintenances so the emissions can be reduced that produce by burning fuel from ship.

Principle flow chart of the emission reduction method by design optimization as follows:



**Design optimization → Resistance Reduction → Less effective power required → Reduced fuel consumption → Reduced emission gases production**

6.3.2 The frictional resistance can be reduced by reducing the wetted surface and by smoothing the underwater hull surface. The roughness can be minimized by selecting anti-fouling paints, flush welding and good paintwork. Moreover, the specific fuel consumption of inland vessels can be reduced by determining the correct capacity of engine power. During ground survey it was found that the engine powers for different vessels are determined without calculations which caused over power engine in many vessels. It was also found that the engines are relatively older which causes more fuel consumption.

#### 6.4 **Financial Impact Analysis**

6.4.1 **Financial Requirement.** As per existing rules and regulations all inland ships must have the storage tank facilities for sewage and bilges. During the study it was found that the design was approved with storage tank facilities but practically no provisions were kept as per design. However, the provision for storage facilities should be ensured for prevention of marine pollution. The storage tank and the pump will require excess money which is shown in Table 6.3:

**Table 6.3: Financial Assessment for Pollution Prevention**

<b>Type</b>	<b>Category</b>	<b>Measures</b>	<b>Installation Cost (Tk)</b>
Passenger Vessel	Cat – 1(Up to 30m) & Cat– 2(30m to 50m)	a. Storage Tank b. Pump	3,00,000.00
	Cat – 3(Above 50m)	a. Sewage Tank b. Bilge Tank c. Pump for Sewage d. Pump for Bilge	15,00,000.00
Cargo Vessel	All categories	a. Storage Tank b. Pump	4,50,000.00
Sand Carrier	All categories	a. Storage Tank b. Pump	2,50,000.00
Oil Tanker	All categories	a. Storage Tank b. Centrifuge(oily water separator) c. Pump	11,50,000.00

6.4.2 To induce the pollution prevention system the above mention price will be required which will in turn increase the fare table of specific ship. Considering twenty

years as ship life, the fair increase rate will have to assess to ascertain financial burden. The calculation of financial impact for passenger ship is shown below:

**Calculation for Passenger Ship**

a. **Category -1 (Up to 30m)**

Total No = 779

Average Passenger Capacity = 145

No of Trip per month = 60

Average running hour/month = 240 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Assume 5% maintenance cost/yr = 15,000.00

Discount Rate 5%

Operating Cost = 20,000.00

**Total Person Carried/yr/ship = Trip/month X Passenger Capacity X  
Month of Op**

$$= 60 \times 145 \times 11$$

$$= 95,700$$

If fare is increased by Tk one/person then the Revenue per yr = 95,700.00

**Table 6.4: Financial Analysis for Cat -1 Passenger Vessels**

Yr	Principal Investment (Tk)	Maint Cost/ Yr (Tk)	Op cost /Yr (Tk)	Exp /Yr (Tk)	Revenue /Benefit (Tk)	PWF	Income /Yr (Tk)	Total Income (Tk)	NPV (Tk)
1	300000	15000	20000	35000	95700	0.95	57809	57809.52	-242190
2	0	15000	20000	35000	95700	0.91	55056	112866.21	-187134
3	0	15000	20000	35000	95700	0.86	52434	165301.15	-134699
4	0	15000	20000	35000	95700	0.82	49938	215239.19	-84760.8
5	0	15000	20000	35000	95700	0.78	47560	262799.23	-37200.8
6	0	15000	20000	35000	95700	0.75	45295	308094.50	8094.508
7	0	15000	20000	35000	95700	0.71	43138	351232.86	51232.87

**Note:** If the fare is increased only one tk per person then the expenditure can be carried in **Six years**.

b. **Category – 2 (30m to 50m)**

Total No = 220

Average Passenger Capacity = 475

No of Trip per month = 30

Average running hour/month = 300 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Assume 5% maintenance cost/yr = 15,000.00

Discount Rate 5%

Operating Cost = 20,000.00

**Total Person Carried/yr/ship = Trip/month X Passenger Capacity X  
Month of Op**

$$= 30 \times 475 \times 11$$

$$= 1,56,750$$

If fare is increased by Tk one/person then the total Revenue/yr = 1,56,750

**Table 6.5: Financial Analysis for Cat -2 Passenger Vessels**

Yr	Principal Investment (Tk)	Maint Cost/Yr (Tk)	Op cost /Yr (Tk)	Exp /Yr (Tk)	Revenue /Benefit (Tk)	PWF	Income /Yr (Tk)	Total Income (Tk)	NPV (Tk)
1	300000	15000	20000	35000	156750	0.95	57809.52	115952.38	-184048
2	0	15000	20000	35000	156750	0.91	55056.69	226383.22	-73616.8
3	0	15000	20000	35000	156750	0.86	52434.94	331555.44	31555.45
4	0	15000	20000	35000	156750	0.82	49938.04	431719.47	131719.5
5	0	15000	20000	35000	156750	0.78	47560.04	527113.78	227113.8

**Note:** If the fare is increased only one tk per person then the expenditure can be carried in **three years**.

c. **Category – 3 (Above 50 m)**

Total No = 62

Average Passenger Capacity = 821

Average running hour/month = 300 Hr

No of Trip per month = 30

Average Running Period per yr = 11 month (01 month for maintenance)

Assume 5% maintenance cost/yr = 75,000.00

Discount Rate 5%

Operating Cost = 40,000.00

**Total Person Carried/yr/ship = Trip/month X Passenger Capacity X  
Month of Op**

$$= 30 \times 821 \times 11$$

$$= 2,70,930$$

If fare is increased by Tk Two/person then the total Revenue = 541860.00

**Table 6.6: Financial Analysis for Cat -3 Passenger Vessels**

Yr	Principal Investment (Tk)	Maint Cost/Yr (Tk)	Op cost /Yr (Tk)	Exp /Yr (Tk)	Revenue /Benefit (Tk)	PWF	Income /Yr (Tk)	Total Income (Tk)	NPV (Tk)
1	1500000	75000	40000	115000	541860	0.95	406533.3	406533	-1093467
2	0	75000	40000	115000	541860	0.91	387174.6	793707	-706292
3	0	75000	40000	115000	541860	0.86	368737.7	1162445	-337554
4	0	75000	40000	115000	541860	0.82	351178.8	1513624	13624.43
5	0	75000	40000	115000	541860	0.78	334456	1848080	348080.4

**Note:** If the fare is increased only two tk per person then the expenditure can be carried in four yrs.

6.5 **Summary.** Ship borne marine pollution has significant impact on environment and prevention is the best method to reduce ship borne marine pollution. There are various methods of pollution prevention but relatively the best technique includes general awareness, Technical Framework, legal framework, coordination, monitoring, economics etc. Moreover the reduction of air pollution can be done by reducing frictional resistance which in turn reduces the power requirement and fuel consumption. Hull design and maintenance as well as painting may play significant role in this regard. However, the financial impact analysis for passenger ship shows that the preventive methods have not much burden on increasing rate of fare and so it is quite affordable.

## CHAPTER - 7

### COMPARISON OF IMPACTS OF MARINE POLLUTION WITH AND WITHOUT PREVENTIVE MEASURES

7.1 **General.** Till now the discussion covered background of marine pollution, overview of the inland water transportation sector, institutional set up and existing regulation to prevent marine pollution, quantification of marine pollution, impact analysis of pollutant and preventive measures with financial impacts. This chapter shows the comparison of impacts of marine pollution with and without the aforesaid preventive measures.

#### 7.2 **Comparison of Marine Pollution With and Without Preventive Measures.**

7.2.1 As discussed earlier, the inland transportation system plays the major role in human, cargo and fuel-oil transportation of Bangladesh. Around eleven thousand registered and huge number of unregistered small vessels (like trawler, fishing boat, boats) is plying in various corner of the country. Large amount of pollutants like bilges, garbage, solid waste, oily water, ballast water etc are discharged into the inland water without any treatment which is making our marine environment polluted. Moreover, these huge no of vessels are also engaged in air pollution by emitting different gases. The pollutants has significant impacts but could not be realized the damage as the impacts are largely non visible. However, the quantity of pollutants discharged in our environment without preventive measures and the pollutants discharged if preventive measures are taken are shown below in Table 7.1 and Table 7.2:

**Table 7.1: Summary of Pollutants Quantity/Year (Without Prevention)**

<b>Category</b>	<b>Bilges Discharged (Ton)</b>	<b>Sewage Discharged (MT)</b>	<b>Oily water (Ton)</b>	<b>Ballast water (Ton)</b>	<b>Fuel Burnt (Ton)</b>
Passenger Vessel	6318.95	384.73	-	-	202158
Cargo Vessel	14001.075	-	-	-	3424836
Oil Tanker	1403.60	-	1093830	306900	36603.60
Sand Carrier	10361.12	-	-	-	632669

**Table 7.2: Summary of Pollutants Quantity/Year (With Prevention)**

Category	Bilges Discharged (Ton)	Sewage Discharged (MT)	Oily water (Ton)	Ballast water (Ton)	Fuel Burnt (Ton)
PassengerVessel	00	00	-	-	202158
CargoVessel	00	-	-	-	3424836
Oil Tanker	00	-	00	00	36603.60
Sand Carrier	5179.02	-	-	-	632669

7.2.2 From the above tables, it is clearly understood that if the preventive measures are taken the pollutants except the air pollutants will be minimized to nil. Air pollution requires special care in ship design and selection of machineries. Engaging experience ship designer for complete designing of ship can improve fuel efficiency of ship a lot which is currently absent in case of small indigenous old ship playing inland routes for last two to three decades.

### 7.3 Comparison of Impact of Pollutants.

The comparisons of impacts of marine pollution in Bangladesh by inland shipping operation with and without preventive measures were done using SimaPro software and shown below in Table 7.3 and Table 7.4.

a. Impacts using ECO indicator 99(I) V 2.04 are shown below:

**Table 7.3: Comparison of impacts of Marine Pollution With and Without Preventive Measures Using Eco Indicator 99 (I) V2.04**

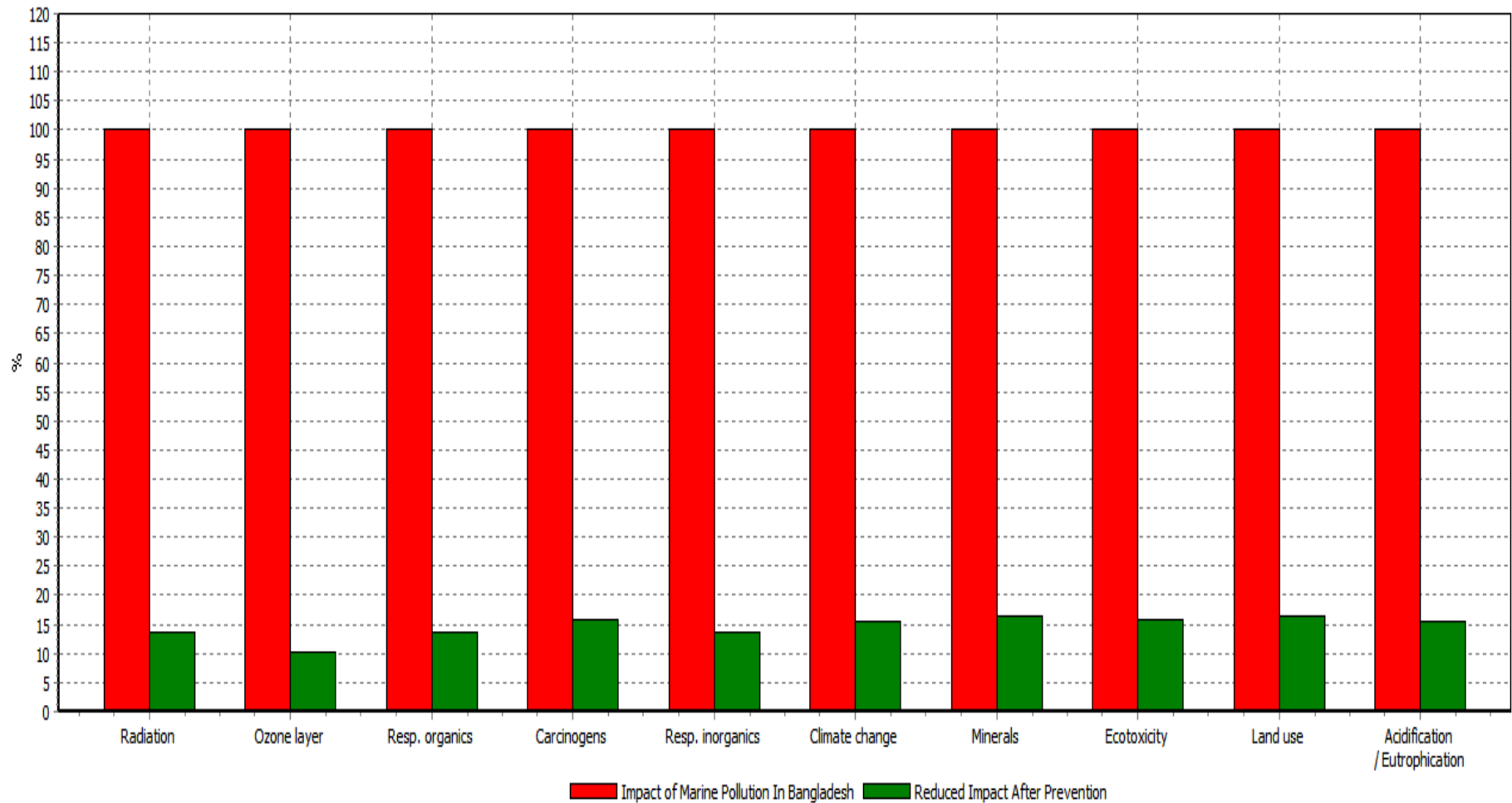
Impact category	Unit	Impact of Marine Pollution	Reduced Impact after prevention	Reduction in Percentage
Carcinogens	DALY	37.27	5.88	84.21
Resp. organics	DALY	19.65	2.66	86.45
Resp. inorganics	DALY	297.24	40.51	86.37
Climate change	DALY	431.68	66.57	84.58
Radiation	DALY	0.0046	0.00063	86.28
Ozone layer	DALY	0.0729	0.00742	89.79
Ecotoxicity	PDF*m2yr	3725258.48	591008.19	84.14
Acidification/Eutrophication	PDF*m2yr	111951516	17247441.14	84.59
Land use	PDF*m2yr	16506151.4	2705693.81	83.61
Minerals	MJ surplus	2301120.22	376501.63	83.64

b. Impacts using **Ecological Scarcity** are shown below:

**Table7.4: Comparison of impact of Marine Pollution With and Without Preventive Measures by Ecological Scarcity**

<b>Impact category</b>	<b>Unit</b>	<b>Impact of Marine Pollution</b>	<b>Reduced Impact after Prevention</b>	<b>Reduced percentage</b>
Emission into surface water	UBP	7.66E+10	1.19E+10	84.45
Emission into ground water	UBP	215.4855	0	100
Emission into top soil	UBP	14758.15	0	100
Energy resources	UBP	36256007	398875.2	98.90
Natural resources	UBP	2.83E+09	4.12E+08	85.42
Deposited waste	UBP	79375.16	0	100

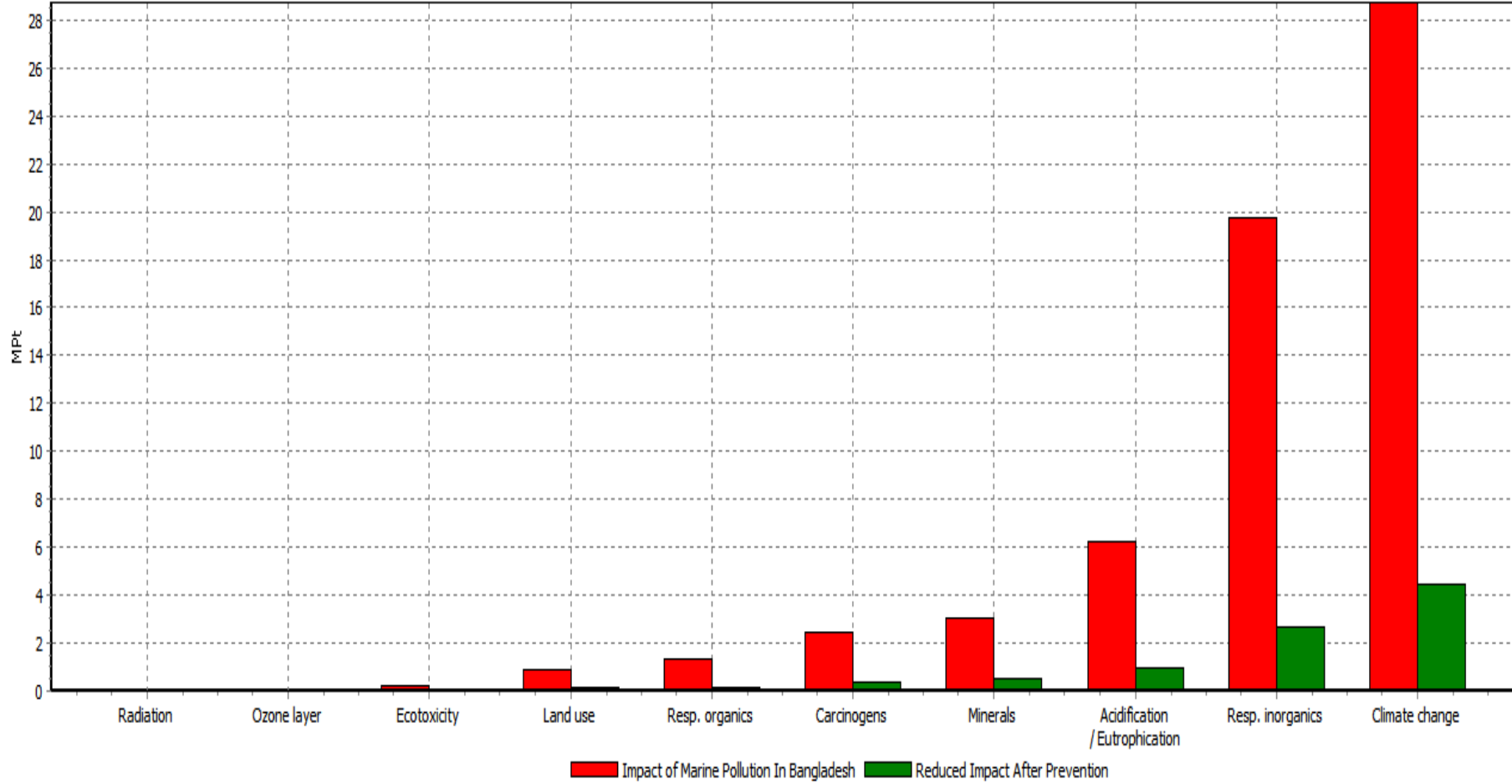
\* The Eco-invent implementation contains seven specific impact categories, with for each substance a final UBP (environmental loading points) score as characterization factor



Comparing 1p 'Impact of Marine Pollution In Bangladesh' with 1p 'Reduced Impact After Prevention'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / damage assessment

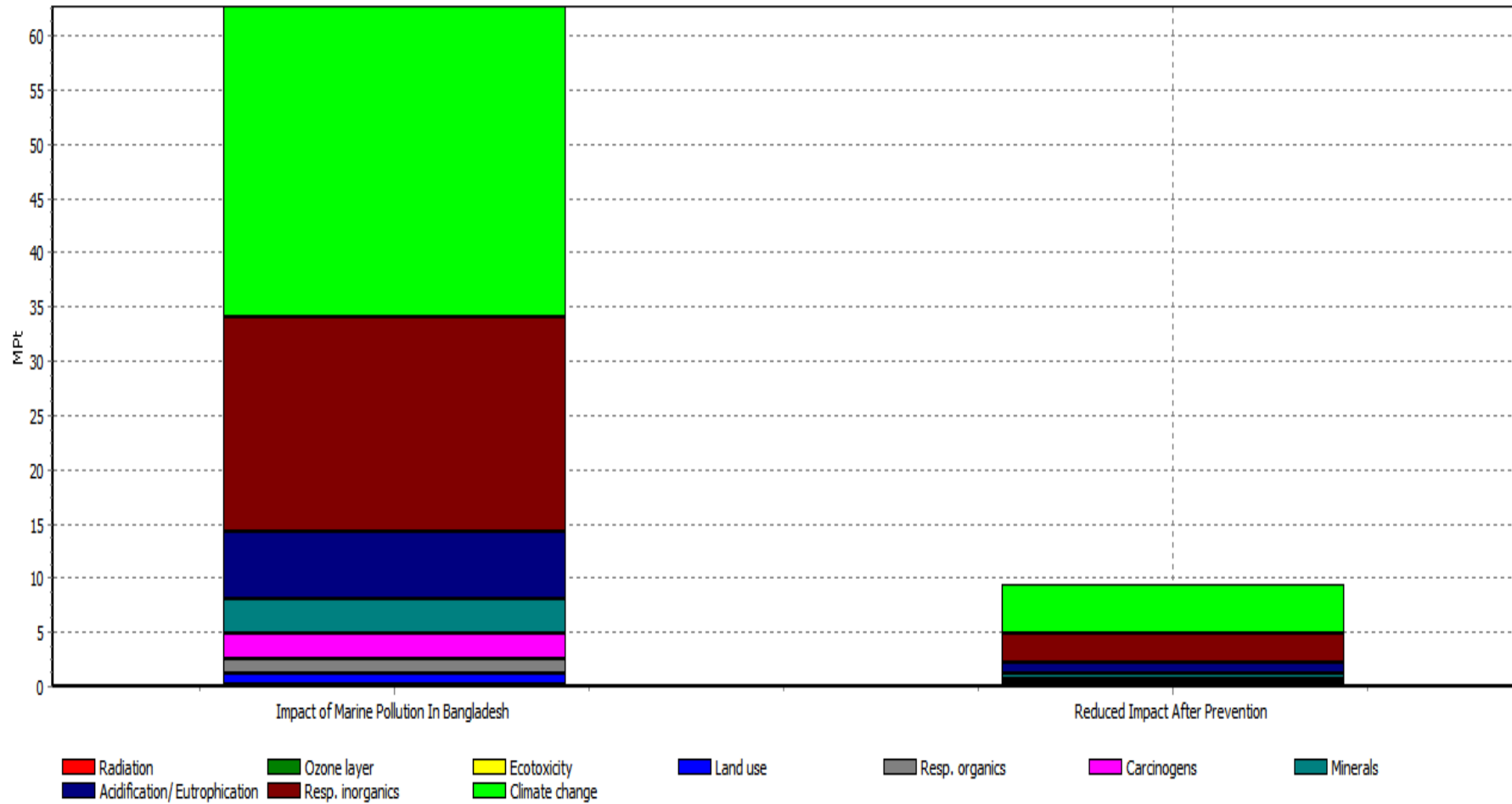
**Figure 7.1: Comparison of impact of Marine Pollution With and Without Preventive Measures (Damage assessment)**





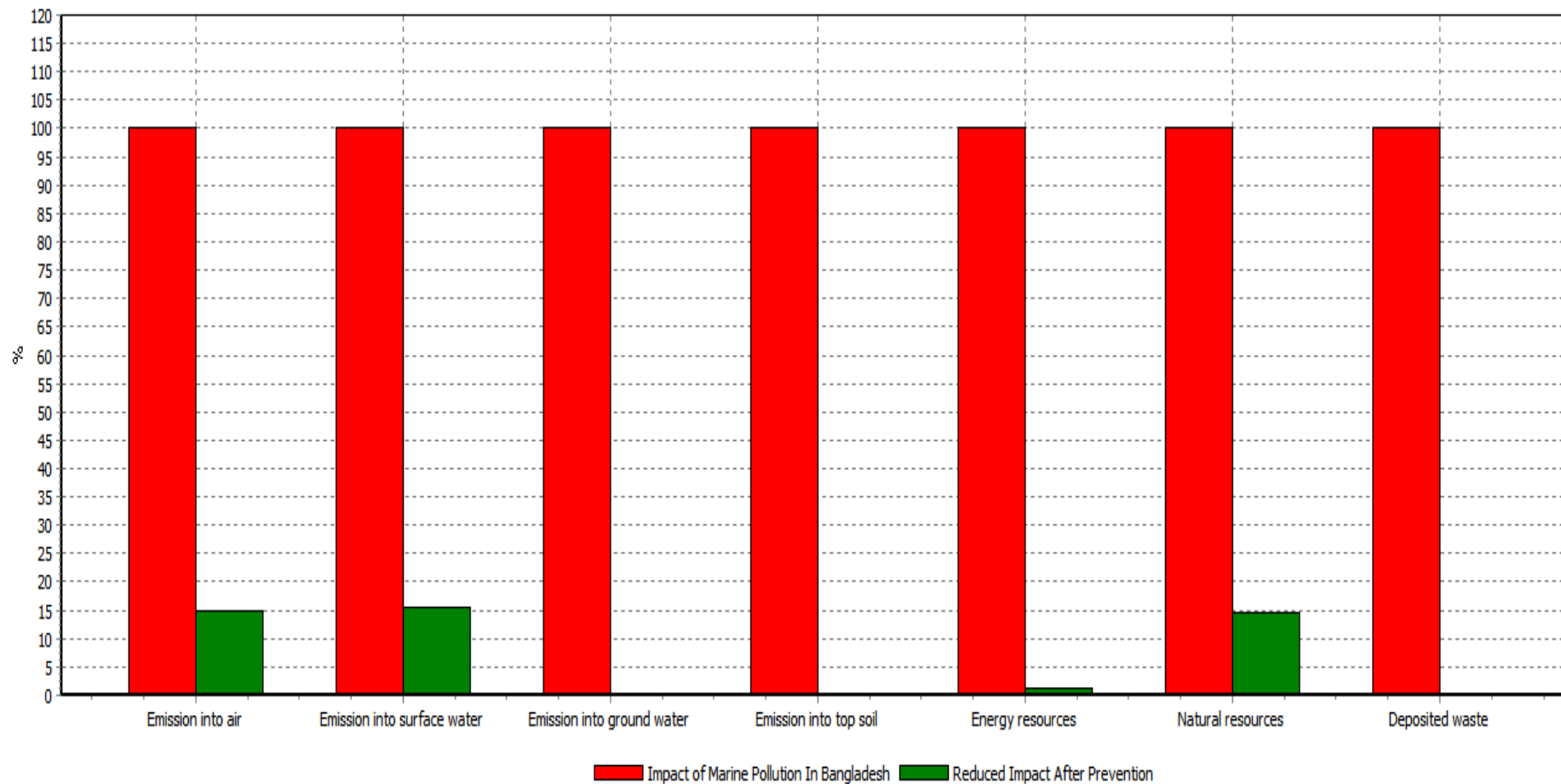
Comparing 1 p 'Impact of Marine Pollution In Bangladesh' with 1 p 'Reduced Impact After Prevention'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / weighting

**Figure 7.2: Comparison of impact of Marine Pollution With and Without Preventive Measures (weighting)**



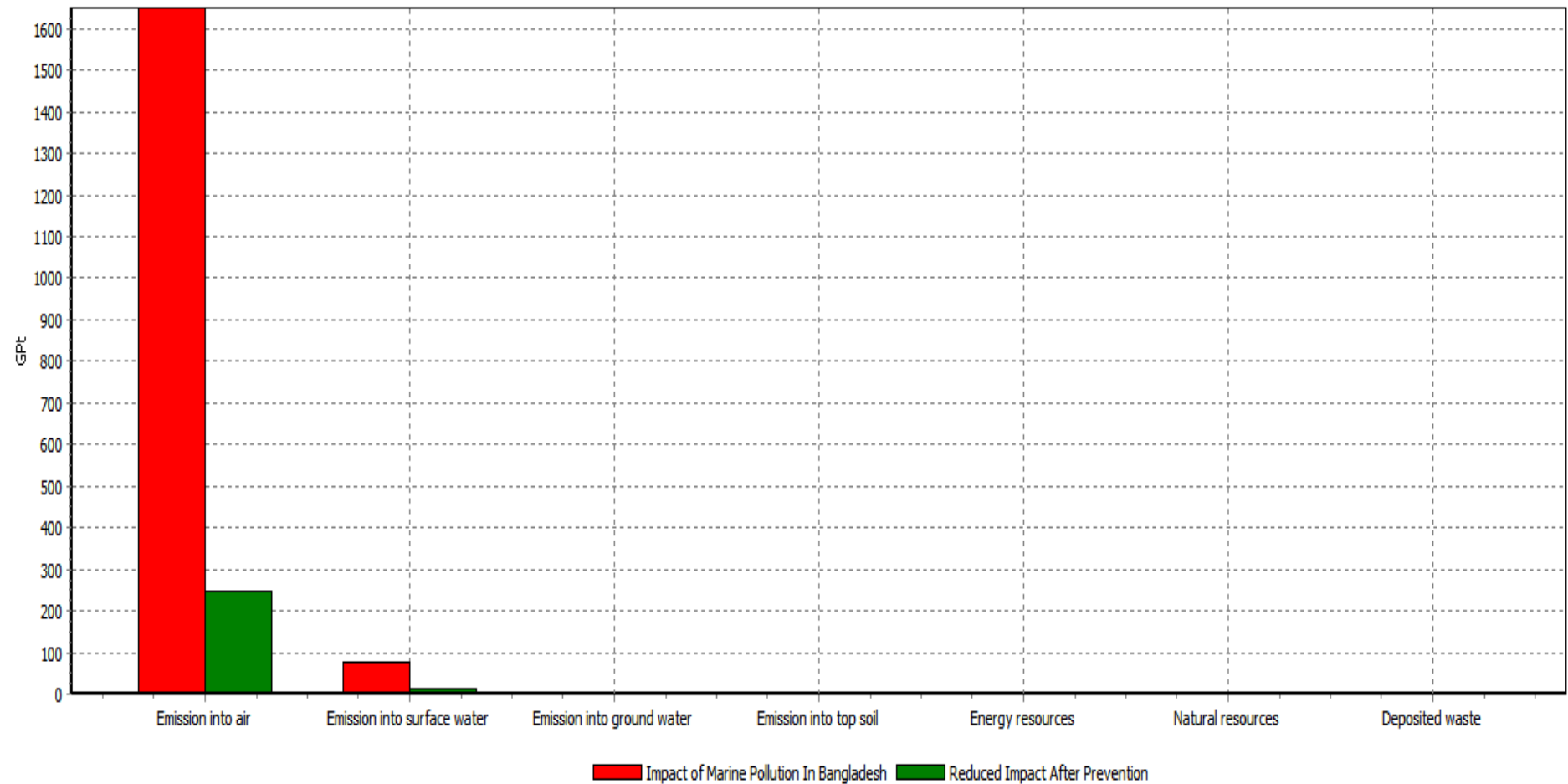
Comparing 1 p 'Impact of Marine Pollution In Bangladesh' with 1 p 'Reduced Impact After Prevention'; Method: Eco-indicator 99 (I) V2.04 / Europe EI 99 I/I / single score

**Figure 7.3: Comparison of impact of Marine Pollution With and Without Preventive Measures (single score)**



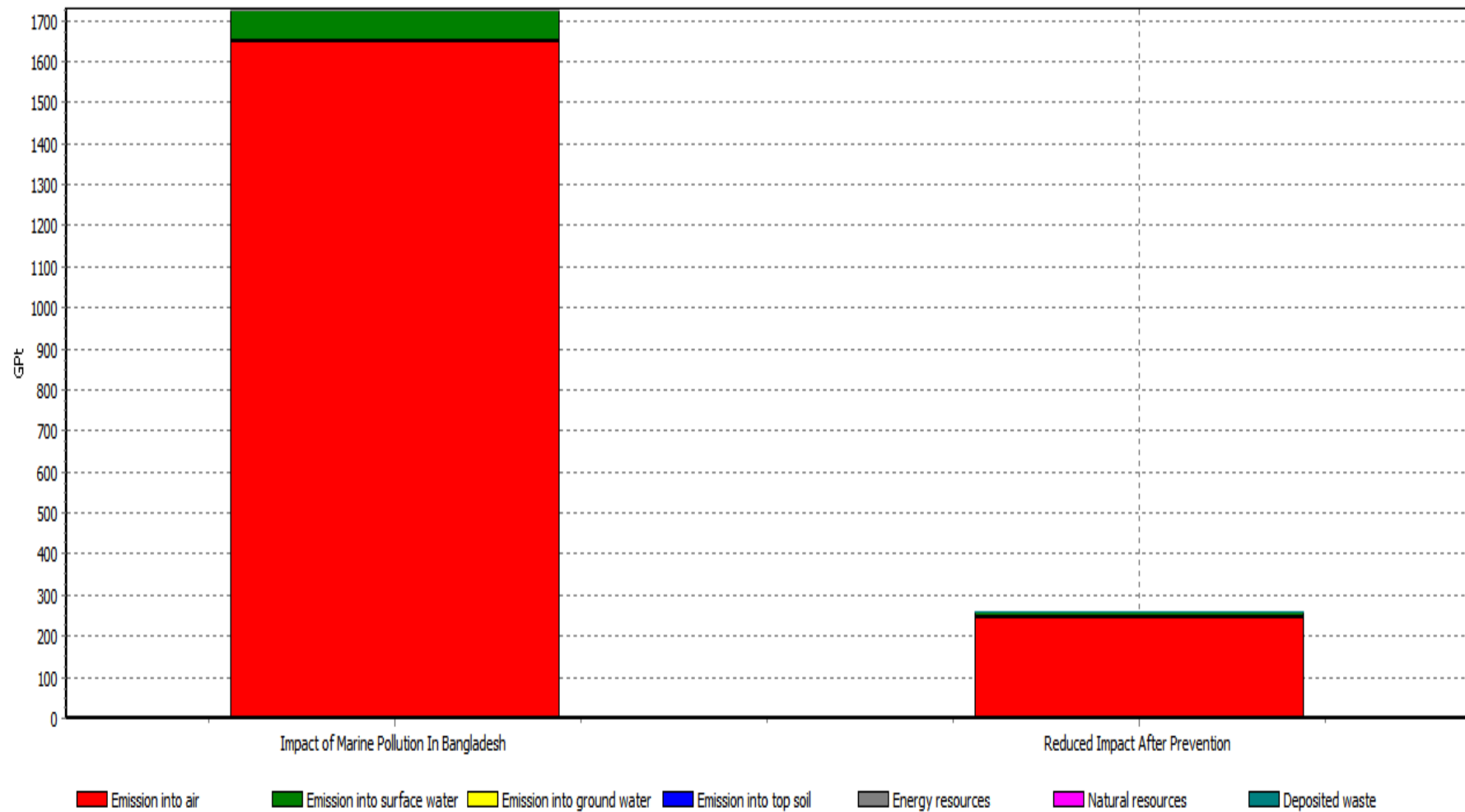
Comparing 1 p 'Impact of Marine Pollution In Bangladesh' with 1 p 'Reduced Impact After Prevention'; Method: Ecological Scarcity 2006 V1.02 / Ecological scarcity 2006 / characterization

**Figure 7.4: Comparison of impact of Marine Pollution With and Without Preventive Measures (Characterization)**



Comparing 1 p 'Impact of Marine Pollution In Bangladesh' with 1 p 'Reduced Impact After Prevention'; Method: Ecological Scarcity 2006 V1.02 / Ecological scarcity 2006 / weighting

**Figure 7.5: Comparison of impact of Marine Pollution With and Without Preventive Measures (Weighting)**



Comparing 1 p 'Impact of Marine Pollution In Bangladesh' with 1 p 'Reduced Impact After Prevention'; Method: Ecological Scarcity 2006 V1.02 / Ecological scarcity 2006 / single score

**Figure7.6: Comparison of impact of Marine Pollution With and Without Preventive Measures (Single Score)**

7.4 **Summary.** The above mentioned discussions, charts and tables showed that the preventive measures have reduced the adverse impact of marine pollution that is the impact on human health, eco system quality and impact on resources. In Simapro, two methods were considered to find out the comparison of impact of marine pollution with and without preventive measures by inland transportation operation in Bangladesh. Both the method showed the reduction in impacts which varied from 87% to 100% in some cases. It clearly provides an idea that the preventive measures will obviously reduce the adverse impact of pollutants on environment.

## CHAPTER- 8

### CONCLUSIONS AND RECOMMENDATIONS

#### 8.1 Conclusions.

8.1.1 Bangladesh is a country with huge no of rivers and it depends heavily on inland water transportation for transportation of goods, cargos, fuel-oil and passengers. Due to reachable means, this is the major sector of transportation of the country. There are various types of vessels plying in inland routes of Bangladesh among which the passenger ship, cargo ship, oil tanker and sand carrier are the major contributor of marine pollution. During study it has been found that the inland water ways are polluted by discharging of bilges, solid waste, oily water and ballast water. The major consequences of such pollution are damage to human health, damage to eco-system quality and damage to resources.

8.1.2 The quantity of various pollutants like bilges, ballast water, oily-water mixture, solid waste, sewage and harmful gases were calculated for one year considering the vessels operational time as eleven month. The quantity of pollutants discharged by Cargo vessels are much higher followed by Sand carriers, Passenger vessels and Oil tankers. The accumulated quantities of pollutant by the inland vessels are shown below in Table 8.1.

**Table 8.1: Discharged Quantity of pollutants/Year**

Type	Cat	Bilges Discharged (Ton)	Sewage Discharged (MT)	Oily water (Ton)	Ballast water (Ton)	Fuel Burnt (Ton)
Passenger Vessel	Cat -1	3856.050	42.845	-	-	51414
	Cat -2	1815.00	229.9	-	-	101640
	Cat -3	647.90	111.98	-	-	49104
	<b>Total</b>	<b>6318.95</b>	<b>384.73</b>	-	-	<b>202158</b>
Cargo Vessel	Cat -1	1435.50	-	-	-	34452
	Cat -2	10256.40	-	-	-	246453.6
	Cat -3	2309.175	-	-	-	61578
	<b>Total</b>	<b>14001.075</b>	-	-	-	<b>3424836</b>
<b>Type</b>	<b>Cat</b>	<b>Bilges</b>	<b>Sewage</b>	<b>Oily</b>	<b>Ballast</b>	<b>Fuel</b>

		<b>Discharged (Ton)</b>	<b>Discharged (MT)</b>	<b>water (Ton)</b>	<b>water (Ton)</b>	<b>Burnt (Ton)</b>
Oil Tanker	Cat -1	212.85	-	39150	-	5108.40
	Cat -2	935	-	1054680	-	25357.20
	Cat -3	255.75	-	-	306900	6138
	<b>Total</b>	<b>1403.60</b>	-	<b>1093830</b>	<b>306900</b>	<b>36603.60</b>
Sand Carrier	Cat -1	5179.02	-	-	-	286209
	Cat -2	5182.10	-	-	-	158794.35
	<b>Total</b>	<b>10361.12</b>	-	-	-	<b>632669</b>

8.1.3 Considering the calculated quantity of pollutants, the environmental impact models of different types of vessels have been made and the impacts of pollutants for different types of vessels through characterization, weighting and single score were found. The results of impacts of pollutants by passenger vessels, cargo vessels, oil tankers and sand carriers were compared and found that the impact of pollutants discharged by oil tanker is much higher than the other vessels, followed by sand carriers, cargo vessels and at last the passenger vessels.

8.1.4 In case of ship borne marine pollution, there are various types of preventive measures which include the technical framework, legal framework, general awareness, monitoring, economics and coordination among the ship owner, ship builder, designer and the related government bodies. From the point of view technical frame work, it is suggested to have a storage tank on board each vessel. The centralized treatment plant of bilge, ballast and sewage water is to be installed in a separate pontoon of port to prevent mixture of pollutants with water. The financial impact analysis showed that the fare rate will not increase more than one taka per ticket if the preventive measures are included. However, the comparison of impacts of marine pollution with and without the preventive measures showed that the preventive measures have reduced the adverse impact of marine pollution considerable for the present inland shipping operation.



8.2 **Recommendations.** A detailstudy on evaluation of environmental pollution in Bangladesh by inland shipping operation shows that the ship borne pollutants have significant impact on environment pollution in Bangladesh. So the preventive measures have to be taken as quickly as possible to stop the pollution. Few recommendations are made basing on above discussions which are mentioned below:

- a. Government should make the arrangements for treatment of various pollutants discharged by the vessels at major river ports to prevent discharging of pollutants.
- b. General awareness among the mass people, ship owner, ship builder, designer and the related government bodies have to be enhanced to stop discharging of pollutants from ships.
- c. Implications of laws regarding discharges from various ships have to be ensured through related government bodies.
- d. Ship surveyor must ensure the storage tank as well as the discharge mechanism on board each ship before issuing certificate.
- e. Ship owner should install correct machineries on board then the old one to avoid excessive fuel cost as well as air pollution.
- f. Complete database with all required information is required for regulatory authorities (DOS, BIWTA).Government should carry out a study for evaluation of marine pollution by inland vessels and take necessary steps as quickly as possible.
- g. Ship designers (naval architects)couldplay a vital role while designing hull form, engine power, pollution prevention mechanism to reduce operational pollution of ship by inland shipping operation.

h. The following unsolved problems are still left for further research in this area:

1. Mechanized country boat and other types of vessels (except passenger vessel, cargo vessel, oil tanker and sand carrier) should be included in future study.
  
2. Detail study on fuel efficient ship.

Annexes:

- A. List of Inland Passenger Vessels
- B. List of Inland Cargo Vessels
- C. List of Inland Oil Tankers
- D. List of Inland Sand Carriers
- E. Calculation of Pollutants by Inland Water Transportation
- F. Damage model of Eco-Indicator 99(I)
- G. Survey Questionnaires and Summary of Survey Analysis

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R AdmASM Abdul Baten, (E), NDC, psc, BN, ACNS (M) (Interview on 29 Aug 2014 at Dhaka).

S.M. NazmulHaque, Ship Surveyor and Examiner, DOS, Dhaka (Interview on May 2013 and 10 August 2014, Motijheel, Dhaka)

MdShahriarHossain, Ship Surveyor, DOS, Dhaka (Interview on 07 July 2013 and 10 August 2014, Motijheel, Dhaka)

Md. MoinuddinZulfiqar, Ship Surveyor, DOS, Dhaka (Interview on 07 July 2013 and 10 August 2014, Motijheel, Dhaka)

Dr. Abdullahel Bari, Chairman, Ananda group, (Interview on 10 Sep 2014 at Head office, City heart building, Motijheel, Dhaka)

M Tariqul Islam, CEO, Ananda group, (Interview on 10 Sep 2014 at Head office, City heart building, Motijheel, Dhaka)

Mr. AtaurRahman, GLSurveyor, (Interview on 05 Dec 2013, Dhaka)

MrShamsulAlam, MD, Marine House Ltd, (Interview on 16 June and 05 Dec 2014, Dhaka)

MdHumayunKabir, Chief Naval Architect, Marine house Ltd, (Interview on 16 June and 05 Dec 2014, Dhaka)

Captain MNazmulalam, Deputy Conservator, Ctg Port (Interview on Feb 2015, Ctg)

**LIST OF PASSENGER VESSELS****Category – 3 of Passenger Vessels (L>50 m)**

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V. Shundorbon – 7	85.95	13.41	2.75	2005	2354
M.V. Parabat – 11	85.67	13.46	2.74	2007	2800
M.V. Shurovi – 7	84.9	13.12	2.75	2004	1201
M.V. Parabat – 9	77.83	12.04	2.67	2005	1721
M.V. Kalam Khan – 1	76.85	11.5	2.45	2007	2541
M.V. Sundarban – 8	73.64	11	2.34	2008	2061.2
M.V.Sarwardi	73.15	9.75	2.62		1119
M.V. Parabat – 7	73.05	11.28	2.54	1998	1709
M. V. KittonKhola –1	71.78	9.75	2.11	2002	1455
M.V. Sher-e-Banglade	69.79	12.8	2.71		1121
M.V. Agrodot Pass	66.75	9.58	2.29	2002	1234
M.V. Parabat -2	64.65	11	2.51	2004	1864
M. V. Kornaphulli -4	62.43	10.06	2.51	2003	1365
M.V. Dipraj	60.97	10.1	2.36	1992	1596.01
M.V. Parabat – 4	59.65	9.3	2.13	2005	1405.85
M.V. Shariah – 1	59.6	10.85	2.44	2004	694
M.V. Dipraj – 2	59	8.76	2.59	2007	1257
M.V. Takwa	58.85	8.84	2.13	2002	1163
M.V. Parabat – 5	58.47	9.91	2.39	2004	1483
M.V. Rajdut – 7	58.27	9.45	2.29	2002	1466
M.V. Parabat – 10	58	19603	2.36	2005	1155
M. V. Tipu – 1	57.91	8.94	2.44	1991	1197.34
M.V. RofRof	57.55	9.75	2.5	2006	1212
M.V. Gori of Srinagar – 3	56.79	9.52	2.51	2006	1192
M.V. Sundarban – 6	55.82	9.15	2.12	2004	1095
M.V. Sundarban – 2	55.44	9.25	2.35	2004	630.5
M.V. Zahid – 4	55.35	9.76	2.44	2005	1044
M.V. Shoikot – 2	55.17	9.75	2.13	1998	1274.92
M.V. Tipu	55.1	8.55	2.44	2006	344
M.V. Tarika – 2	54.99	8.84	2.13	2003	1172
M.V. Shompat	54.86	8.84	2.29	2000	1175
M.V. Shoikot – 1	54.42	8.24	2.14	2002	530
M. V. Kornophuli – 3	53.64	8.53	2.08	2000	1050

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M. V. Parabat – 6	52.91	8.99	2.29	2007	1137
M.V. Moshirun Khan – 1	52.83	8.28	2.13	1999	833.17
M.V. Tipu – 6	52.54	8.24	2.14	2002	925
M.V. Sunderban – 3	52.5	8.54	2.44	2001	1082.34
M.V. Zahid- 3	52.15	9.15	2.45	2003	1080
M.V. Balia	52.1	9	2.3	2003	900
M.V. Moir – 2	51.81	8.38	2.13	2001	974
M.V. Dipu – 5	50.13	7.93	2.13	2003	715

**Category – 2 of Passenger Vessels (50>L>30 m)**

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V. Totul	49.98	8.53	2.16	2001	1015
M.V. New Al Borak	49.63	8.53	2.13	2002	976
M.V. Prince of Rashel – 1	49.38	8.53	2.29	2002	1040
M. V. Mayer Achol -6	48.8	8.53	2.44	2004	857.38
M.V. Lali	48.75	8.55	2.3	2004	722
M.V. Anchol	48.1	7.92	2	1998	749
M.V. Farhan – 1	48.1	8	2.15	2002	543
M.V. Tungipara	48	8.48	3.25	2003	369.1
M.V. Bogdadia – 9	47.8	7.01	2.21	2000	641
M.V. Shahidut	47.55	8.53	2.01	1995	824.97
M.V. Al Walid	47.5	7.31	2.01	1986	711.3
M.V. Flotila	47.24	8.23	2.13	1998	854.6
M.V. Parabat – 1	47.02	8.53	2.36	1990	735
M.V. Glory of Sree Nagar-2	46.94	8.23	2.18	2000	880
M.V. Razhongsho – 7	46.94	7.32	2.01	1999	677.58
M.V. Tipu – 4	46.56	7.87	2.13	2004	686.15
M.V. Farhan – 2	46.33	7.92	2.13	2001	769
M. V. Himalaya	46.04	8.54	2.32	2003	600
M.V. Mour – 1	46.02	7.65	2.21	1999	732.12
M.B. Patar Hat -4	45.49	7.92	2.34	1993	701.93
M.V. Bogdadia – 8	45.41	7.01	2.29	2000	631
M.B. Dip Raz – 4	44.5	7.92	2.29	1999	770
M.V. Prince Awlad –	44.5	7.31	2.06	1991	707
M.V. Dipu – 3	44.5	7.31	2.01	2003	560.07
M.V. AllahorMorji	44.5	8.14	2.44	1994	785.26

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V. Mitali – 6	44.04	7.92	1.98	1997	718.85
M.V. Torika – 7	43.68	7.92	2.05	1992	713.75
M.V. Tipu- 2	43.58	7.31	1.98	2000	642
M.V. Paira – 3	43.44	7.93	2.14	1992	532.13
M.V. Shornodip – 7	43.28	7.31	2.13	2000	612
M.V. Shariatpur – 3	42.97	8.32	2.06	2002	574.19
Md.V. Sadim	42.9	7.31	2.13	2004	569
M.V. Mitali – 5	42.9	7.92	2.44	1995	756.35
M.V. Farhan	42.62	9.14	2.39	1999	849.91
M.V. Farhan	42.62	9.14	2.39	1999	849.91
M.V. Bondhon – 7	42.51	8.55	1.98	2003	508.08
M.V. Koko – 4	42.37	7.25	2.13	1999	654.69
M.V. Zuboraz – 2	42.32	7.95	2.01	1999	689.25
M.V. Pubali	42.06	8.08	2.13	2006	599
M.V. Shoikot – 8	41.91	7.92	2.35	1988	443.72
M.V. Shoikot – 9	41.91	7.91	2.36	1988	483.72
M.V. Patarhat – 1	41.33	7.31	2.16	1999	593.88
M.V. Bagerhat – 1	40.86	7.32	2.15	2006	368.99
M. V. Koko – 2	40.84	8.23	2.44	1991	722.64
M. V. Koko – 1	40.84	8.23	2.44	1991	722.64
M.V. Zamal – 3	40.77	7.39	1.98	1995	584.33
M.V. Bandhon	40.54	7.02	2.05	2001	577
M.V. Gazi Express – 4	40.35	7.09	2.15	1990	498.07
M.V. Nusrat – 2	40.35	7.92	2.44	1998	559.64
M.V. Zol Taranga – 1	39.95	6.71	2	2000	409
M.V. Pubali – 2	39.93	6.71	2	2002	359.67
M.V. Patarhat – 5	39.8	7.9	2.13	2001	634
M.V. Tarika – 1	39.62	6.71	1.83	2000	480.22
M.V. Riaz – 4	39.6	7.77	2.75	1990	444.77
M.V. Co Co – 3	39.56	7.31	2.36	2007	354.85
M. V. Prince of Barisal	39.24	7.9	2.2	2003	443.69
M.B. Kheapar	39.1	7.93	2	2001	153.27
M.V. Nagorik	38.84	7.26	2.08	1995	535.94
M.V. Modern Sun	38.83	7.62	2.29	1991	573.13
M.V. Auvijan – 1	38.72	7.72	1.83		1019
M.V. Abe Jomjom	38.57	7.32	2.06	1990	254
M. V. Mitali – 2	38.4	7.31	2.01	1999	559.69
M.V. King Shomrat	38.4	7.31	2.31	1999	559.62
M.V. Juboraj	38.4	7.31	2.31	1999	564.82



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V. Jamal – 1	37.8	7.32	2	1997	452.55
M.V. Manik – 5	37.79	7.31	2.01	2000	570
M.V. Kazol	37.77	7.32	2	2002	547
M.V. Nazma khan	37.49	9.14	2.13	1984	449.1
M.V. Rajhongsho Pas	37.49	7.31	2.13	2003	322.13
M. V. Manik – 4	37.34	7.1	1.98	1998	522.02
Barge Ayesha KhatonPinki	37.2	9.14	1.53	2001	77.04
M.V. New Sun – 4	37.18	7.31	1.98	2001	542
M.V. New Meghna Rani	36.55	7.01	2.16	1995	491.81
M.V. Prince Awlad – 3	36.27	7.09	1.91	2002	528
M.V. Atlas Sun	36.16	7.01	2.31	1977	306.4
M. B. Red Sun – 2	35.96	8.23	1.98	1984	510.56
M.V. Running Sun	35.8	6.77	2	1984	380
M.V. Mahanagori	35.69	6.96	1.91	2002	441.15
M.B. AlMadina	35.49	8.54	2.11	2005	65.23
M.V. Shornodip – 8	35.36	7.01	2.24	1993	473
M.V. Annatoma – 1	35.26	7.01	1.98	2001	460
M.V. New Mishu	35.23	7.01	2.13	2003	267.3
M.V. Auvijan – 3	35.1	8.69	1.98	2004	390
M. V. Sandra	35.06	7.62	2.29	1950	204
M.V. Bogdadia – 6	34.56	7.01	2.19	1990	450.82
M.V. ZalPalanka	34.5	7	2		1334
M.V. Silver Sun	34.44	6.71	2.01		1117
M.V. Morning Sun – 1	34.19	7.01	1.91	2003	381
M.B. Mohoi Khan – 7	34	6.02	1.83	2002	177.74
M.V. Beauty of Dipanchal	33.84	6.86	1.83	2002	150
M.B. Riaz – 2	33.68	6.87	2.06	1987	269.83
M.V. Dorbar	33.65	6.71	2.13	2002	305
M.B. Newshan	33.5	6.83	1.83	2003	263
M.V. Manik -8	33.45	6.96	2.26	2004	344
M.V. MohuyeNafee	33.22	7.86	2.13	1989	281
M.V. Razdhani	33.16	7	2	2003	277
M. V. Shorno Deep – 1	33.1	6.71	2	2004	276.85
M.V. Shornodip – 4	33.07	6.58	2.89	1984	279.75
M.V. Manoshi – 2	32.77	7.31	1.8	2002	310
M.V. Surreshshor – 1	32.75	6.86	1.97	1993	356.29
m.v. Shovaraz	32.61	6.64	2.74	1985	262.08
M.V. Zoltarango	32.57	6.7	1.98	1986	294

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. Bipasa – 1	32.5	8	2.3	2005	60.99
M.V. Dingi	32.39	6.06	1.9		1302
M.V. Chandradip	32.36	6.71	1.83	2001	245.2
M.V. Igal – 2	32.31	7.8	2.9	1974	263.13
M.V. Igol – 1	32.31	7.8	2.9		1240
M.V. Miraz – 2	32.15	6.55	2.29	1986	241.01
M.V. Momin Khan	32	6.71	1.9	1994	310.81
M.V. Sureshor- 2	32	6.72	1.95	1985	175
M.V. Sonartori – 1	31.85	7.31	2.19	1985	240.74
M.V. Shariatpur – 1	31.61	8.05	2.04	1991	353.01
M.V. Mohammadi	31.55	6.16	1.68	1984	98.5
M.V. Noria – 2	31.45	7.31	1.91	1993	202.9
M.V. Water King – 7	31.4	5.5	2.13	1982	115.23
M.V. Lamia	30.7	6.85	1.98	1992	316
M.V. Vhobanipur – 2	30.61	6.33	1.84	1983	109.4
M.V. Shathi	30.3	6.4	1.85	2001	70.6
M.V. Lopa Express	30.17	6.63	2.13	2001	328.58
M.V. Milon Express	30.1	6.6	1.83	1990	116

**Category – 1 of Passenger Vessels (L<30 m)**

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V. Shurovi – 3	29.87	7.16	1.38	1984	117.33
M.V. Reyad Express	29.87	6.71	2.29	1985	176.1
M.V. Nipu	29.47	6.3	1.68	1989	71.02
M.V. Mokbul – 1	29.27	6.1	1.53	1988	104.59
M.V. Anandapur	29.26	7.62	1.98	1985	136.01
M.V. Chonchita – 2	29	6.4	2	2005	165.66
M.V. Prince of Barisal	28.56	6.5	2.13	1980	150.97
M. V. Koli	28.5	6.71	1.88	1993	212.8
M.V. Beauty of Toma	28.5	7.06	1.68	1997	165.05
M.V. Mamun	28.4	6.4	1.68		
M.V. Mohima – 1	28.35	6.7	1.7	2002	299
M.V. Sea Prince	28.35	6.95	2.13	1986	147.79
M.V. Noria – 1	28.35	6.4	1.82	1980	86.6
M.V. Suravi	28.35	5.55	1.75	1976	64
M.B. Bipasa – 2	28.3	7.34	2.36	2005	50
M.V. Jhanda	28.04	6.25	1.86	1990	146.07
M.V. Mishu	27.95	6.41	1.68	1998	131.58

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V.Bancharampur	27.54	4.27	0.91	2007	10
M.V. Green Water – 1	27.43	5.97	1.83	1994	143.26
M.V. Water King 5	27.4	5	1.66	1997	81.84
M.V. Awlad Express	27.1	5.99	1.85		1038
M.V. Bipasha – 1	27.06	7.09	1.77	1988	129.9
M.B. B – 613	27.01	6.26	1.65	2004	94.1
M.V.Mouchak	27	6.1	1.6		1303
M.V. TomizTalukder	26.82	7.16	1.68	2000	125
M.B. Pritilmad – 1	26.65	3.2	0.98	2009	11.87
M.V. Dhanshiri	26.6	5.55	1.77	1980	74.49
M.V. Prince of Laxmipur	26.52	6.71	1.84	2002	139
M.L. Rasel Express – 2	26.52	5.79	1.67	2003	34.8
M.L.Hasan	26.5	6.1	1.5	2003	51
M.V. Tofder Express	26.49	5.95	1.67	2003	61.03
M.V. Bhobanipur – 1	26.4	6.4	2.23	1980	82.1
M. V. Razu Express	26.37	7.01	1.7	2001	227
M.V. Hedaiet	26.33	6.1	1.65	2003	72.6
M.V. Al Falah	26.22	5.95	1.6	1989	76.17
M.V. Khan Zahan Ali	26	6	1.23	1985	74.5
M.V. Nitoo	26	6	1.83	2003	74.5
M. V. Momotaz	25.92	5.8	1.6	1993	92.58
M.V. Shamim	25.9	6.48	1.9	1989	107.72
M.L. Upabon	25.81	5.71	1.98	1991	116.26
M.V. Shagor King	25.68	3.15	1.25	1993	29.9
M.V. Green Water – 5	25.61	5.64	1.83	1995	106.96
M.V. Shabiloy	25.6	5.79	1.54	1977	60.02
M. B. FariaSadia	25.53	5.65	1.68	1997	87.2
M.L. Shah Ali	25.53	5.76	1.57	2003	40.63
M.V. Shonchita – 1	25.38	5.86	1.76	1991	198.27
M.V. Sinthia	25.3	5.49	1.45	2001	97
M.L.Moinamati	25.22	6.15	1.82	2000	48.9
M.V Shathil -1	25.1	5.49	1.68	2001	226
M.V. Jolpadda	25.07	6.71	1.89	1991	106.82
M.V. Beauty of Barisal	25	6.1	1.83		1280
M.V. Shuravi – 2	25	3.55	1.96	1985	118.59
M.V. Janata	25	5.79	2.05		97.56
M.V. Zakaria	24.79	5.49	1.65	1999	105.48
M. V. Aanika	24.69	5.79	1.98	1984	72.9
M.L. Paharpur	24.62	5.74	1.68		1074

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. Al Arafat – 1	24.6	5.05	1.68	1998	87.17
M. V. Black Bard	24.55	5.42	1.98	1962	50.2
M.V. LalShaheb	24.54	5.5	1.8	2003	147
M.V Auntara	24.39	4.88	1.7	19.89	57.1
M.V. Mohabbat Express	24.39	5.79	1.67		1332
M.V. Mahfuz	24.38	6.55	1.52	2001	96
M.V. Nasir	24.38	6.1	1.82	1982	70.6
M.V Super Sonik -2	24.35	5.49	1.8	19.89	85.73
M.V. Aricha	24.18	5.2	1.68		1239
M.V. Al Madina – 1	24.15	5.34	1.98	1985	86.9
M.V. Runa	24.1	5.34	1.5	1996	81.15
M.V. Mustafa	24.09	5.5	1.54	1979	53.89
M.V. Salimabad	24.08	5.73	1.83		1232
M.V. Zilani	24.08	6.28	1.52	1987	116.76
M.VK. Shoheli	24.05	6	1.9	1979	70
M.L Rupak Express	24	5.95	1.75	2002	74
M. V. Monihar	24	5.08	1.83	1996	71.94
M.L. Dalim – 2	24	5.65	2	2002	74.27
M.L. Shariatpur	24	5.5	1.6	2003	59
M.L. Shantipur	24	5.65	1.8	1982	97.53
M.L.River Bridge – 2	24	5.37	1.53	1993	70
M.L Hayet	23.99	4.74	1.55	2002	63.71
M.V. Ass Salah	23.99	6.52	1.89	1992	102.02
M.L. Al Arafat	23.96	5.94	1.68	1961	44.9
M.L. Voirob	23.95	5.92	1.55	2005	50
M.V. Shawan Express-2	23.93	6.55	1.8		1205
M.V. Rezwan	23.93	5.54	1.52	1996	65.66
M.L. Akter	23.92	5.72	1.6	1998	54.13
M. V. Titas	23.9	5.59	1.83	1995	97.24
M.V. Bowali	23.9	6.25	1.98	1995	91.65
M.L. Koshbah	23.9	5.48	1.6		1073
M.V. Pinak	23.9	5.49	1.08	2003	147
M.L. Chatlapar	23.9	5.62	1.65	2006	87.02
M.L. AndharMaink	23.89	6.5	1.73	2005	128
M.V. Culiar Char – 3	23.87	5.6	1.44	2003	81.79
M.L. Tuli	23.85	6	1.67		1209
M.V. Bishadut	23.85	6.63	1.63	1988	93.18
M.V. Tazmahal	23.83	6.05	1.68	1995	77.59
M.V. Kawrakandi	23.77	6.25	1.55	2002	95.2

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V Chistia	23.77	5.5	1.82	1977	56.06
M.V. Beauty of Silimpur	23.74	5.49	1.71	1992	96.46
M.L. Princes	23.72	5.3	1.6	1990	70.01
M.L. Super Sonik – 1	23.7	5.6	1.85	1977	49.3
M.L. Manik Nagar	23.7	5.3	1.53		1092
M. V. Amanat – 3	23.67	5.64	1.63	1995	98.37
M. V. Shah Poran	23.67	5.62	1.6	2005	51
M. V. Kamal Express	23.6	5.78	1.65	2006	80
M.L. Bristi	23.6	5.26	1.75	2005	45.09
M.L. Rahman	23.58	4.52	1.44	2004	55
M. V. Nabil – 1	23.54	4.88	2.13	1989	111.54
M.V. Seven Star – 3	23.49	5.49	1.53	2004	49.1
M.V. Sujon – 2	23.48	5.79	1.82	1982	55.05
M.V. Borkot	23.46	4.88	1.53	1964	53.07
M.V. Sherpur	23.45	6.37	1.7	1991	88.08
M.V. Seven Star – 4	23.42	5.94	1.57		1206
M. V. Tofan Mail – 2	23.35	5.16	1.98	1981	62.4
M.V. Vela	23.34	6.1	1.68	2001	114
M.V. Tumpa Express	23.29	6.25	1.15		1230
M.V. Chuti	23.29	6.35	1.57	1995	133.44
M.L. Shamim	23.23	4.75	1.75	1981	58
M. V. ShaplaPhul Express	23.21	5.33	1.6	1996	80.28
N.V. Nipu – 1	23.2	5.3	1.55	1994	60
M.V. Prince of Mitara	23.2	5.18	1.6	1983	50.05
M.V. River Bridger	23.17	5.18	1.53	1977	40
M.L. Darashiko	23.17	5.79	1.67	2003	75
M.V. Injam	23.01	5.43	1.67	1987	89.54
M.L. Mashud Khan	22.98	5.49	1.68	2001	52.7
M.V. Al Madina – 2	22.88	5.19	1.68	1954	32.2
M.L Naia	22.87	5.41	1.67	1967	50
M.V. Porbot	22.87	5.49	1.63	2005	66.23
M.L. ShamimNigar	22.87	4.45	1.5	2007	49
M.L. Al Hossain	22.86	4.73	1.66	2004	60.25
M.L. Zaugona Express	22.79	5.57	1.65	2003	42.08
M.V. Mozlishpur	22.76	6.3	1.78	1993	97.72
M.V. Navil – 3	22.73	5.18	2.13	1979	73.1
M.V. Khondoker	22.71	5.23	1.65	1995	85.75
M.V. Nafi Khan	22.71	6.4	1.78	1997	116.67
M.L. Barkat	22.7	4.72	1.8		1335

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.V. Al Helal- 1	22.7	5.4	1.67	2005	67.2
M.L. Azmir – 2	22.63	4.4	1.33	2007	47
M.L.Zulekha	22.61	4.48	1.49	2004	50
M. L. Bahauddin	22.6	4.88	1.52	1994	40
M.V. Bidhut	22.55	5.34	1.65	1996	89.31
M.V. Anowna Express	22.55	4.88	1.68	2000	61
M. V. Flying Bird	22.55	6.1	1.83		1237
M.V. Meghduth – 1	22.55	5.24	1.68	1985	54
M.v. Hawlader Express	22.55	5.36	1.52	1990	59.24
M.L. Asif	22.52	4.64	1.65	2007	54
M. L. Bepari Express-2	22.5	5.62	1.71	1984	56.53
M. L. Ma Roba	22.47	5.88	1.93	1992	61.52
M.L. Samia – 4	22.45	3.35	1.54	2008	56
M.L.Kabir	22.43	4.48	1.53	2005	52
M.V. Shuchona	22.4	5.56	1.7		1333
M.V. Parveen	22.4	5.65	1.95	1983	75
M.V. Monir Express	22.3	5.4	1.6	2006	54.2
M. V. KhazaEnayetpuri	22.26	5.65	1.6	1994	69.7
M.L. Zogazog Express	22.26	5.49	1.53	2003	17.3
M.L. Shumi	22.21	4.19	1.33	2004	44
M.L. Khan Express	22.03	5.49	1.45		1079
M.L. Chandpur Express	22.03	4.2	1.6	2003	45.7
M.L. Chandpur Express	22.03	4.2	1.6	2003	45.7
M. L. Milon Express	22	5.48	1.83	1959	52.02
M.L.Zuthi	22	5.35	1.83	2002	62.84
M. V. Rabbi	21.97	4.75	1.52	1993	60.91
M.L. Nazir Express	21.96	4.49	1.7	1960	36.09
M.L. Nippon	21.95	5.03	1.53	2003	42.08
M.L. New Koruna	21.95	4.96	1.35	1983	19.4
M. V. Prince of Sutarpara	21.94	6.25	1.25	2001	74
M.V. Anwara -1	21.94	6.16	1.75		1091
M.V. Galimpur – 1	21.94	6.1	1.42	1999	68.14
M.V. Khaza Express	21.94	6.03	1.98	1984	57.4
m.l. Bizli	21.94	4.42	1.37	2003	52.72
M.L. Balaka	21.94	4.42	1.37		52.72
M.L. Mostafa	21.93	4.4	1.48	1992	47.8
M.L. Tayef	21.93	5.28	1.56		1226
M.L. Motihar	21.89	6.15	1.52	1997	76.81
M.L. Khodeja	21.82	4.4	1.49	2004	44

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.L. Nila	21.8	4.88	1.52		1299
M.L. Sonali	21.8	5.12	1.53	1983	45.36
M.L. Sundarban	21.79	5.64	1.68	1985	45.39
M.L. Goni	21.76	4.45	1.42	2004	45
M.L. Islam – 2	21.68	4.38	1.71	2005	44
M.B. Rim	21.65	4.88	1.53	1996	57.3
M.L. LitonParibahan	21.65	5.18	1.38		1257
M.L. Doulat	21.65	5.18	1.55	1969	39.08
M.L. Shahabuddin Express-1	21.6	4.8	1.44	2005	70
M.L. Munir	21.55	4.88	1.75	1975	49.5
M.V. Markuli	21.5	6	1.37	87	70.54
M.L. Paleken	21.35	6.1	2.29	2001	88.54
M. L. Rayan	21.33	5.84	1.68	1998	69.98
M.L. Shathi	21.3	5.38	1.45		1093
M.V. Flash Door	21.15	3.26	1.02	2004	23.86
M.L. Shiking Express	21.08	4.96	1.52	1985	37.19
M.L. Arafat	21.03	4.6	1.54	1960	41.9
M.L. Banani Express	21.03	4.72	1.52	2002	40.8
M.L. Hawlader Express-2	20.91	4.96	1.45	2003	27.2
M.L. Nazim	20.88	4.19	1.45	2001	52.24
M.L. Kornofuly Express	20.8	4.16	1.4	2008	33
M.L. KhaledMahmood Khan	20.8	5.92	1.6	1997	65.18
M.L. Islam	20.77	4.34	1.45	1982	49
M.L. Khan Express	20.75	4.9	1.45	1997	42.2
M.L. Nabinagar	20.72	4.26	1.67	2005	33
M.L. Rokeya Begum	20.69	3.72	1.09	1978	29
M.L. Rahat	20.6	5	1.6		1338
M.. River Star	20.57	4.63	1.37	1985	36.04
M.B. AugroZatra	20.57	4.12	0.76	2008	6.57
M.L. Bon Bibi	20.5	6.36	2.14	2004	76.6
M.L. Charmonai – 5	20.49	4.6	1.55	1988	50
M.L. Nizam	20.43	4	1.45	2007	42
M.L. Tanveer – 4	20.42	5.18	1.73	2000	47.89
M.L. Bagdad	20.41	5.29	1.76	1989	47.74
M.L. Beauty of Madhapara	20.37	4.78	1.42	1997	62.98
M.L. Mohammadi – 1	20.3	5.85	2.6	1986	41.9
M. L. Taz – 1	20.3	4.9	1.37	2001	61
M.L. Akota	20.29	4.95	1.53	1983	43.11
M.L. Shango	20.2	4.03	1.4	2005	37

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.L/ Shohati	20.13	4.73	1.53	1999	94.94
M.L Moushumi – 1	20.13	4.73	1.53	1999	38.9
M.L. Madina	20.13	3.74	1.14	2005	29
M.L. Prince of Padma – 1	20.12	5.03	1.52		1084
M.L. ShahinRion Express	20.1	4.72	1.95	1990	43.2
M.L. Mamoon Express	20.1	4.75	1.45	2003	29.9
M.B. Tohin	20.09	4	1.29	2006	27.54
M.B. Khaled	20	3.96	1	2003	5
M.L.Zahir	19.98	5.39	1.53	2006	50.5
M.B.AlamgirNau Trans.	19.96	2.89	1.07		1169
M.L. Suchna	19.96	4.42	1.36	2007	12.23
M.L. Shumi Express	19.95	4.48	1.3	2002	38.88
M.L. Urmi	19.95	3.97	1.41	2007	38
M.L. Shamrat – 3	19.94	5.05	1.55		1298
M.L. Moris Patti	19.93	4.85	1.53		1203
M.L. Zonni Express	19.9	4.94	1.43		1202
M.B. Shipa	19.9	3.32	1.08	2007	20.42
M.V. Fateha Noor – 2	19.87	5.19	0.76	1983	36.05
M.L. Sadia Kamal	19.87	3.45	1.2	2007	30
M.B. Shipa – 4	19.87	3.66	1.09	2009	8.085
M.L. Taz	19.85	4.7	1.4	1989	35.39
M.L. KairiKornophuli	19.85	4.46	1.68	2006	84.68
M.L. Sarfaraz Khan	19.85	5	1.4	1984	33.01
M.L.Bongoduth	19.85	4.8	1.67	1995	49.34
M.V. Moniza	19.83	4.2	1.18	1988	31.49
M.L. Shatata -2 1	19.82	4.95	1.3	2004	51
M.L. Tanjil – 3	19.82	4.8	1.53	2003	21.6
M.L. Shafi	19.82	4	1.39	2005	36
M.L. Pangshi	19.81	5.49	1.49	1988	62.5
M.L. Kornofuly	19.8	4.9	1.55		36.6
M.L. Culiar Char – 2	19.78	4.72	1.74	1990	61.99
M.L. Shalook	19.7	4.9	1.93		1161
M.L. Salim	19.68	3.92	1.38	2005	35.21
M.L. KeyariTorongo	19.68	5.7	1.7	2007	64.21
M.L. New Kornofully	19.66	5.38	1.3	1999	45.67
M. L. Nasir Khan	19.65	4.75	1.6	1990	43.2
M.L. Al Islam	19.63	5.18	1.74	1989	58.19
M.L. Rabeya	19.62	3.94	1.41	2004	32
M.L. Hirock	19.59	6.5	0.96	2003	27



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.L. Pinak – 5	19.57	4.1	1.22	1990	24
M.B. Sadeka	19.56	3.65	0.87	2008	6.5
M.L.RangamatiPurabi	19.54	3.96	1.35	1976	37
M.L. Chofura	19.54	3.96	1.35	1987	35
M. L.Jeto – 2	19.5	4.24	1.35	2008	23.75
M.L. Rony Express	19.5	5.37	1.57	2005	48.74
M.L.Mitu	19.5	4.24	1.35	2008	23.75
M.L. Shakiba	19.5	4.65	1.85	2006	35.28
M.B. Rafique	19.41	3.84	1.21	2006	23
M.B. Shipa – 2	19.4	3.74	1.04	2007	19.79
M.L.Akash	19.4	3.94	1.22	2008	24.6
M.L. Zilani	19.39	3.53	1.14	1985	28
M.L River Prince	19.36	4.57	1.37	1973	26
M.L. Fayzan – 2	19.35	3.86	1.32	2008	40
M.L.New Maria – 1	19.32	5.9	1.53	1983	42.19
M. L. Rezia	19.3	4.26	2.4	1979	50
M.L. Nusrat	19.28	5.61	1.56	1990	55.15
M. L.Dolphin	19.28	4.65	1.22	1995	50.59
M.L. Aulia Express	19.25	3.56	1.17	1980	25
M.L. Ayon	19.2	4.05	1.22	1994	13.9
M.L. Sufia	19.2	3.89	1.4	2002	35
M.L. Tanjim – 1	19.2	4.4	1.4	1996	24.15
M.L Chormonai – 4	19.16	4	1.08	1986	50
M.L. Babar Doa	19.13	4.52	1.52	2008	13.4
M.L.Shaheen Express	19.11	4.72	1.6	1990	52.04
M.B. Jannath and Tanim	19.11	3.85	1.1	2009	18.09
M.L.Wahid – 2	19.1	4.65	1.6	1989	55.98
M.L. Mohsin Express	19.08	5	1.46	2003	15.3
M.B. Mahmood and Ripon	19.03	3.62	0.93	2009	16.73
M. L. Shiplu	19	5.6	1.7	1981	37.9
M.L. Mucha Express	19	3.55	1.15	1980	26
M.L. Shotota Express	19	4.6	1.4	1973	24.5
M.L. Kuliar Char	19	4.5	1.3	1	35.28
M.L. Tarik Express	19	4.48	1.32	2003	25
M.L.Hasan	19	3.97	1.38	2005	37
M.L. Zahid	18.95	4.46	1.46	1974	25
M.L. Nansree – 1	18.94	3.95	1.05	1996	17.04
M. L. Akota Express	18.93	8.81	1.45	1946	30.06
M.L. Pinaq – 3	18.91	4.2	1.39	1988	80

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. Rubel and Sukur – 1	18.9	3.15	0.92	2008	5.58
M.L.AzizMonzil	18.9	4.02	1.58	1985	30.35
M.L. Tital	18.9	5.55	1.52	1986	39.61
M.V.Shuversa	18.85	3.8	1.06		1233
M.B. Ereen Kamal	18.85	3.05	1.2	2006	13.85
M.L. Fayzer – 3	18.85	3.86	1.32	2008	41
M.L. Fayzer – 4	18.85	3.86	1.32	2008	55
M.L. Azmir	18.84	3.83	1.21	2001	32
M.L. Lira	18.8	4.14	1.36	2007	25
M.B. Zihan	18.76	3.6	2.24	2006	22.22
M. L. MadhuMati	18.75	4.57	1.52	1990	36.7
M.B. Swad Enterprise	18.75	3.65	1.3	2007	9.07
M.B. Goneshpur	18.73	3.75	1.14	2006	22.63
M. L. Prince of Mamun	18.67	5.33	1.6	1993	51.32
M.B. Ismail Paribahan	18.67	3.72	1.12	2006	22.59
M.L. Ridoy Express	18.67	4.63	1.37	2003	26.2
M.L. Fayzer – 5	18.67	3.3	1.9	2008	38
M.L. Shahin Sonia – 1	18.65	4.88	1.38	2006	60
M.B. Momtaz	18.63	3.52	1.07	2006	19.42
M. B. Silvia	18.62	4.22	1.39	2007	26.66
M.L. Princes Sivia	18.62	4.22	1.39	2008	11.14
M.L. Ma	18.6	4.73	1.42	1995	32
M.L. Labonnoy	18.6	4.27	1.52	1993	33.24
M.L. Fahem	18.6	3.82	1.35	1999	26.28
M.L. Mizanoor	18.59	4.57	1.7	1978	29.04
M.L.Nargis	18.56	4.89	1.52		1234
M.L. Kaykobad	18.49	4.4	1.37		36.19
M.B. TauhidParibahan	18.47	3.6	1.18	2006	21.65
M.L. Prince of Harta	18.45	3.65	1.07	2001	18
M.L. UzanMeherpur	18.44	5.31	1.14	2004	35.16
M.L. Pinak – 4	18.42	4	1	1994	30
M.L. Mamun	18.34	3.57	1.19	1985	26
M.L. Niharika-2	18.3	3.66	1.13	19.91	25
M.L. Bismilla	18.3	4.65	1.27		1037
M.B. Sadia	18.3	4.27	1.22	2006	9.72
M.B. Doli	18.3	4.27	1.22	2006	9.72
M.B. SuityParibahan	18.3	4.27	1.22	2006	9.72
M.L. Dolfon	18.3	4.6	1.53	1996	41.71
M.L. AfsarUddin	18.29	4.48	1.37	2003	30

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. New Hemail – 1	18.29	3.96	0.91	2008	6.72
M.B. New Hemail – 2	18.29	3.96	0.91	2008	6.72
M.L. Samia – 5	18.29	3.5	1.22	2008	20.77
M.B. NurusSunnah	18.29	3.35	0.91	2008	6
M.B. Suborna	18.29	3.65	1.37	2008	9.32
M.L. Khyea	18.28	7.94	1.52	1975	29.9
M.B. Mayer Doa – 1	18.21	3.46	1.05	2006	18
M. L. New Janata	18.13	4.45	1.45	1989	27.57
m.L. Sharif Express – 1	18.06	4.49	1.45	1988	50.74
M.V. Mayer Doa – 2	18.04	3.96	0.95	2006	20.85
M.L. Sikder Express	18.03	5.54	1.53	2004	36.27
M. B. Tarek	18	3.5	1	2003	5
M.L. Prince of Nesarabad	18	4	1.22	1999	26.21
M.L.Noman Express	17.98	4.27	1.52	1985	29.88
M.L.Faizan	17.98	3.28	1.15	2007	25
M.L. Shakhina Express	17.93	4.95	1.37		1162
M.L. RangamatiExprss	17.92	3.16	0.76	1998	17.15
M.L. Padmar Par	17.91	4.57	1.22		1339
M.B. Haroon	17.91	3.45	1.01	2008	7
M.B. HaziParibahan	17.9	3.9	0.9	2008	22.36
M.L.MeherunNessan	17.88	3.73	1.04	1959	23.15
M.L Fahmida Happy Express	17.83	4.37	1.3	19.91	56.13
M.B. Jewel Paribahan	17.83	3.48	1.07	2008	6.77
M. L. Arif	17.78	4.73	1.4	1982	24
M.L.Rana	17.75	3.42	0.97		1033
M.L. Bakerganj-1	17.71	4.34	1.22		1256
M.L Nasfee	17.7	4.35	1.53	1989	27.89
M.L Niharika	17.7	3.8	1.07	1992	24
M.B.AsharAloo	17.7	3.88	0.95	2008	6.65
M.L. Bristi	17.68	4.72	1.52	2003	25
M.L.Nabila	17.68	4.73	1.4	2002	14.11
M. L. Jahangir Alam	17.67	4.42	1.29	1985	25
M.L. Shotota	17.64	4.27	1.22	2007	9.37
M.L. Makka	17.63	4.2	1.65		1259
M.L. Tarasicho – 1	17.55	4.3	1.6	2003	34.96
M.B. Rubel and Sukur – 2	17.5	3.2	0.92	2008	17.5
M.B. Ayub Enterprise	17.38	3.2	1.14	2008	6.46
M.B. Akamony	17.38	3.59	1.83	2007	12.62
M.B. LakiParibahan	17.38	3.66	0.84	2008	5.45

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. Haturia – 1	17.37	3.73	0.9		1098
M.L. Shetu	17.37	4.26	1.68		20
M.L. Munshigonj	17.3	4.1	1.3	2003	15.4
M.L.jChalachal – 1	17.25	4.08	0.93	2008	6.68
M.B. Sium and Zobair	17.24	3.15	0.97	2009	10.83
M. L. Faruque – 2	17.2	4.47	1.6	1989	29.74
M.L.Bagdad Express – 2	17.2	3.55	1.27	2005	25
M.L. Nashim Express	17.18	3.57	1.28	1978	26
M.B.Salek Enterprise	17.17	3.2	1.14	2008	6.38
M.B. Yusuf Enterprise	17.17	3.2	0.94	5.26	5.26
M.B. Mujib	17.14	3.8	0.9	2008	20.86
M.B. Anowar and Milon	17.13	3.5	0.97	2009	12.06
M.L.Sharosh	17.08	4.58	1.38	1994	28.33
M. B. Ridhoy	17.07	3.54	1.11	2008	16.62
M. L. Shawan	17	4.4	1.45	1970	26.6
M.B. Haturia – 2	17	3.73	0.9		1099
M.B. Friendship S – 2	17	6.5	1.1	2006	63.72
M.B. Haturia – 3	17	3.73	0.9	2008	5.82
M.B. TabasumParibahan	16.92	3.42	0.99	2008	5.84
M.B. AtaburParibahan	16.92	3.05	0.91	2008	4.89
M.B. SubornoParibahan	16.92	3.2	0.91	2008	5
M.B.DiaParibahan	16.92	3.2	0.91	2008	5
M.B. Friendship S – 1	16.9	4.5	1.1	2005	57.31
M.L. Halim – 3	16.9	4.15	1.2	2006	8.59
M.B. Hazrat – 1	16.86	3.73	1.05	2009	14.04
M.L. Paharika Express	16.82	2.93	1.02	2005	12
M.L. B of Bisharkandi – 2	16.8	3.8	1.14	1998	21.28
M.B. Noor Mia	16.8	3.47	0.97	2008	6
M.B. Shanti Paribahan	16.8	3.2	1.2	2008	22.96
M.B. Shova	16.78	3.66	1.07	2007	6.7
M. L. Dayal – 2	16.77	5.03	1.83	1988	37.48
M.B. Meghna	16.77	3.5	1.22	2007	7.3
M.B.AllahVorashaParibahan	16.77	3.02	0.92	2006	4.75
M.L. Kacha Long – 1	16.77	3.36	1.37	2008	7.87
M.B. HadishaParibahan	16.77	3.5	1.22	2006	7.3
M.L. Kazi Express	16.76	3.96	1.14	1990	16.4
M.B. Islam – 3	16.76	3.35	0.9	2004	7.5
M.B. Samia – 1	16.76	3.35	1.9	2004	7.5
M.B. Samia – 2	16.76	3.88	1.3	2004	7.5

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. Samia – 3	16.76	3.88	1.3	2004	7.5
M.L. Shahana	16.69	4.27	1.35		1201
M.B. Naiem Enterprise	16.69	3.02	1.01	2008	5.16
M.L. Akota Express	16.67	4.47	1.37		1336
M.L. Bahar	16.64	2.97	1.12		1029
M.L. Biplob	16.62	4.35	1.2	2003	24.1
M.L. Biplob	16.62	4.35	1.2	2003	24.1
M.L. Mushnad	16.59	4.45	1.3	2001	45
M.L. Amena	16.55	3.3	1.03	2008	14.96
M.L. Char Monai – 1	16.5	3.3	1.1	1987	14.3
M.B. ZabedNauParibahan	16.48	3.3	0.99	2009	12.04
M.B. Mizan Express	16.47	3.66	1.14	2008	7.01
M.L. Hiro	16.47	3.35	1.06	1988	11.16
M.B. Bahar Enterprise	16.46	3.2	0.91	2008	4.88
M.L. Sonia	16.46	4.6	1.37	1994	20.64
M.L. Prince of Al Rabbi	16.46	5.26	1.6	1990	44.66
M.B. RefayetUllah	16.43	3.35	0.97	2009	12.41
M.L. Taposh	16.41	3.96	1.32	2008	13.5
M.L. Herashiko – 1	16.4	4.26	1.6	1994	30.16
M.B. ImdadulHoque	16.32	3.33	1.11	2009	12.63
M.B. Aushok	16.3	3.07	0.93	2008	16.56
M.B. Fazil Mia	16.25	3.07	0.93	2008	16.51
M.B. Moury	16.24	3.67	1.05	2007	29.84
M.B.Rahim Enterprise	16.23	3.2	0.91	2008	4.82
M.B Jannat	16.23	2.97	0.76	2008	3.74
M.L. Rigan Express	16.2	4.2	1.3	2003	20.3
M.B. Mujahid	16.2	3.08	0.88	2008	16.59
M.L. Kaikobad - 2	16.16	4.12	1.3	1994	22.27
M.B. Hima and Arif	16.15	3.35	0.62	2006	3.42
M.L.:Nasir	16.15	4.57	1.6	1973	20.2
M.B. Shah Kutub	16.07	3.5	1.23	2006	16.68
M.L. Nabila	16.06	2.86	0.79	1981	10
M.L. Shovoraz	16.06	3.26	0.93	2008	27
M.L. Shova Express	16	4.15	1.2	2003	26
M.B. Akota Express	16	3.76	0.99	2007	6.07
M.B. ShukurMamud	16	3.2	0.91	2008	4.75
M.L. Al Noor	16	4.12	1.45	2003	14.17
M.L. RuhulAmeen	16	4.27	1.3	2004	19.7
M.B. Shahad	16	3.35	0.82	2008	5

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.I. Shojib	15.96	4.33	1.35	2003	14.1
M.L. Shapla Express	15.9	5.2	1.22	1988	24.8
M. L. Munim	15.85	3.84	1.25	1990	24.79
M.B. EmonNauParibahan	15.85	3.96	0.92	2006	5.89
M.B. Kabita Express	15.85	3.96	0.92	2006	5.87
M.L. Mamun Express	15.85	4.57	1.37	2003	14.1
M.L. AsrabUddin	15.85	4.11	1.37	2003	15.07
M.L. Halim – 4	15.85	4.06	1.15	1981	13
M.L. Halim – 1	15.85	4.27	1.37	1990	23.6
M.L. Soma Express – 1	15.82	4.3	1.14	1974	17.9
M.L. BirSena	15.75	3.35	1.12	1991	19.49
M. L. Noor-e-Madina	15.72	3.65	1.18	1996	22.32
M.B. Shovon	15.63	3.2	0.7	2007	3.67
M.L. Sadia	15.63	3.73	1.22	1985	
M.B. Surman – 2	15.59	2.83	0.78		1048
M.B. VaiBoan	15.59	2.83	0.78		1049
M.B. BuluParibahan	15.56	2.95	0.91	2008	4.53
M.B. Surma	15.56	2.93	0.84	2007	
M.B. JuelParibahan	15.56	3.26	0.95	2008	17.15
M.B. Jannath	15.56	3.26	0.95	2008	17.15
M.b. Chan Mia	15.54	3.51	1.21	1985	16.57
M.V. Shahjalal Express	15.48	3.3	1		1238
M.L. Laximpur Express	15.4	4.57	1.4	1975	21.4
M.L. Smriti (M 4064)	15.39	4.1	1.29	2008	22.47
M.L.SonarMouir	15.35	4.5	1.3	2003	16.7
M.L. Shujon	15.25	3.36	1.07	1988	15.56
M.L. Moon Paribahan	15.25	3.5	1.1	2008	6
M.B. Pass VaiParibahan	15.25	3.35	0.9	2008	16.36
M.L.KhajaGarib-a-Nawaz	15.24	2.74	0.9	2006	8
M.L. Rahat – 11	15.24	3.35	1	2008	5.2
M.B. Suparna Enterprise	15.24	3.3	0.9		1059
M.L. Riyad	15.24	3.96	1.22	1988	22.12
M.B. Mostaque	15.24	2.85	0.76	2008	3.37
M.L. ShamolRumki	15.24	3.07	0.94	2009	17
M.L.Prince of Hularhat-1	15.2	3.7	1.15	1996	22.6
M. L. Shahin-3	15.11	3.62	1.12	1996	20.72
M.L. Tanzim – 2	15.1	3.67	1.32	1988	15.52
M.B.VaiVai	15.09	3.1	1.04	2008	16
M.B. Rumon Enterprise	15.02	2.78	0.6		1061

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Year</i>	<i>Dead Weight</i>
M. B. MurshedKandari	15	3.12	1	2003	5
M.B. RidhoiAlam	15	3.8	0.92	2008	5.34
M.L. Herashiko	14.98	4.14	1.25	2003	19.04
M. V. Ruma	14.93	3.22	0.94	2008	11.36
M.B. VaiVai Enterprise	14.93	2.97	0.71	2008	3.21
M.L. Upahar	14.93	3.96	1.82	1974	25
M. B. Zakir	14.87	43.1	1.15	2005	5.5
M.L.Shoma Express	14.83	3.9	1.29	2000	12.4
M.L. Jhalowkati	14.8	2.8	0.98	1987	11.05
M.B. Aumi Enterprise	14.73	3.35	0.91	2007	4.55
M.L. Shuktara	14.69	3.8	1.37	1987	18.98
M. L. Hafiz	14.66	3.72	1.13	1986	15
M.L. SonaliSerajganj	14.66	3.5	1	1987	17.41
M.B. Ismail	14.63	3.2	0.85	2008	14.21
M.B. Mayer Doa	14.63	3.14	0.91	2003	5
M.L. Nasfee – 1	14.63	5.42	1.29	2008	17.5
M.L.Seven Star	14.63	4.27	1.83	1994	23.03
M.B. Mokhles Enterprise	14.5	2.86	0.9		1063
M.L. Bono Mrigo	14.47	2.85	1.41		1077
M. L. Lima Express	14.43	3.64	1.22	1989	17
M.B. Augrogrami	14.39	2.59	1.07	2008	7
M.L. Syed Express	14.35	4.35	1.25	2006	13.04
M.L.Hanif	14.33	3.25	1.16	1972	7.3
M. B. RaheenTanin	14.3	2.92	0.82	2008	8.13
M.L. Ananda – 2	14.29	3	1.07	1988	11.55
M.B. Mayer Doa	14.2	3.01	1.02		1062
M.L. Shachib	14.17	4.02	1.21		1337
.M.L. Tohin Express	14	3.8	1.2	2003	25
M.L. Prince of Shahinoor Express-2	13.96	3.62	1.2		1075
M.L.Palton Express	13.9	4	1.2	2003	14.6
M.B. Prince of Agorpur	13.84	3.07	1.07	2008	5
M.B. Habiba – 1	13.84	3.16	1.07	2008	5
M.B. Alam	13.79	2.87	0.9	2008	9
M.L AKola Vita	13.75	3.36	1.3	1990	11.38
M.L. Shobuz	13.75	3.36	1.3	1999	25
M.L. Beauty of Bisharkandi	13.72	3.11	1.22	1994	11.82
M.B.Zahid Express	13.72	3.2	0.91	2008	9.28
M.L. Tareqje	13.72	3.7	1.2	2008	24

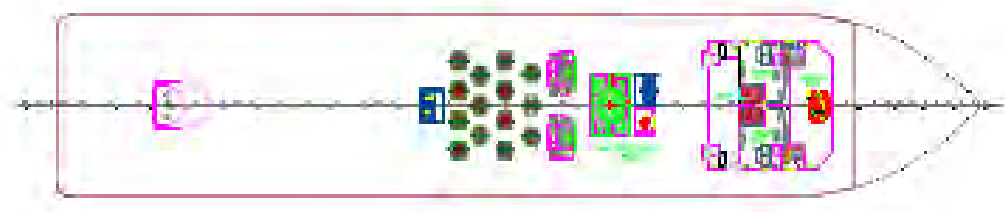
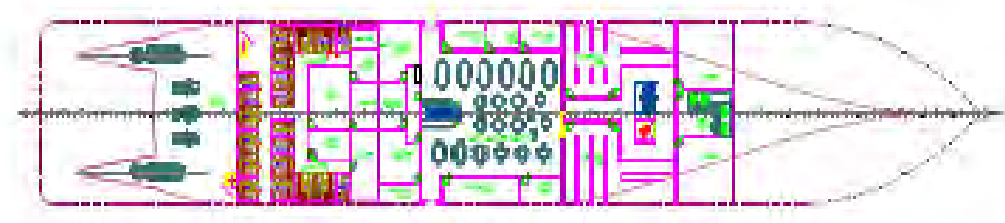
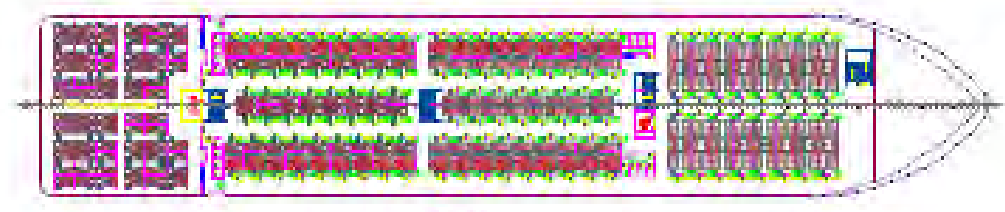
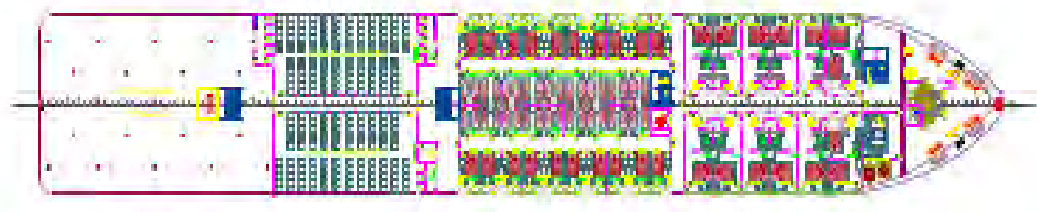
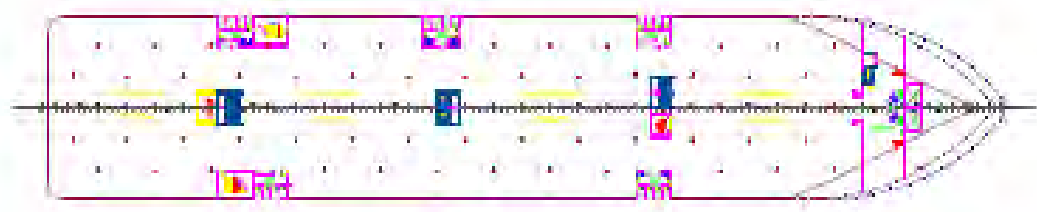
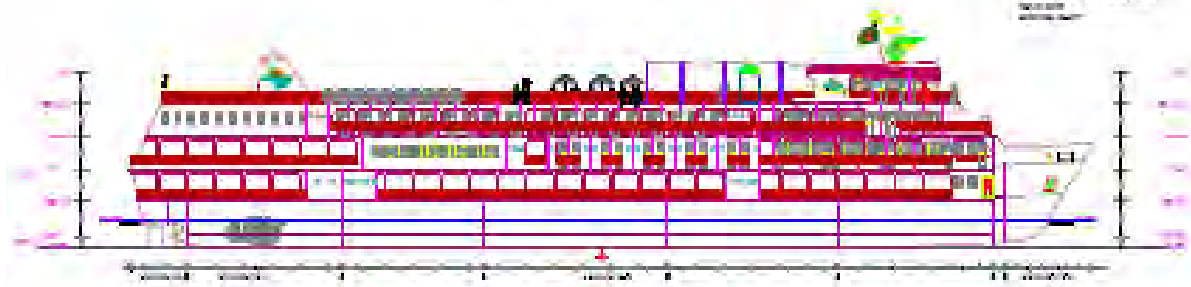
<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.L. Margoba	13.72	3.7	1.2	2008	24
M.B.VaiVai Express – 2	13.71	3.04	1.14	2008	4
M.B. VaiVai	13.71	3.04	1.09	2008	4
M.L.Rahman	13.71	3.65	1.82	1986	15
M.L. Rokeya	13.71	3.65	1.52	1986	18
M. L. Mumin	13.7	2.82	1.06	1987	8.43
M.B. Mau Paribahan	13.5	3.56	0.5	2008	2.45
M. L. Al Madin a	13.47	3.19	0.85	1981	25
M.L. Rabbi	13.41	3.32	1.07	1993	12.39
M.L. VaiVai – 2	13.41	3.73	1.07	1990	18.49
M.B. Raquib	13.4	3	0.9		1060
M.B. Mahi and Nafi – 1	13.34	2.8	1	2008	4.09
M.L. Sharif – 3	13.21	3	1.07	1988	14.46
M.L. Shohag	13.1	2.89	1.06	1987	8.56
M.B. Prince of Agarpur – 1	12.92	3.07	0.92	2008	5
M.L. Zedda	12.89	3.04	0.91	1981	25
M.L.Jui	12.85	2.62	0.79	2008	2.71
M.L. Razmukut	12.85	2.7	0.91	1987	9.05
M.B. Bahadur	12.81	2.9	0.92	2008	7
M.L.Madina	12.8	3.84	1.4	1974	8
M.B. Saleha Express	12.8	2.93	0.85	2008	6
M.B. Denebola	12.8	3.65	1.53	2007	20
M. L. Bizlee	12.77	3	0.78	1993	10
M.L. Shatata Express	12.68	3.04	0.95		1031
M.L. Kazi Express – 1	12.52	3.1	1.15	1997	12.82
M.L. Supria – 3	12.5	3.35	0.99	1994	20
M.L. Shuktara – 1	12.5	2.43	0.92	1987	7.8
M.L.HisbulBahar	12.5	3.05	0.99	1987	7.58
M. L. Kabir Express	12.2	3.5	1.14	1990	10
M.L. Ekra Express-1	12.2	3.2	1.15		1032
M.B. Mayer Dan	12.2	3	0.76	2008	7
M.B. JolShetu	12.2	2.95	0.82	2008	7
M.B. Hawlader	12.2	8.82	0.92	2008	7
M. L. ShohagRana	12	3.4	1.25	2000	8.04
M. L. Baba Shah Poran	11.9	3.35	1.14	1991	11.32
M.B. Shohag – 2	11.9	2.9	0.8	2004	2.5
M.B. Agragami	11.9	2.44	1.2	2007	4
M.B. MimJheel	11.9	2.9	0.82	2008	6
M.b. Turag	11.9	2.92	0.84	2008	7



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Year</b>	<b>Dead Weight</b>
M.B. ShuvooChuchona	11.9	2.9	0.74	2008	6
M.B. OishiParibahan	11.89	3.65	0.91		1050
M.B. Noorjahan Express	11.88	2.77	0.92	2008	4
M.B. Milon	11.75	2.95	0.8	2004	2.5
M. L. Ramzan Ali	11.6	3.2	1.06	1986	7.34
M.L. Satata	11.6	2.75	1	1981	12.89
M.L. VaiVai	11.59	2.65	1.06	1994	6.37
M. L. Moinuddin	11.58	3.2	1.07	1989	9.76
M.B. Gaokhali	11.58	2.74	0.92	2006	3
M.B. Ekra – 2	11.58	2.36	1.06	2008	2
M.B. Shohag – 3	11.4	2.44	1.2	2004	3.5
M.B. Boithakata	11.4	2.44	1.2	2007	8
M.B. Boithakata – 2	11.4	2.44	1.2	2004	3.5
M.B. Shohag	11.4	2.44	1.2	2007	3.5
M.B. Saiful	11.4	2.44	1.2	2004	3.5
M. L. Rampur	11.28	2.89	1.07	1984	7.48
M.L. Royal Express – 2	11.2	4.38	1.68	1998	65.14
M. L. Rasel	11	2.75	0.92	1987	6.17
M.B. UzanVati	10.98	2.82	0.76	2008	6
M. L. Shah Ali Express	10.97	3.23	1.09	1982	9.5
M.B. Mamoon	10.97	3.48	0.91	2007	5
M. V. Bolga	10.67	3.15	1.3	1983	10
M.L. Pervez	10.67	3.2	1.06	1994	9.29
M. B. MehediMurshed	10.62	2.78	0.92	1984	7
M.L EnamulHoque	10.2	2.7	0.91	1982	5
M. L. Munir – 3	9.93	3.23	1.09	1978	10.9

**HAZIRLANMIŞTIR**  
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**ANNEX B****LIST OF CARGO VESSEL****Category – 3 of Cargo Vessels (L>50 m)**

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Banglar Urboshi	86.05	8.84	3.66	416	2001
M.B. Hang Gang – 2	82.29	13.97	4.78	1590.24	2003
M.V. Kafil Uddin – 1	76.5	11.3	6.3	1231.34	2007
M.V. City – 5	75	11.19	5	1002	2006
M.V. City – 6	75	12.19	5	952	2006
M.V. Roknoor – 1	73.5	11.03	4.73	910	2006
M.V. Seven Seas	73.17	11.59	4.88	1015	2006
M.V. Pokhraj	73.15	11.58	4.88	952	2007
M.V. Madina -1	71.7	10	5.57	975.48	2006
M.V.City – 16	71.65	10.98	4.95	830.2	2005
M.V. Sirajul Islam – 1	70	10.67	5	875	2008
M.V. Bdanlar Eagle – 1	70	10.67	5	876	2008
M.V. City – 18	70	12.8	4.573	995	2008
M.V. City – 17	70	11	5.35	974.25	2007
M.V. Newtek – 2	70	11.67	3.96	1043	2008
M.V. Khazababa Foridpuri	70	9.76	4.88	796.07	2007
M.V. City -19	70	12.8	4.57	990	2009
M.V. Suravi	70	10.06	4.88	880	2009
M.V. Banglar Soinik – 5	70	10.97	5.01	973	2009
M.V. Markentiel – 2	69.9	11.6	4.6	816.63	2006
M.V. Markentile – 3	69.9	11.6	4.6	816.63	2006
M.V. Habib Ullah	69.82	10.71	5	932	2008
M. V. Shani – 3	69.8	10.36	4.88	820.4	2007
M.V. City – 14	69.51	11.58	4.57	1156	2006
M.V. City – 2	69.51	11.58	4.57	894	2004
M.V. Amazan Lili – 1	69.5	10.06	4.57	799.6	2008
M.V. Agoiljhara – 12	69.5	12.19	4.57	899.95	2006
M.V. Al Forkan Noor	69.27	9.76	4.65	794.38	2008
M.V. Nazera	68.5	10.36	4.89	941	2006
M.V. Banglar Egal	68.5	10.06	4.57	776.5	2007
M.V. Roknoor - 2	68.2	9.76	4.57	680	2006
M.V. Nihar	68.2	9.91	4.57	753.2	2008
M.V. Nihar	68.2	9.91	4.57	753.2	2008

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Abdullah Al Asib-2	68	9.91	4.73	775.5	2007
M.V. City – 13	67.68	10.36	4.36	785	2004
M.V. City – 10	67.68	10	4.72	717.17	2007
M.V. N. A. – 2	67.38	9.76	4.57	767.75	2007
M.V. Gouri of Sreenagar-5	67.38	10.15	4.9	681	2008
M.V. Nonali Probal	67.26	10.67	4.58	801.12	2006
M.V.Rajanigondha – 2	67.1	10.82	4.88	790	2007
M.V. Roknoor -3	67	9.61	4.41	600.2	2006
M.V. Shumi Rimi	66.46	10.37	4.88	820	2006
M.V. Master Suniat – 2	66.43	9.98	4.7	795	2007
M.V. City – 11	66.2	11.6	4.6	705	2001
M.V. Kazol – 4	66.16	9.77	4.42	672.75	2007
M.V. Anisha – 1	66	9.9	4.7	790	2005
M.V. Akash – 8	66	9.76	4.58	685	2008
M.V. Tiger of East Bengal-2	66	9.9	4.7	690	2007
M. V. Boo-Bay	65.85	9.9	4.6	687	2006
M.V. Muhaimanu	65.85	9.9	4.6	697.27	2006
M.V. Al Abika-1	65.85	10.11	4.88	777.77	2007
M.V. Yousuf Arafat	65.85	9.91	4.88	752	2008
M.V. City – 1	65.8	10.4	4.26	630	2003
M.B. Beauty of Triratna – 3	65.55	9.91	4.57	710	2008
M.V. Shanta Maria	65.53	10	5	620.9	2005
M.V. Prince Arefin	64.64	9.75	4.27	636.32	2004
M.V. Goldren Dream	64.63	9.76	4.58	563.7	2005
M. V. Master Jarif	64.63	9.76	4.58	563.7	2005
M.V. Chader Aloo – 1	64.63	9.55	4.37	711.17	2005
M.V. Master Ziad	64.63	9.76	4.58	655.4	2005
M.V. S.M. Tanjim	64.63	9.76	4.58	728	2008
M.V. Akash – 3	64.63	9.76	4.58	563.7	2005
M.V. Kiamoni – 1	64.6	10.06	4.57	810	2008
M.V. Golden Hope	64.53	9.76	4.58	563.7	2005
M.V. Glory of Sreenagar-4	64.48	9.9	4.73	752	2007
M.V. City – 8	64.31	11	3.05	730	2002
M.V. Liton – 2	64.2	9.76	4.58	708.12	2008
M.V. Joy – 1	64.2	9.76	4.58	650	2006
M.V. Joy – 2	64.2	9.76	4.58	650	2006
M.V. Prince of Kalam – 7	64.2	9.76	4.58	655	2006
M.V. Toma Rabbi – 1	64.2	9.76	4.58	663.5	2008

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Arika Mahmud	64.03	9.8	4.3	707	2006
M.V. Zamana – 1	64.03	10.06	4.57	757.2	2007
M. V. Al Miskat – 3	64.02	9.76	4.57	652	2006
M.V.Amazan Lili	64	9.76	4.58		2006
M.V. D. Hossain Bhuiya – 2	64	9.76	4.57	683.39	2007
M.V. City – 15	64	9.91	4	721	2005
M. V. B.B. 1123	63.87	8.7	3.35	650	2003
M. V. B.B – 1130	63.87	8.7	3.35	650	2003
M.V. Markentiel – 9	63.5	9.76	4.88	788.41	2008
M.V. Markentiel – 10	63.5	9.76	4.88	788.41	2008
M.V. Tasnim - 3	63.5	9.76	4.88	788.41	2008
M.V. Banglar Shopno	63.43	9.52	4.42	640.8	2005
M.V. Shagor Sheraji	63.27	9.15	4.27	632.6	2006
M.V. Tanveer Tousif – 1	62.95	9.76	4.57	652.18	2006
M.V. Tamim	62.95	9.76	4.57	652.18	2006
M.V. Mohiuddin Jobbar – 1	62.85	9.76	4.42	670	2007
M.V. Golden Rubi	62.62	9.76	3.85	650.75	2005
M.V. Auboni	62.61	10.06	4.57	860.87	2004
M.V. Seven Circle – 14	62.6	11.6	4.6	795.21	2008
M.V. Seven Circle – 13	62.6	11.6	4.6	792.32	2008
M.V. Seven Circle – 12	62.6	11.6	4.6	792.32	2008
M.V. Shazzadul Hoque – 1	62.55	9.76	4.42	643	2005
M.V. Mahzabin	62.2	9.77	4.57	673.4	2007
M.V. Nusrat – E – Hoque – 3	62.15	9.76	4.57	648.09	2007
M. V. Shabab – 1	61.6	9.77	4.57	634.92	2007
M.V. Zannatul Bushra	61.3	9.9	4.32	732.64	2002
M.V. Marine – 2	61.28	9.76	4.12	700	2003
M.V. Newtek – 1	61.28	9.76	3.81	685	2008
M.V.Saleh Baba Yeasmani-2	61.05	9.76	3.96	557	2008®
M. V. Baridhi	61.02	9.91	4.42	588.5	2005
M.B. Master Saniat – 1	61	9.8	4.4	638	2006
M.B. Nashek	61	9.8	4.3	675	2005
M.V. Forchuna – 1	61	10.06	4.57	653.31	2006
M.V. Begum Saleha – 1	61	10.36	4.27	652.91	2006
M.V. Arfan Salim	61	10.36	4.27	652	2006
M.V. Salman Salim	61	10.36	4.27	652.91	2006
M.V. Bhondo Sarder	61	10.36	4.27	652.91	2006
M.V. Roni Shedu – 2	61	9.77	4.57	623.91	2006

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Fazlul Hoque – 3	61	9.8	4.3	529	2004
M.V. Tiva	61	9.77	4.57	649	2005
M.V. Shahrasti – 2	61	9.15	4	534.48	2008
M.V. Prince of Dhamanto	60.71	8.55	4	532.82	2005®
M.V. Dolaniti – 2	60.52	9.15	4.12	635	2005
M.V. Crown	60.5	9	4.27	437	2003
M. V. D. Hossain Bhuiya	60.4	9.75	4.42	579.8	2005
M.V. Golden Star	60	9.77	4.5	610	1989
M.V. Tishan	60	8.98	4.12	556.5	2005
M.V. Fazlul Hoque – 5	59.91	11.6	4.6	907	2008
M.V. Syef Khan – 1	59.9	11.4	6.15	962.02	2006
M.V. Bibi – 1131	59.83	8.63	3.5	650	2004®
M.V. Bibi-1136	59.76	8.76	3.5	550	2003
M.V. Bibi – 1135	59.76	8.76	3.5	550	2003
M. B.Suraya	59.7	9.25	3.7	564	1951
M.V. Tasnim – 2	59.68	8.54	3.56	437.1	2006
M.V.Beg – 1`	59.63	8.7	4.11	598	2004
M.V. Khaja Ahmed Shah – 1	59.6	8.25	4.1	470	2005
M.V. Hazera Begum	59.53	8.7	4.25	640	2006®
M.V. Tito – 6	59.45	9.8	4.27	496	2003
M.V. Chitra-1	59.45	10.06	4.27	848	2006
M. V. Bandhob	59.45	9.8	4.65	535.8	2003
M.V. Zaina – 7	59.45	10.36	4.26	676	2004
M.V.Razanigondha – 3	59.45	10.06	4.575	700	2008
M.V. Farabi	59.45	9.15	4	527	2004
M.V. Bijoi Bangla	59.45	10.06	4.27	584.38	2007
M.V. Prince of Jalal Uddin	59.45	9.8	4.27	548.3	2005
M.V. Banglar Jononi	59.43	9.75	4.29	597.36	2003
M.V. Titu – 12	59.15	9.6	4.2	478	2004
M.V. Shani- 1	59.15	9.6	4.2	505	2005
M.V. Nirjhor – 1	59.13	10.06	4.27	628	2003
M.V. Sea World	58.88	8.55	3.97	487	2005
M.V. Titu – 7	58.84	9.66	4.26	630.74	2002
M.V. New Bue Ocean	58.63	9.45	3.84	495	2004
M.V. Akhondo Khorshed– 1	58.54	8.92	4.1	500	2004
M.V. Nargis	58.5	9.77	4	549.47	2007
M.V. Zalchari	58.5	9.77	4.5	635.85	2006
M.V. Sharjana – 2	58.46	9.45	4.12	596	2004

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Gulshan Ara	58.37	10.36	4.27	695.11	2001
M.V. Sazzadul Huque	58.29	9.7	4.17	610	2003
M.V. Ashad – 2	58.24	8.53	4.19	547.21	2004
M.V. Fariad	58.24	9.75	4.27	594	2003
M.V. Banglar Audhinayok	58	9.77	4.5	606.42	2005
M.V. Busra Biva – 1	57.93	9.15	4.27	571.94	2008
M.V. Isra Mahmud – 1	57.75	8.55	4.22	495.6	2006
M.V. Central	57.6	9.45	4.27	570	2004
M.V. Nirjhor – 4	57.46	9.45	4.42	480	2003
M.V. Shouhardo	57.46	9.45	4.42	475	2004
M.V. Faisal – 7	57.38	8.54	3.97	492	2009
M.V. Master Kanak-3	57.3	9.46	4.3	455	2005
M.V. Titu – 8	57.3	9.16	4.3	588.13	2002
M. V. Banglar Shanti	57.15	8.54	4.27	626	1993
M.V. Master Saniat – 3	57.08	8.7	3.9	639	1997
M. V. Sea Dream	57	10.35	4.26	607.31	2004
M. V. sharachen	57	9.45	4.27	544.3	2005
M.V. Titu – 10	57	9.4	4.3	602.87	2002
M.V. Master Kanak – 4	57	9.45	4.3	563.17	2003
M.V. Chitolmari	57	9.45	4.27	480	2003
M.V. Seven Circle – 31`	57	10.36	4.26	572.77	2008
MV Nahian Al Hasan	56.99	10.36	4.11	682	2001
M.V. Shah Fateh Ali OIC	56.93	9.14	3.81	463.94	2004
M.V. Seven Circle – 23	56.9	12	3.5	495.73	2003
M.V. Padma Probah	56.75	8.23	3.3	391.2	2005
M.V. Soretish – 5	56.69	9.75	4.11	551.23	2002
M.V. Aunisha	56.69	9.14	3.96	500	2002
M.V. B.Jaman – 1	56.4	8.23	3.35	390.8	2006®
M.V. Sayed – 3	56.25	8.55	3.1	371	2005
M.V. Newtake -3	56.1	9.8	4.32	598	2003
M. V. Malek – 4	56.1	8.67	4.27	500.9	2007
M.V. Naymur Rahman	56.1	9.8	6.32	500	2003
M.V. Mother Land	56.09	10.36	3.1	609.68	2002
M.V. Shamata S.T.A – 2	55.79	9.54	4.12	581.96	2002
M.V. Samir	55.78	9.45	4.27	570	2003
M.V. Taposh – 2	55.65	8.84	4.38	627	2007
M.V. Arnib – 1	55.6	10.14	3.99	684	2001
M.V. Gazi – 2	55.3	8.25	4.15	622	2008®

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Mahmood – 1	55.22	9.45	4.06	484.46	2005®
M.V. Banglar Jamuna	55.2	8.61	4.11	550	2007
M.V. Wayefang	55.18	8.44	3.96	518	2005
M.V. City – 7	55.17	11	3.05	628	1998
M.V. City – 9	55.17	11	3.05	628.2	1998
M.V. Akash – 2	55.17	9.86	4.11	602	2000
M.V. Al Zaber	55.03	9.15	3.6	453	2005
M.V. White View	55	8.53	4	463	2005
M.V. Ashraful Alam	55	8.85	4	535	2006
M.V. Bushe	55	8.23	4.1	444.23	2005 ®
M.V. Reza – 1	54.98	8.7	4.6	540	2008®
M.V. Seven Circle – 24	54.95	10.07	3.8	514.58	2008
M.V. Seven Circle – 25	54.95	10.07	3.8	514.58	2008
M.V. Sowat	54.92	3.25	4.12	500	2006
M.V. Liton – 5	54.91	9.75	4.11	617	2002
M.V. Sharp – 3	54.86	9.27	4.29	587.28	1998
M. V. Kofiluddin-2	54.84	8.54	3.81	403.44	2007
M.V. Darul Asbab – 1	54.7	8.54	4.2	556.7	2006
M.V. Navil – 2	54.62	8.55	3.98	511	2002
M. V. Zanj – 2	54.6	9.6	4.26	650	2004
M.V. Sonali Shoikot	54.57	9.76	4	506	2009
M. V. Al- Alabhi	54.5	8.5	4	466.2	2000
M.V. Babul	54.5	8.53	4	447.74	2006
M.V. Khalil – 1	54.4	9.45	4.3	489	2005
M.V. Banglar Ziad	54.38	8.5	3.6	460	2007
M.V.Prince of Kalam	54.33	9.75	4.11	538	2003
M.V. Monowara	54.27	8.61	3.65	424.8	2005
M.V. Golap – 4	54.26	8.55	4.12	445.77	2006
M.V. Chaklader – 2	54.2	9.15	4.42	530	2006
M.V. Al Abrar	54.2	8.25	4.12	480.24	2009®
M.V. Seven Circle – 6	54.12	9.5	3.82	394.38	
M.V. Nusrat-E-Hoque-2	54	9.45	4.3	572.8	2003
M.V. Master Saniat	54	9.45	4.3	599.5	2002
M. V. Banglar Nayak – 1	53.96	9.76	4.73	558.6	2008
M.V. Gulf – 2	53.96	9.3	4.57	495.9	2007
M.V.Farid – 1	53.96	9.45	4.42	489.52	2007
M.V. Banglar Pataka – 2	53.96	9.76	4.62	520	2008
M.V. Fariad – 2	53.96	9.45	4.42	492.6	2007



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Zagotpur	53.96	8.2	3.95	405.5	2007
M.V. Al Arsar Uddin – 1	53.96	9.76	4.73	551.6	2008
N.V. Udayer Pathe	53.96	10.08	4.73	620	2009
M.V. Noor –A-Daria	53.95	9.8	4.06	602.29	1998
M.V. Abu Horaira – 2	53.95	8.54	3.81	458.85	2007
M. V. Banglar Milon	53.9	9.8	4.3	451.9	2004
M.V. Banglar Man	53.9	9.8	4.3	593.15	2004
M.V. Al Samit – 2	53.9	9.8	3.96	589.52	1997
M.V. Al Samit – 1	53.9	9.8	3.96	589.52	1997
M.V. Rajapur – 1	53.84	8.55	4	426.27	2006®
M.V. Shimul Shad – 1	53.82	9.85	4.57	579.99	2007
M.V. Syful Bahar	53.7	9.8	4.57	717	2005
M.V. Master Shohel	53.66	7.92	3.96	421.59	2007®
M.v. Titu – 11	53.65	8.38	3.65	416	2002
M.V. Yeasmin Rokshana	53.62	1.14	4.23	609	2008®
M.V. Al Forkania	53.55	9.15	3.96	459	2005
M. V. Poton	53.5	8.53	3.35	363.05	2003
M.V. Targo Wagon	53.49	9.45	9.95	560.88	1995
M.V. King Shamrat – 1	53.45	8.69	3.66	416	2006
M.V. Al - Zihad	53.4	9.3	4.42	509.45	2006
M.V. Al Zamiu	53.4	9.75	4.42	600	2008
M. V. Khadiza – 1	53.36	8.55	4	460.5	2005
M.V. Gulshan	53.36	8.23	4.21	433.03	2006 ®
M.V. Mehede Hasan – 2	53.35	9.76	4.27	525	2007
M.V. Yasir Arafat	53.35	8.23	3.35	352.13	2008
M. V. Al-Zobair – 1	53.35	9.15	4.27	479.41	2006
M. V. Char Shamail	53.35	8.5	3.56	415	2005
M. V. Pankhi Raz	53.35	8.3	4.27	541	2007
M.V. Wahid Rokeya – 1	53.35	9.15	4.12	463.33	2006
M.V. Modern	53.35	8.54	4		2005
M.V. Safina – E- Bahar	53.35	9.45	4.27	482	2005
M.V. Master Rahat Shawan-1	53.35	9.76	4.57	554.9	2006
M.V. Dolaniti – 3	53.35	10.36	4.57	571.09	2007
M.V.. A.B.H. Bondhon – 2	53.35	8.97	4.57	503.8	2008
M.V. Kazol Dighi – 3	53.35	9.76	4.57	560.6	2007
M.V. Mohammad Ali – 5	53.35	9.45	7.27	509.1	2006
M.V. Moonmoon Shetu – 2	53.35	9.45	4.27	501.27	2003
M.V. Master Morzia	53.35	9.76	4.57	525.89	2007

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Rahbar	53.35	8.55	3.65	485	2008
M.V. Sheto – 1	53.35	9.45	4.27	519.5	2005
M.V. Banglar Dut – 1	53.35	10.37	5	625	2009
M.V. Master Mohaimanul	53.34	8.23	3.66	382.04	2006®
M.V. Sharif Uddin – 2	53.34	8.5	3.74	530	2006
M.V. Tausif Aiman	53.32	8.5	3,50	490	2008®
M.V. T.S. – 1	53.3	8.54	3.96	458.92	2006
M.V. Ameen – 3	53.3	9.2	4	499.83	2003
M.V. Rodela	53.27	8.25	3.9	532	2005
M.V. Ramim	53.26	9.75	4.27	565	2001
M.V. Sea Master – 2	53.25	9.8	4	530.25	2000
M.V.N.C.-1	53.23	9.2	3.65	562	2007
M.V. Sun Marino	53.2	9.15	3.96	488.15	2006
M.V. Dream of Rasheda Sobhan	53.2	9.15	3.9	483.5	2006
M.V. Imran - 2	53.13	9.76	4.57	583	2008
M.V. Udayer Patha	53.1	9.6	4.57	571.2	2007
M.V. Rafi – 1	53.1	9.45	4.12	456.89	2006
M.V. Prince of Kalam – 4	53.03	9.45	3.71	496	2001
M.V. Zans	53.03	9.14	3.99	455	2002
M.V. Sonali Ash	53	9.15	4	452	2001
M.V. Safowan	53	9.45	4.6	550	2009
M.V. Riaz Uddin – 4	52.98	8.69	4.27	498	2007
M.V. Annayson	52.98	8.54	4.34	448.72	2006
M.V. Beauty of Narayal	52.9	9.67	4.12	532.49	2002
M.V. Liton – 3	52.75	9.76	4.27	524	2007
M. B. Rafid -1	52.75	9.76	4.17	509.15	2006
M.V. Dora	52.75	9.15	3.6	504.36	2008
M.V. Ma Babar Doa – 2	52.75	8.53	4.27	504	2007
M.V.Araf	52.75	8.55	3.96	445.5	2006
M.V. Turban Nessa	52.75	8.54	3.5	417.97	2006®
M.V. Madina – 2	52.74	10.37	3.96	496	2002
M.V.Faisal – 4	52.73	8.23	3.66	413	2000
M.V. Chader Kiron	52.52	9.86	4.65	538	2006
M. V. Tonmoi - 1	52.5	8.52	4.3	467.2	2005
M.V. Boo Island	52.5	9.75	4.5	650	2006
M.V. Radia	52.44	8.23	3.96	425.2	2007
M.V. Prince of Shamol	52.44	9.15	4.27	489.5	2006
M.V. Malek – 1	52.44	8.85	4.27	474.5	2006

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Golap – 2	52.44	8.54	3.66	442	2003
M.V. Zahin – 2	52.43	9.45	4.27	513	2008
M.V.Faysal – 3	52.42	9.14	3.96	413.06	2007
M. V. Umme Habiba	52.41	8.33	3.98	404	1973
M.V.Bashundhora Logistic-3	52.4	8.25	3.16	449	2002
M.V. Zalpary	52.4	8.23	4.27	454	2006
M.V. Sea-Land – 1	52.25	8.23	3.81	402.8	2005®
M.V. Bashundhara Lagistic-12	52.2	8.24	3.6	362.44	2007
M.V. Titu – 2	52.2	8.8	4.8	493.3	1996
M.V. Sunjid	52.2	8.54	4.12	409.55	2
M.V. Sunjid	52.2	8.54	4.12	409.55	2
M.V. Shompratti	52.15	9.76	4.57	570	2006
M. V.Mayer Adesh-2	52.13	8.54	3.05	300	2004
M.V. Hera Parbat – 7	52.13	8.69	4	469	2008
M.V. Rafti	52.13	8.69	3.66	435	2006
M.V. Sabiya Karim Mogni	52.12	8.55	3.51	406	2003 (M)
M.V. Prianka	52.09	8.53	4	493	1995
M.V. Tasnuva – 1	52	8.84	4.2	434.66	2006
M.V. Tasnuva – 2	52	8.84	4.2	434.66	2007
M. V. Seven Circle 9	52	8.4	3.51	439.34	2003
M.V. Faysal – 6	51.93	8.52	4.07	468	
M.V. Beauty of Matlab	51.91	8.69	3.66	431	2003M
M. V. Malek – 3	51.83	7.93	4.12	480.7	2005
M. V. Himel Khan	51.83	8.23	3.5	390.48	2006
M.V. Sinkan Sen	51.83	9.3	4.57	507.5	2008
M.V. Shohel Moni	51.83	9.15	4.27	503.8	2008
M.V. Ritoo	51.83	9.76	4.57	525.3	2007
M.V. Mou	51.83	7.93	3.81	369.8	2007®
M.B. Sultana – 2	51.83	7.77	3.66	440	2003
M.V. Prince Rashel	51.83	9.15	4.27	503.8	2008
M.V.Baba Bahar Shah	51.83	8.58	2.42	335	2005
M.V. Rasha	51.82	9.2	3.92	432.57	2000
M.V. Shale Baba Yeameni-1	51.82	9.6	4.11	514.45	2005
M.V. Milon Shomoon-1	51.81	9.14	4.11	500	2001
M.V.Socretish – 4	51.81	8.53	3.96	451	2001
M.V. Milon Shuman – 2	51.81	9.14	4.11	500	2001
M.V.Tazwar	51.81	9.35	4.11	477.29	2002
M.V. Titu – 5	51.8	9.15	4.1	483	2001

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Titu – 1	51.8	9.15	4.26	523.7	2003
M.V. Aurdi	51.8	9.1	4	418.88	2001
M.V. Wasik	51.8	8.7	3.5	370	2005®
M.V. Borshon – 2	51.8	9.2	4	461.36	2006
M.V. Gulshan-2	51.8	9	4	449.28	2002
M. V. Chaklader – 1	51.7	9.3	4.12	474	2006
M.V. Jolbihango	51.69	9.14	4.01	522.34	1995
M.V. Hazi Jalal Ahmed	51.68	8.1	5.18	460	2006
M.V. Boshundhara Logisti 9	51.61	9	4.11	476	2003
M.V. Yousuf Khan – 3	51.6	8.76	4.08	448	2008
M.V. Bright – 1	51.53	8.23	3.23	342	1995
M.V. A.B.H. Bondhon	51.52	8.53	4.12	436.22	2005
M.V. Nabodut	51.52	8.35	4.12	456.37	2006®
M.V. Rabbana – 1	51.52	8.54	3.36	384.3	2005 ®
M.V. P. & T.	51.51	9.22	3.99	449.27	2003
M.V. Sharp – 1	51.5	8.26	3.8	411.51	2005
M.V. Feku Mia	51.5	7.8	3.96	400.97	2005
M.V. Hazi Kayes	51.5	9.5	4	500	1996
M.V. Klitoria	51.5	8.6	4.02	298.2	2007
M.V. Croun – 1	51.45	8.77	4.2	483	2004
M.V. Sharmin Nahar Dipa-1	51.45	8.54	3.65	390	2006
M. V. Blow View	51.39	9.91	4.94	680.34	1999
M.V. Raiyan Express	51.32	9.75	4.01	532	2001
M.V. Seven Circle – 15	51.31	8.4	4	435	2000
M.V. Moumoni	51.22	9.15	3.35	321.75	2004
M.V. Tausief	51.22	8.54	3.58	434.41	2005
M.V. Al Khan Jahan Ali	51.21	7.94	3.5	358	2003
M.V. Al Khanjahan Ali – 2	51.2	7.92	3.96	458	2005
M.V. Seven Circle – 17	51.17	7.76	3.85	347.12	2008®
M.V. Banglar Dristi	51.1	8.84	3.96	451.32	1999
M.V. Three Star	51	9.2	4	424.35	2001
M.V. Mokshodpur – 2	51	9.3	3.82	518.13	2005®
M.V. Navigator	50.93	9.14	3.81	506	2003
M.V. Aunnesan – 3	50.92	8.85	4.27	492	2008 (
M.V. Aunnesan – 3	50.92	8.85	4.27	492	2008 (
M.V. Marzia	50.76	8.23	3.5	367.26	2006
MV. Boshundhora Logistics-13	50.74	8.23	3.8	376	2005
M.B. Boshudhara logistics-7	50.7	8.34	4	484	2006

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Kabir – 2	50.63	9.36	3.96	470	2008
M.V. Chaklader – 3	50.63	9.36	3.96	438.6	2007
M.V. Nimbash	50.6	9.45	4.27	475	2003
M.V. Sumaiya Sajid	50.6	8.3	3.96	470	2007
M.V. Farin	50.6	8.23	4	395.34	1992
M.V. Pra	50.59	9.83	4.52	483.12	1997
M.V. Protol	50.59	9.83	4.52	483.12	1997
M.V. Banglar Titumir	50.59	9.15	4.11	496	2003
M.V. Seven Circle – 21	50.5	9.15	3.1	361.92	2008®
M.V. Paragram	50.49	8.23	4.05	390	
M.V. Shomudrer Nir – 1	50.31	9.15	4.27	450.55	2008
M.V. Doudkandi	50.3	8.23	3.51	378.84	2008®
M.V. Hazi Akbar Ali -2	50.3	8.84	4.22	440.5	2008
M.V. Hizbul Wahab	50.3	9.15	3.96	428	2004
M.V. Parabar	50.3	8.7	4.1	380	2002
M.V. Tiger of Eastbengol-5	50.3	9.15	4.5	434.9	2007
M.V. Tiger of East Bengal – 4	50.3	9.15	4	434.9	2007
M.V. Soretish-3	50.29	9.25	4.11	493	2000
M.V. Milanium	50.29	8.69	4.01	468.28	1997
M.V. Ameen – 2	50.23	8.6	4	418.8	2003
M.V. Boshundhara Logisti 17	50.2	9.27	3.48	383	2006
M.V. Ayesha Gofur	50.17	8.79	3.3	393.07	1998
M.V. Pronati	50.15	8.23	3.35	391	2005
M.V. Shathi Vai	50.05	8.54	3.81	385	2006
M.V. Al Assa – 1	50.02	8.56	4.27	425.02	2008
M.V. Seven Circle – 3	50	7.8	2.5	303.2	1982
M.V. Maluncha	50	7.8	2.5	303.2	1982

**Category – 2 of Cargo Vessels (50>L≥30 m)**

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Master Shohel – 2	49.98	8.55	3.5	421.98	1997 ®
M.V. Aei Mother	49.98	8.56	3.91	426	2001
M.V. Azazul Hoque	49.98	8.54	3.35	351	2003
M.V. Borshon	49.98	9.27	3.96	432	2003
M.V. Borshon	49.98	9.27	3.96	432	2003
M.V. Gold Mine	49.85	8.54	3.66	367.88	2002
M.V. Noor-A-Refat	49.85	8.7	4	410	2001
M.V. Adorsha – 1	49.75	8.3	3.51	372	2008®
M.V. Fahim Faisal	49.65	8.23	3.61	355	2008®
M.B. Ma Babar Doa – 1	49.6	7.94	3.35	388	2006
M.V. Al Shamid – 3	49.53	8.23	3.3	425.69	1997
M.V. Queen of Feroza	49.5	8.08	3.81	364.81	2007
M.V. A.P.S. – 1	49.5	8.55	4	412.8	2005
M.V. Suncost	49.5	8.84	4.2	402.12	2004
M.V. Jannatul Ferdous	49.5	8.55	4	375	2004
M.V. Hazi Abdul Latif	49.49	8.23	4.16	394.37	2007®
M.V. Titu – 9	49.38	8.38	3.96	398.15	2003
M. B.Nusrat Islam – 1	49.35	3.55	3.89	424.35	2003
M.V. Borshan – 3	49.3	8.8	4	356.4	2004
M.V. Rashid – 1	49.27	8.53	3.05	324.8	2005
M. V. Bashundhara Logistic – 10	49	8.48	3.96	398	2003
M.V. Midship	49	9.76	2.45	444.43	1995
M.V. Aziz Mia – 1	49	8.69	2.97	346	2003
M.V. Sharmin Shagor	48.95	8.23	3.85	425.8	2005
M.V. Southern Star – 1	48.93	8.54	3.35	390	2008(R)
M.V. Dewan Mehedi	48.8	8.54	4.27	404.25	2006
M.V. Sea Lion	48.8	8.54	3.66	355.6	2005
M.V. Atpara	48.79	8.54	3.97	455	2004
M.V. Shuhadaya Badar	48.78	8.23	3.2	295	2007
M.V. Newtek	48.78	8.54	3.96	390	2006
M. V. Golam Rahman	48.77	9.14	3.99	419	2003
M.V. Solaiman Shammi	48.77	8.53	3.81	419	2000
M.V. Kornofully – 1	48.77	7.22	2.13	651	1999
M.V. Poton – 2	48.77	9.14	3.96	481.28	1999
M.V. South Star	48.75	9.75	3.65	460.4	2000
M.V. Abu Taleb	48.73	7.93	3	358	2007

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Nuhil Mashud	48.6	8.24	3.76	356	2008
M.V. Ibrahim Khalil – 2	48.6	8.3	3.96	371	2009
M.V. Shevron – 1`	48.57	8.29	3.42	335	2008
M.V. Rafi	48.5	8.28	3.55	318.2	2003
M.V. Unicorn	48.5	7.74	4	347.45	2006®
M.V.Ariana – 2	48.4	8.54	3.55	422.15	2005
M.V. Saleh Baba Yeasmani	48.36	7.9	3.65	302.5	2008®
M.V.Zoni Roni	48.32	8.28	3.35	345.1	2006®
M.V. Mayer Adesh	48.32	8.54	4.27	412.85	2003
M.V. Hiramom	48.3	7.93	3.35	245	2007(R)
M.V. Ami – 2	48.25	7.99	3.74	365	2008
M.V. Lutfa	48.2	7.92	3.81	365.5	2008
M.V. Bibi – 1144	48.2	9	4	410	2004
M.V. Zian Ziad and Brothers	48.17	7.47	3.89	350	2009
M.V. Aksha – 2	48.16	9.14	3.96	476.9	1997
M.V. Borshon – 4	48.16	8.84	3.96	405	2003
M.V. Borshon – 4	48.16	8.84	3.96	405	2003
M.V. Ramisha	48	7.95	3.3	301.45	2008 ®
M.V. Bosundhara Logistic-18	48	8.23	3.2	336	2004
M.V. Tasfee – 2	48	9.76	4.12	442	2009 ®
M.V. Banglar Akhi	47.96	8.23	3.66	349	2001
M.V Rajes – 4	47.96	7.88	3.35	378	2006
M.V. Zobair	47.96	7.99	3.83	370.88	2008®
M.V. Boshundhara Logisti 16	47.87	8.23	3.81	288.09	1994
M.V.Green Bird	47.87	7.62	3.35	282.54	2008®
M.V. Manik Mia – 1	47.85	8.74	3.05	368.78	1996
M.V. Jahangir	47.7	8.23	2.82	297	2004
M.V. Blue Paradise	47.66	8.39	3.5	320	2006
M.V. Arafat Mahmud	47.65	9.15	4	435	2008
M. V.Chottagram	47.64	8.85	4	400	1996
M.V.Marufa – 1	47.6	8.54	3.66	357.3	2008
M.V. Marufa	47.6	8.54	3.66	303.26	
M.V. Titu – 3	47.57	9.15	3.58	398.1	2003
M.V. Nirzhor – 3	47.57	8.7	4	410	1996
M.V. Zaber	47.56	7.94	3.5	300	2008
M.V. North Star	47.55	8.53	3.99	405.5	2007
M.V. A.K. Zilani	47.54	9.19	4.01	474.08	1997
M. V. Shark – 2	47.5	7.32	3.6	315.33	2005

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Zoo Garden	47.5	7.9	3.4	328	2009®
M.V. Zosim Uddin	47.43	8.15	3.52	304.6	2008
M.V. Shahabi	47.36	7.93	3.2	315.64	2006 ®
M.V. Babar Parash	47.3	8.54	3.81	395.9	2006
M.V. Saifur Rahman	47.27	8.03	3.5	312	2008
M.V. Sea Line – 1	47.26	8.55	3.74	353	2008
M. V. Seven Circle 19	47.24	7.13	3.36	321.95	2003
M. V. Seven Circle-20	47.24	7.95	3	320.4	2007
M.V. Arena	47.22	8.12	4.04	371	2008
M.V. Tista (Prv.BB-1147)	47.13	9	4	430	2004
M. V. Pappi	47.1	7.62	3.62	301.52	2005
M.V. Sultan Mahmud – 1	47	8.55	3.5	326.73	2002
M.V. Farhan	47	9.45	4	455.7	1994
M.B. Prince of Modhur Khola	47	9.15	4	420	1997
M.V. Sumaiya	47	9.35	4	408.96	
M.V. Beauty of Pabna	46.99	8.33	2.75	329.3	1996
M.V. Mehedi Hasan	46.94	8.53	3.51	370	2001
M.V. Sunim	46.87	8.54	3.3	335.13	1995
M.V. Rezwana Express	46.85	7.93	3.55	312	2006
M.V. Master Rahat – 1	46.8	8.7	4.27	385.09	2007
M.V. Shumi	46.65	7.93	3.58	314	2008
M.V. Hisbul Wahab	46.64	8.23	3.41	317.52	2000
M.V. Islam	46.64	8.23	3.05	270.25	2008
M.V. Tamjid – 1	46.63	8.38	3.51	332	2003
M.V. Erectorse – 3	46.56	7.98	3.18	329.53	1995
M. V. Panama	46.55	7.93	2.13	462.19	2003
M.V. Bibu – 1146	46.5	9	3.12	327.09	2004
M.V. Sazol – 1	46.42	7.98	3.96	422	2005
M.V. New Sonali	46.36	8.5	3.5	344.58	2003
M.V. Gazipur	46.35	8.89	3.63	340	2008®
M.V. Khan Sons – 1	46.33	7.92	3.51	349	2000
M.V. Khan Sons – 2	46.33	7.92	3.56	356.93	1998
M.V. Mugni – 1	46.3	8.24	3.7	326.71	2006
M.V. Banglar Shakti	46.28	8.92	3.91	407.72	2006
M.V. Shamoli – 1	46.26	8.68	2.8	330	2006
M.V. Partashi	46.25	7.9	3.55	305	1995
M. V. Barsha– 1	46.2	7.2	3.5	267	2005
M.V. Boshundhara Logistic-15	46.2	8.55	3.65	352	1994



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Putool	46.11	7.32	3.65	356	2006
M. V.Gadu	46.1	8.08	3.18	298.23	1995
M.V. Shahjahan	46.1	7.85	3.2	312	2004
M.V. Ann-Nahar	46.05	8.54	3.68	350	2006
M.V. Green Padma	46.04	8.02	3.66	387	2007
M.V. Bashundhara Logistic-11	46.02	6.61	3.66	398	1997
M.V. Ameer – 1	46.02	7.92	2.9	314.62	1998®
M.V. Khalil – 2	46	8.45	3.43	337.43	2006
M.V. Al Kawsar – 2	46	7.88	3.34	341	2006 ®
M.V. Azmary Sultana	46	8.55	3.5	304.2	2005
M.V. Kamal	45.9	8.55	3.65	325	2003®
M.B. Ashrar	45.8	8.68	2.44	359.6	1986
M.V. Prince of Ador	45.8	7.31	3.5	278.67	2005
M.V.Shovon – 1	45.8	8.54	3.73	340	2008
M.V. T. L. N. – 16	45.75	8.55	3.66	330.9	2007
M.V. T. L. N. – 17	45.75	8.55	3.66	315	2006
M.V. Kaumi – 2	45.75	8.55	3.66	305	2006
M.V. T.L.N. – 14	45.75	8.55	3.66	330.9	2008
M.V. Universel – 1	45.75	7.62	3.5	275.88	2007
M.V. Kutubia – 1	45.75	7.62	3.35	358	2008®
M. V. Emran	45.73	8.74	3.24	310.3	2004
M.V. Jahanara Bulbul	45.73	7.92	3.35	300	2006
M.V. Abdus Salam – 2	45.72	8.15	3.3	319	2002
M. V. Barsha	45.7	7.62	3.45	283.45	2005
M.V. Ishrat	45.7	7.93	2.95	309.12	1995
M. V. Moumoni	45.6	8.2	3.53	313.5	2002
M.V. Chandra Shila	45.58	7.35	2.42	335	2006
M.V. Nibir	45.57	7.93	3.35	300	2009
M.V. Golden Field	45.5	7.32	3.35	241.6	2006
M.V. Sayem Khan – 2	45.5	7.31	3.11	261.39	2009
M.V. Seven Circle – 18	45.47	8.81	3.63	363.45	1992
M. V. Golden Bard	45.45	7.93	3.37	357	2006
M.V.Ahmod	45.43	8.2	3.3	398	1997
M.V. Prince Zia	45.43	7.92	3.66	397	2006
M.V. Ibrahim Khalil – 1	45.43	7.35	3.35	264.3	2004
M.V. Beauty of Nodia	45.43	7.88	3.41	350	2007 ®
M.V. Agontok – 3	45.42	8.55	3.65	315	2003
M.V. Rimon Sadia	45.42	8.5	2.74	264	2007

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Shahjahan – 2	45.42	8.68	3.5	358.68	1994
M.V. Zoti	45.42	8.23	2.43	282.8	1995
M.V. Fahmida	45.42	9.14	3.75	372.5	2003
M.V. Ma Moni	45.41	8.53	4.01	396	2000
M.V. Shagor Shoikot – 1	45.32	8.23	3.5	385	2008
M.V. Mahina	45.3	7.49	3.66	274.17	2009®
M.VK. Golden of Shimulia	45.24	7.92	3.76	295.4	2001
M.V. Jahangir Mia – 2	45.2	8.68	3.5	358.68	1994
M.V. Sifat Anis – 1	45.2	7.95	3.55	287	2008®
M.V. Tisha – 2	45.15	9.45	2.9	287	2008
M.V. Tisha – 3	45.15	9.45	2.9	287	2008
M.V. Golap – 1	45.15	7.62	3.27	275.6	2008®
M.B. Sanam	45.15	8.54	3.66	362.3	2007
M. V. Baro Bari	45.12	8.55	3.3	300	2007
M.V. Ruma Issa Hoque	45.12	8.54	3.66	341.01	2006
M.V. Boshundhara Logistics 2	45.12	8.55	3.36	356.57	2004
M.V. Al Robbani	45.12	8	3.35	350	2007®
M.V. Boshundhora Logistic-1	45.11	8.69	3.66	367	2001
M.V. Suneast	45.1	8.52	3.6	366.48	2002
M.V. Suneast – 2	45.1	8.52	3.6	366.48	2002
M.B. Mahabub	45.05	72.32	3.05	274	2005
M.V. Shamoli – 2	45.03	8.18	3.68	387	2006
M. V. Madinar Pathay	45	7.62	3.58	291.14	2006
M.V. Ahad Ashfaq	45	8.23	3.53	313.05	2002
M.V. Aunana	45	7.95	3.18	273.44	1988
M.V. Yusuf Arafat – 1	45	8.67	3.51	332.6	2008
M.V. Taufik – 1	44.97	8.42	3.23	383	2009®
M.V. Birol	44.9	7.43	3.54	301.7	2008
M. V. Borsha – 2	44.85	7.5	3.82	255.6	2005
M.V. Kaniz Fatema	44.85	7.5	3.02	292	2005
M.V. Al Kawsar	44.83	7.32	3.27	271.16	
M.V Chitta Master	44.82	8.7	3.81	360.36	2007
M.V. Agoirjhara – 5	44.82	8.55	3.36	298.25	2008
M.V. New Sun – 1	44.82	7.94	2.7	251	2008
M. V. Al Hasem – 1	44.81	7.92	3.2	299.94	2001
M.V. Yeah Malikol – 1	44.8	8.1	3.55	325	2003
M.V. Ditlinday	44.8	8.19	3.55	286.6	2004
M.V. Mobasher	44.8	7.34	2.72	250.39	1993

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Auvijit – 1	44.7	7.85	3.55	344	2006
M.V. Shava	44.68	8.55	3.81	358.68	2003
M.V. Pabel	44.67	7.69	2.82	265.77	2008
M.V. Shajid Ahsan	44.67	8.08	3.66	411	1989
M.V. Atgahar Hossain – 2	44.66	7.92	3.3	350	2007
M.V. Jibon – 2	44.66	8.56	3.81	323.14	2006
M.V. Anmona – 1	44.65	7.93	2.89	316.6	2003
M.V. Torafder-3	44.62	8.05	3.12	312.53	1991
M.V. H.R. Zilani	44.6	9.15	3.66	288	2005
M.V. Sabuz	44.6	7.62	3.5	290.18	1987
M.V. Shomata S. T. A. – 1	44.57	9.15	3.6	315	1996
M. V. Shourav 2	44.52	8	3	264.12	2002
M.V. S.I. Noor	44.51	7.62	3.51	238	2006
M.KV. Naurin	44.51	8.23	3.65	292.16	2001
M.V. Shihab Khan	44.51	8.54	3.66	340.6	2009
M. V. Seven Circle 10	44.5	8.4	3.7	405	2004
M.V. Master Al Ameen	44.46	7.98	2.9	268.21	2008®
M.V. Hazi Wahab – 1	44.46	8	3.2	275	2008
M.V. Al Modina	44.4	7.62	3.2	274.42	2002
M.V. Banglar Modhumodi	44.4	8.69	3.35	363.6	1998
M.V. Golden of son – 1	44.32	7.92	3.35	303.97	2002
M.V. Tuli – 1	44.32	8.59	3.41	355.28	1990
M.V. Westeen	44.32	8.32	3.5	338.25	2003
M.V. Mitu	44.3	8.1	3.2	286	2004
M.V. Mahjabin	44.3	7.8	3.36	290	1987
M.V. Hera	44.3	8.23	3.65	314	2005
M.V. Beauty of Feni	44.3	8	3.2	285	1986
M.V. Boshundhara Logistics 5	44.3	7.15	3.6	218	2004
M.V. Fuad – 2	44.3	7.92	3.5	362	2006
M.V. Fuad – 2	44.3	7.92	3.5	362	2006
M.V. Al – Fangus – 1	44.28	7.72	2.72	250.42	1986
M.V. Master Niaz – 1	44.27	8.69	3.66	367	2000
M.V. Tahsina Omi	44.26	7.32	3.43	302	1993
M.V. Master Maheen	44.21	7.2	2.75	225	2007
M. V. New Anabil	44.2	8.8	3.35	389	2008
M.V. Holy Home Land	44.2	7.64	3.5	292.14	2000
M.V. Afifa	44.2	8.35	3.35	374.28	2002
M.V. Kazoldighi	44.2	8.18	2.9	319	2007

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Farhad	44.19	7.77	3.35	343	2002
M.V.Shahthi Vai – 1	44.19	8.53	3.05	326	1990 (m
M.V. Dada Vai	44.19	8.26	3.35	320	2001
M.V. Farhad-1	44.19	7.92	3.3	310	2001
M.V. Tanvir Toushif	44.19	8.23	3.51	339	2001
M.V. Boshundhara Logistic-20	44.19	8.53	3.35	356	1987
M.V. King of Narisha	44.12	8.53	3.55	371.89	1995
M.V. Beauty of Sakura	44.06	8.23	2.9	300	2006
M.V. Tatoitola – 7	44.05	7.92	3.35	337	1990
M.V. Jahangir – 1	44.04	8.43	3.2	341.38	1997
M.V. Tasmina Hoque – 1	44	8.38	3.66	348	2000
M.V. Ferdous	44	7.32	3.35	297	2005m
M.V. Rumana	43.91	8.24	3.05	265	2005
M.V. Ayesa – 3	43.9	9.15	2.75	241	2008
M.KV. Abdul Kadir	43.89	8.46	3.5	355	1997
M.V. Tin Konnay	43.88	7	3.2	299	2006
M.V. Khatoon – 2	43.86	8.84	2.86	313.57	1990
M.V. Salman Alam Khan	43.85	7.62	3.2	250	2003
M.V. Razu – 1 (Pvt.Nirala)	43.8	7.31	3.35	287	2008(m
M.V. Swapan – 2	43.76	7.77	2.74	272.99	1995
M.V. Solaiman – 1	43.75	9.52	3.13	320	2008
M.V. Rezaul Huq	43.75	8.54	3.66	350	1996
M.V. Jahangir – 2	43.69	8.48	3.2	333.27	1998
M. V. Nargis – 1	43.67	8.53	3.6	330.6	2007
M.V.P.M. Riton	43.66	7.7	2.69	265.16	1995®
M.V. Upashagor	43.6	8.24	3.5	332	1997
M.V. Kashfee Hasan	43.6	8.23	3.35	298	2003
M.V. Delwar Al Bahar	43.6	8.53	3.23	299.43	2001
M.V. B Marium	43.6	8.23	3.55	298	2003
M.V. Shaila	43.6	7.32	3.35	282	1985
M.V. Jublin – 1	43.6	8.85	3.74	383.55	2008
M.V. Rani Raj	43.6	8.23	3.5	283.5	2005
M.V. Shazzad Hossain	43.59	7.46	3.2	233.32	2001
M. V. Al Sharif	43.58	7.31	3.2	278.26	1998
M. V. Taposh	43.58	10.48	1.92	355	2008
M.V. Dandilion	43.58	8.53	3.35	352.7	1997
M.V. Shagor Shandhani	43.56	8.2	3.35	329	2006
M. V.Borsha – 3	43.5	7.5	3.35	222.18	-

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. B. Shibli Sadeque	43.5	7.5	3.35	52.72	2005
M. V. Morad-2	43.5	7.95	2.95	285.76	1998
M.V. Hazi Akbar Ali – 1	43.5	8.32	3.15	280	2006
M.V. Saddam Sayham – 1	43.5	7.5	3.35	296.39	2005 ®
M.V. Trisha	43.45	9.5	3.05	330.2	2006
M.V. Ayesa – 2	43.45	9.15	2.9	255	2008
M.V. Noore Sumaiya	43.35	8.55	3.55	250	2004
M.V.Salman Alam-3	43.35	7.62	3.2	250	2003
M.V. Mohiuddin Jabbar	43.35	8.25	3.56	318.94	2002
M.V. Purbanchol	43.31	7.62	3.2	294.77	1998
M. V.Bazal Mia	43.3	9.95	3.5	300.1	2005
M.B. Shib Rayer Kandi	43.3	7.5	2.6	263.38	1993
M.V. Mizan	43.3	7.94	3.25	264.14	1999
M.V. Kobra	43.29	8.53	3.17	295.47	2001
M.V. Jabalay Noor	43.28	8.23	3.35	334.26	1997
M.V. Fulkarnine	43.28	8.23	3.43	343	2001
M.V. Partho	43.28	7.62	3	283	1999
M.V. Toslim	43.27	7.94	3.2	337	
M.V. Toslim	43.27	7.94	3.2	337	
M. V. Swapan – 3	43.26	7.94	2.9	280.9	1993
M.V. Kafil Uddin – 3	43.26	7.32	3.15	230.06	2008
M.V. Shalshabeel	43.23	8.38	3.51	342	2002
M.V. Agontok	43.23	8.54	3.05	305.59	1994
M.V. Al Kibria	43.2	8.2	2.99	343	2008
M.V. Shawan – 1	43.05	8.38	3.51	352.45	1997
M.V. Mugni	43.05	8.08	2.89	291.39	1996
M. V. Adnan	43	7.95	2.95	248.41	2002
M. V.Ghuri	43	7.46	3.5	260.2	2005
M.V. Khayrun Nahar	43	8.24	3.5	297.07	2000
M.V. Laboni – 2	43	8.25	3.35	276.74	2000
M.V. Abdul Salam – 1	43	7.62	2.6	260.47	1999
M.V. Tomal	43	8.23	3.81	294.89	2001
M.V.Kheam	43	8.55	3.25	346.93	1995
M.V. Gori of Balihari	43	8.25	3.35	347	1996
M.V. Master Arif	43	7.02	2.6	237.54	1993
M.V. Kusum	43	7.02	2.6	237.54	1993
M.V. Palash Shimul	43	8.55	3.55	299.43	2002
M.V. Infinity	43	8.59	3.58	307.78	2007

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. King Sajjad	43	8.23	3.2	282.8	2000
M.V. Sagar Bodhu	43	7.1	3.35	250.1	2004 ®
M.V. Shaira Al Hossain	43	8.03	2.95	293.09	1994
M.V. Sunfa – 4	43	7.68	2.74	266.64	2000
M.V. Joloraz – 3	43	8.23	3.2	272	2006
M.V. Zamal Al Bahar	43	8.55	3.35	347	1995
M.V. Noor – A-Tahassum	43	8.55	3.35	330.09	2001
M.V. Jaboo – 10	43	7.32	3.42	350	2008
M.V. Usa – 2	43	8.54	3.81	326.32	2007
M.V. Noor – Nusrat	43	8.55	3.35	330	2001
M.V. Sarder	42.99	7.62	2.75	228.8	2004(M
M.V. Showan	42.97	8.84	3.05	347.92	1987
M.B. Beauty of Bicrompur – 1	42.97	8.07	3.2	310.88	1997
M.V. Lilia	42.97	8.53	2.56	339.73	1991
M.V. Foud – 3	42.9	8.39	3.65	296.6	2007
M.V. Chanmoni – 1	42.9	6.7	3.2	198.6	2005
M.V. Anarkoli – 1	42.9	6.7	3.2	198.6	2005
M.V. Arial Kha	42.88	7.3	3.35	261.2	2006
M.V. Mrinda - 1	42.85	7.62	3.2	270	2005
M.V. Mim Nisha	42.85	7.62	3.2	272	1990
M.V. Shahrasti	42.83	7.77	3.51	274.27	2007
M.V. Anonnaya – 1	42.8	8.4	3.21	305.16	1997
M. V. Razu – 3	42.77	8.23	2.9	297.2	1994
M V.Prince of Jewel-1	42.75	8.74	3.35	352	1995
M.V. Shafina– eFazle Rob	42.75	8.54	3.66	364	2000
M.V. Momtaz Alam	42.75	8.08	3.35	315.17	1997
M.V. Shahbin Khan	42.75	8.23	3.45	295	2004
M.V. Jheel Bangla	42.75	7.62	3.2	260	2003
M.V. Razib	42.7	7.94	3.05	284	1996
M.V. Watford	42.7	8.55	2.9	298.38	1990
M.V. Tito	42.7	9.27	3.51	403	1996
M.V. Bidduth – 5	42.7	7.77	2.9	266.64	1994
M.V. Bidduth – 5	42.7	7.77	2.9	266.64	1994
M.V.Pullock – 1	42.7	7.92	3.36	274.63	2003
M.V. Tonima	42.7	7.65	1.9	233.73	1998®
M.V. Sabbir	42.69	8.54	3.2	305	2008
M. V. Shaira Kabir	42.68	8.54	3.5	306.19	2006
M.V. Arif	42.68	7.26	3.41	293	2003

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Sonia – 3	42.68	7.32	3.3	248.94	2001
M.V. Al Mim	42.68	9.15	3.2	350	2000
M.V. Fahema – 1	42.68	8.25	3.35	297.16	1993
M.B. Jolpipi	42.68	8.54	3.66	311.2	2006
M.V. Marine -7	42.68	8.54	2.9	319	2006
M.V. Kaktus	42.68	8.24	3.29	298	2003
M.V. Rahima Hoque	42.68	8.2	3.2		2003
M.V. Kamargram	42.68	8.54	3.5	306.19	2006
M.V. Al Noor – 1	42.67	8.38	3.35	323	2000
M.V. Beauty of Tamanna	42.67	8.53	3.51	355.44	1999
M.V.Hasan	42.67	7.42	3.2	264.32	1999
M.V. Korona	42.67	8.38	3.35	330.62	1998
M.V. Khatoon – 1	42.67	8.84	2.97	306.66	1991
M.B. Tipu Sultan	42.63	7.01	3.15	240	2008
M.V. Jolvea	42.6	7.97	3.65	280	2006
M.V. Mushaphir	42.57	7.33	2.89	233	1983
M. V. Sheba	42.52	9.3	3.1	357.6	1987
M.V. Shato	42.4	7.32	3.1	259.98	1996
M.V. Al –Kausar – 7	42.4	7.92	3.05	236.54	2008
M.V. Queen of Shariatpur	42.4	7.77	3.2	282	1997
M.V. Sobhan Raz	42.39	7.32	3.2	227	0
M.v. Zahid Rakib – 1	42.38	7.7	3.5	350	2008
M.V.Provati	42.37	7.25	3.1	308	2000
M.V. Akankha	42.37	8.23	3.35	330	1998
M.V. Master Faruque	42.37	8.23	3.2	321.09	1997
M.V.Master Ratul – 1	42.37	7.92	3.35	308	2002
M.V. Rimon	42.35	8.25	3.55	310	1997
M.V. Parl	42.35	7.62	3.05	240.13	2005
M.V. A Mazid	42.34	7	3.2	240	2008
M.V. Shato – 3	42.32	8.38	3.43	335.38	1997
M.V. Shahrin	42.31	8.25	3.55	320	1996
M.V. Al Murad – 2	42.3	8	3.2	281	1986
M.V. Rajrani	42.3	7.93	2.9	270	2003
M.V. Attanzil	42.29	8.23	3.51	337	2000
M.V.Raznogori	42.29	8.23	3.3	275	2003
M.V.Mohammad Ali 3	42.23	8.54	3.2	312.74	1995
M.V. Shantono	42.22	8.54	3.66	378	2008
M.V. Sumona – 1	42.21	8.23	3.51	295.43	2003

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Omit Goni	42.16	8.1	3.1	263.52	2001
M.V. Sabiya Karim – 1	42.16	7.95	3.55	245 weGBPwc	2002
M.V. Nazma Goni	42.16	8.03	3.35	277.83	2002
M.V. Kobori Express – 4	42.16	8.23	3.05	313.92	1999
MV Faysal – 5	42.14	8.23	3.17	318	1995
M.V. Akbar	42.14	7.16	2.74	215.05	1993
M.V. Bright – 3	42.13	8.55	3.28	310.56	1989
M.V. Kashmina Hoque – 2	42.1	7.93	3.5	261.24	2006
M.V. Abdul Berek – 1	42.09	7.32	2.75	260	2006
M.V. A.R.F	42.08	6.92	2.79	171.02	2008
M.V. ali Al Mahboomd	42.07	10.98	3.04	430.96	2001
M.V. Master Alal Dulal	42.07	8.23	3.5	326.53	2008
M.B. Jhorna	42.06	8.08	3.35	299	2000
M. V.Nairom	42.06	8.28	3.35	332	1997
M. V. Antarjami	42.06	8.23	3.51	331.56	1997
M.V. Nazrul Islam	42.06	8.43	3.35	326.24	1996
M.B. Tahsin	42.06	8.23	3.35	316.72	1999
M.V. Talha – 1	42.06	8.1	3.3	303.25	1999
M.V. Asha Manika – 2	42.06	8.23	3.45	333.48	1997
M.V. Ma Babar DKoa – 3	42.06	8	3.2	306.01	1997
M.V. Shohagpur	42.06	8.23	3.2	298	2001
M.V. Wani	42.06	7.57	3.05	255	2000
M.V. Wani	42.06	7.57	3.05	255	2000
M.V. Seven Circle – 4	42.06	8.31	3.58	345	1997
M.V. Manosh -3	42	7.45	3.28	265	2007
M. V. Farzana Hasan	42	8.7	3.04	296.16	1991
M.V. Promi	42	7.02	2.97	245	2005
M.V. Herat	41.96	7.6	3.2	269	2005
M.V. Shonkhochil-2	41.95	8.23	2.6	275	1990
M.V. Ameen – 1	41.92	7.32	3.2	268.54	2002
M.V. Belfast – 1	41.92	8.54	4	368.3	2008®
M.V. Al Rusho	41.91	7.67	2.59	245.32	1994
M.V. Al Fahad	41.88	8.72	3.38	331.82	1991
M.V. Zuin Elmi – 1	41.86	8.74	3.35	329.32	1992
M. V. Salma Kazi	41.85	7.92	3.5	255.52	2003
M. V. Beauty of Bhagokul	41.83	8.69	3.15	331.91	1995
M.V. Sunflower	41.81	7.1	3.16	205	2008®
M.V. Sharaf – 1	41.8	8.43	3.35	315.1	1999



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Jabu – 6	41.8	8.54	3.66	374	1989
M. V. Nawbab	41.77	7.5	3.35	241.6	2007
M.V. Shafayet	41.77	7.5	2.75	229.58	2001
M.V. Luna	41.77	7.77	3.02	250.69	1996
M.B. Tomal – 1	41.77	8.54	3.81	319.99	2006
M.V. New Parveen	41.77	7.5	2.75	215	2003
M.V. Azad	41.76	7.77	2.74	257	1994
M.V. Chowdhury – 1	41.76	8.23	3.35	316	2000
M. V. Oditi	41.76	8.23	3.23	41.76	2001
M.V. Hazi Sohrab Hossain	41.76	8.54	3.3	340.36	1997
M.V. Konok	41.76	8.23	2.6	282.8	2002
M.V. Mashfi Al - Mahin	41.76	8.4	3.2	290	2006
M.V. Parma Chrot	41.76	8.69	3.51	352.23	1998
M.V. Roshulpur	41.76	6.85	3.04	220	2000
M.V. Panna	41.76	7.09	2.9	239.78	1997
M.V. Beauty of Manoshi-1	41.74	8.75	3.26		2008
M.V. S. Alam – 1	41.7	8.43	3.9	438	1995
M.V. Al-Tayef	41.66	7.95	3.3	280.66	2000
M. V. Shornogram	41.6	7.31	2.83	243	2006
M.V. Hazrat Shah Fatullah	41.5	7.95	3.35	239	1996
M. V. Alfadanga	41.46	7.92	2.89	295.12	2001
M.V. Josnar Noor	41.46	7.92	3.35	286.64	1994
M.V. Shadia Shumi – 1	41.46	8.85	2.6	299.43	1992
M.V. Noor Mahadi	41.46	7.92	2.89	295.12	1997
M.V. Turag Express – 1	41.46	7.92	2.89	295.12	1998
M.V. Lakhi	41.46	8.54	3.3	320.34	1997
M.V. Faisal – 2	41.46	7.92	2.89	270.5	1993
M.V. Jheemi – 1	41.46	7.32	3.35	254.82	1995
M.V. Ador – 4	41.46	7.62	3.43	254	2003
M.V. Al Samit – 4	41.46	7.92	2.99	270.5	1997
M. V. Auvi Ashis	41.45	7.32	3.2	239.61	1999
M.V. Taigreece	41.45	7.31	3.25	271	2000
M.V. Farhana Hoque	41.45	7.9	3.3	293	2002
M.V. Kashmina Hoque	41.45	8.08	3.3	293	2002
M.V. Atahar Bhuiya	41.45	7.92	3.35	285	2001
M.B. Sultan Mahmud	41.4	8.08	3.1	277.18	1993
N.V. Farhad	41.4	7.62	2.95	218.2	2005
M. V. Authoi	41.38	7.95	3.4	263	2003
M.V. Sayem Rahman	41.37	8.61	3.51	333.43	1989

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Master Anis	41.33	8.44	3.17	295.5	1991
M.V. Chand Shah-1	41.3	8.3	3.35	340	2003
M.V. Emon Shoikot	41.3	6.48	2.9	214	2002®
M.V. Seaman – 1	41.3	7.3	3.35	301	2007
M.V. Panama – 2	41.27	8.43	3.2	313.64	1996
M.V. Mostafa – 1	41.27	8.53	3.05	323.64	2005
M.V. Almi	41.25	8.23	3.2	280.03	2002
M.V. Saudarn – 3	41.25	7.32	3.5	270	2004
M.V. Prince of Riyad	41.25	7.32	3.2	216.21	1999
M.V. khaja Ahmed Shah – 2	41.23	8.1	3.3	335	2003
M.V. Master Aunik	41.2	8.08	3.3	302.12	1996
M.V. Kasmi	41.2	8.08	3.3	302.12	1996
M.B. Kafela	41.2	7.5	3.51	250.1	2008
M.V. Beauty of Rubel	41.2	7.1	2.93	216.58	216.2
M.V. Agroni	41.19	8.38	3.02	289.57	1989
M. V. Water Hen 1	41.16	8.23	3.3	298.84	2001
M. V. Khan – 1	41.16	8.23	3.3	260.56	2002
M.V. Mehedi Khan-1	41.16	8.23	3.57	273.42	2000
M.V. Mimataz	41.16	8.55	3.05	244.03	2006
M.V. T. L.N. – 18	41.16	7.93	3.36	278.5	2008
M.V. Noyansree-2	41.16	8.54	3.3	295	1996
M.V. Shugondha – 1	41.16	7.95	3.3	309.72	1997
M.V. Shugondha – 2	41.16	8.4	3.2	290	1997
M.V. Seven Circle – 5	41.16	7.95	3.3	309.72	1998
M.V. Nadipath – 1	41.16	8.54	2.9	321	1999
M.V. Narisha Purba Char	41.16	8.23	3.05	280	1996
M.V. New Al Zabir	41.16	8.24	2.75	207.35	2007
M.V. Ruzi – 2	41.16	8.23	3.3	260	2008
M.V. Agoirjhara – 2	41.16	7.95	3.21	251.46	2007
M.V. Master Sabbir	41.16	8.25	3.35	240	2007
M.V. Queen of Moon	41.16	8.23	3.3	280	1996
M.V. Anmona – 2	41.16	8,54	2.9	320.09	1990
M. V. Rokti	41.15	8.54	3.35	279.94	2006
M.V. Stone	41.15	8.3	3.05	261	2004
M.V. Mashfiq – 2	41.15	7.77	3.05	276.23	1990
M.V. Shantonon – 1	41.15	8.23	3.23	286.93	2003
M.V. Alam Al Bahar	41.15	8.23	3.2	300	1997
M.B. Prince of Modhur Khola-4	41.15	8.23	3.78	240	2007
M.V. Anza – 1	41.15	8.23	3.35	300	2000

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.B. Nusrati Hoque	41.15	8.53	3.05	296.26	1995
M.V. Water Hen	41.15	8.53	3.05	296.26	1994
M.V.Saiful Badrul	41.15	8.08	3.35	296.02	2003
M.V. Al Forkan	41.14	8.25	3.2	307.92	1998
M.V. Shamima Hoque – 2	41.14	7.95	3.35	316.83	1998
M.V. Sea Shamrat	41.14	7.92	2.89	270.5	1994
M.VK. Fotepur	41.14	6.7	3.05	226.6	1998
M.V. Alal Shah	41.1	7.17	3.3	225.64	2008®
M.B.Boshundhora Logistic-19	41.02	7.92	3.2	268	2001
M.V. Abdul Barek – 2	41.02	8.38	2.8	302.9	1986
M.V. Al Alif-1	41	8.2	3.18	231.88	1991
M.V. Jhenook	41	8.12	3.36	286	2005
M.V. Tushar Khan	41	7.95	3.18	291.43	2002
M.V. Zaci – 1	41	8.23	3.26	265	2008
M.V. Sunfa – 5	41	7.31	2.82	237.65	
M.V. Diamond of Shimulia	41	8.23	3.2	285.87	1995
M.V. Dafodil	40.87	8.61	3.55	303	2008®
M.V. Alal Shah – 2	40.86	9.93	4	320	2007
M.V. Saleha	40.85	6.56	2.75	155.75	2003
M. V. Star – 2	40.85	6.1	3.17	117	2003
M.B. Prince of Fultola	40.85	8.54	3.64	394	2006
M. V. Ratul – 2	40.84	8.81	3.12	326.44	1995
M. V. Tanvir	40.84	6.55	3.05	228.3	1997
M.V. Sadia Amir	40.84	8.28	3.35	312.69	1997
M.V. Darul Asbab – 2	40.84	8.38	3.35	317.85	1997
M.V. Ushamoni	40.84	6.71	3.05	224.38	2001
M.V.Moru Dulal-1	40.8	6.55	3.05	210.6	2000
M.V. Noyansree	40.77	7.92	3.17	274.71	1989
M.V. Mitali – 4	40.7	7.06	3.15	195.11	2006
M.V. Shonali Deep	40.7	8.08	3.2	290.5	1987
M.V. Al-Habib	40.7	7.32	3.06	246.98	1995
M.V. Sayful Islam	40.65	7.95	3.2	246.91	2007(M
M. V. Abdul Jalil	40.61	8.59	3.66	322.73	1990
M.V. Songram	40.61	8.23	3.2	293	2000
M.V. Queen of Agrojan	40.6	8.23	3.3	325.36	1998
M.V. Raztori	40.59	8.23	3.35	301.94	1991
M. V. Alhaz Alauddin – 1	40.55	8.25	3.2	303.25	1997
M.V. Northmoon and Star	40.55	7.38	3.66	240	2007
M.V. A. Jabbar	40.54	8	3.05	258	2003

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M. V. Sheshir	40.54	7.62	3.23	256.54	2002
M.V. Al Titas – 2	40.54	7.13	3.05	236.34	1997
M.V. A. Rob-1	40.48	7.86	3.11	281.78	1989
M.V. Khaled	40.45	7.18	2.98	224.02	1998
M.V. Meghna – 1	40.41	8.38	3.2	281	1992
M.V. Jabu – 9	40.41	8.1	3.04	283.3	1981
M.V. Beauty of Matlab	40.38	6.71	3.3	228.33	2002
M.V. Panama – 3	40.35	7.93	3.2	294.16	1997
M.V. New Mitali	40.31	8.11	3.26	283.38	1990
M.V. Afroze	40.3	7.62	3.35	246.27	2008
M.V. Monir Uddin	40.3	7.94	2.9	255.93	1994
M.V. Lumyea -2	40.26	7.54	2.74	227.32	1989
M. V. Shani – 1	40.24	8.23	3.2	281.28	1995
M.V. Gomati – 3	40.24	7.74	2.9	284.44	1989
M.V. Jannat	40.23	8.38	3.28	287.18	1990
M.V. Mohammadpur	40.23	7.16	2.59	210	1999
M.V. Sium	40.23	8.38	3.28	296	1990
M.V. Maria Tasnim	40.2	7.94	3.5	284	2008
M.V. New Kutubia	40.12	7.02	2.75	163.6	2005
M.V. Almamun	40.11	8.17	3.12	278.08	1987
M.V. Foisal – 1	40.11	8.38	3.4	301.03	1992
M.V. Ononna – 1	40.09	8.14	3.2	276.62	2002
M.V.Himi Mala	40.01	7.92	3.2	286.29	1999
M. V. Sento – 1	40	8.08	3.41	320.61	1988
M.V. Master Nadim	40	8.23	3.2	251.28	1995
M.V. Master Redin	40	8.23	3.2	293.93	1993
M.V. Zibon Arafat	40	8.23	3.2	271.21	1994
M.V. Faria Mazid – 1	40	7.8	3.32	248	2003
M. B. Ashar Allow	39.95	7.8	2.95	93.76	2007
M.V. Abu Horaira	39.95	7.93	3.2	260	1997
M.V. Insaniat	39.95	7.39	3.1	199.85	2009 ®
M.V. Master Koushik	39.93	7.47	2.92	231.42	1993
M.V. Adib	39.93	8.08	3.2	285.73	1997
M.V. Dholeshor – 1	39.9	6.8	3.1	197.12	2003
M.V. Nowmi	39.9	8.3	3	260.1	1986
M.V. Banglar Tamanna	39.87	8.54	3.81	300	2008
M.V. Anwar Islam – 1	39.85	8	3.14	273.16	1987
M. V.Sayem	39.8	7.97	3.05	281	1995
M.V. Walker	39.8	8.53	3.35	301.81	1992

<i>Name</i>	<i>L</i>	<i>B</i>	<i>D</i>	<i>Dead Weight</i>	<i>Year</i>
M.V. Allartan Mayer Doa	39.77	6.85	2.89	216.01	1983
M.V. New Star	39.77	7.01	2.74	207.85	1988
M.V. Razu Sony	39.7	7.47	2.97	230.07	1992
M.V. Al-Sayma – 3	39.7	9.12	3.2	310	2006
M.V. Bijoi – 1	39.7	7.94	2.9	268.16	1996
M.V. Showan – 2	39.7	7.94	3.05	280	1997
M.V. Munir	39.7	7.94	2.9	185,25	2003
M.V. Mahmood Rayhan	39.68	8.23	3.25	289.26	1994
M.V. Al Titas	39.66	7.52	3.3	285	2006®
M.V. Shahi	39.65	7.02	2.74	240.38	1994
M.V. Mim Nisha – 1	39.65	7.77	2.59	237.57	1998
M.V. Barlap Star	39.64	8.54	2.9	260.1	1989
M.V. Nadim– 1	39.64	8.54	2.9	250.1	1999
M. V. Shakib-1	39.64	8.54	2.9	260	1989
M.V. Southern Star – 2	39.64	8.54	2.9	260.64	1989
M.V. Al-Saima – 1	39.64	8.08	3.21	279.06	2002
M.V. Digonto	39.64	7.17	2.75	207.63	1994
M.V. Toma	39.64	8.54	2.9	260.1	1989
M.V. Ashad	39.63	8.54	3.35	275	2006
M.V. Master Rito	39.62	8.11	2.99	276.99	1987
M. V. Marine – 5	39.62	8.53	2.89	254.35	2004
M. V. Amin	39.62	7.09	2.68	210.42	1994
M.V. Samia	39.62	7.77	3.35	262	1990
M.V. Habib – 1	39.59	8.08	3.28	275	1990
M. V. Meghla Akash	39.56	7.92	3.2	279.58	1986
M.V. Hazi Kala Mia	39.5	8.47	3.05	293.7	1994
M.V. Pabon – 1	39.5	7.94	2.9	248.44	1992
M.V. Nowshin Akter	39.5	7.16	2.79	209.15	1993
M. V. Unity	39.47	8.31	3.28	284.61	1988
M.V. Seven Circle – 1	39.47	6.71	2.8	193.96	1992
M.V. Shahida	39.4	7.57	3.4	245	2008
M.V. Duronto	39.39	8.15	3.2	272.09	1989
M.V. Abir	39.38	7.77	2.9		
M.V. Brothers – 1	39.33	7.01	2.6	221	1995
M. V. Sent Martin	39.32	7.32	3.11	263	1990
M.V. Shom	39.32	8.23	2.99	265.66	1985
M.V. Barik – 1	39.32	8.08	3.2	267.63	1989
M.V. Zarin – 1	39.32	8.07	3.04	276.88	1995
M.V. Lal Golap	39.32	8.15	3.15	267.63	1988

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Masranga Express	39.32	7.77	2.74	239	2000
M.V. Master Arif	39.3	8.23	3.35	259.63	2003
M.V. Kazol Dight – 2	39.3	8.23	3.35	257	2003
M.V. Tuli	39.3	7.01	3.05	199.31	2003
M.V. Hazi Alauddin	39.3	7.62	2.59	224.63	2003
M.V. Prince of Dohar	39.29	7.99	3.41	278.36	1992
M.V. Moina – 1	39.26	7.92	3.2	272.02	1989
M.V. Jamshed	39.23	71.6	2.8	207.51	1990
M.V. Fazlul Hoque -2	39.22	8.08	3.05	270.4	1997
M.V. Shahjalal Express	39.22	7.97	2.9	267.89	1996
M.V. Al-Modina – 1	39.18	6.7	2.58	151.08	2008®
M.V. Maisranga-2	39.18	7.01	2.6	202.6	1993
M.V. Dhubria	39.15	7.16	2.75	216.15	1997
M.V. Pubali	39.1	8.08	3.14	277.2	1985
M.V, Borak	39.09	8.11	3.2	266.83	1990
M.V. Akhash Parash	39.09	8.15	3.12	266.83	1987
M.V. Shipa Nipa	39.07	8.08	3.2	265.85	1988
M.V. Beauty of Dhaka	39.02	7.94	2.9	258	1990
M.V. Suzza Shikha	39.02	7.94	2.9	275.62	1992
M.V. Beauty of Balihari	39.01	6.55	2.44	170.12	1984
M.V. Yeah Noor	39.01	7.01	2.29	190	2000
M.V.Dewan Mukta	39.01	7.62	3.5	242.68	1993
M.V. Tarafder	39.01	8.17	3.28	279.42	1986
M.V. Unaisa	39.01	7.99	3.11	262.75	1987
M.V. King Sazzad – 1	39	8.54	3.35	259	2007
M.V. Hazi Kala Mia – 1	39	8.23	3.06	250	1996
M.V. Sharif Uddin – 1	39	7.1	2.8	195	2003
M.V. A. Rob – 2	39	7.92	2.9	251.77	1996
M.V. Shimulia	38.99	8.36	3.4	304	1994
M.B. Narayanganj	38.98	8.61	2.75	84.48	2007
M.V. Trazer – 1	38.94	7.92	8.08	257.31	1988
M.V. Muhee Wahid – 1	38.91	7.92	2.85	252.23	1991
M.V. Bodrunnahar	38.9	8.23	3.35	233.24	2005
M.V. Master Sharif	38.9	6.15	2.98	172.38	2008
M.V. King Bard	38.89	6.71	6.92	192.66	1991
M. V. Sea Master	38.89	8.08	3.23	266.33	1992
M.V. Yeah Razzakoo	38.89	7.92	3.2	280.25	1986
M. V. Shorna Rito	38.88	7.77	2.99	237.52	1986
M. V. Erektors – 1	38.86	6.7	2.9	202.82	1996

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Naznoor	38.86	7.06	2.86	199.54	1990
M.V. Ulid	38.85	7.92	3.3	225.2	2006
M.V.A.K.M. Shahnewaz	38.83	7.95	3.08	259.16	1991
M.V. Habib – 3	38.75	8.25	2.75	257.09	1993
M.V. Habib – 2	38.75	8.52	2.75	257.1	1993
M. V. Erektors – 2	38.74	6.85	2.67	195.34	1994
M.V. Master Shawan	38.72	7.32	2.67	212.76	1990
M.V. Beauti of Dohar	38.69	7.62	3.45	257.03	
M.V. Gomati	38.65	7.77	3.2	260	1986
M.V. Motahar Hossain -2	38.63	8.08	3.2	262.88	1989
M.V. Dipak – 4	38.63	7.92	2.97	267	1993
M.V. Amanat Shah	38.63	7.99	3.11	262.8	1990
M.V. Asha Jaoa	38.61	7.39	1.92	546	2000
M.V. Motahar Hossain	38.59	8.17	3.14	280.61	1986
M.V. Atahar Hossain	38.59	7.99	3.13	280	1986
M.V. Molla	38.57	7.02	3.13	211.43	2006®
M.V. Jolkali	38.56	7.93	2.81	273.42	1987
M.V. Beauti of Narisha	38.56	7.93	2.89	273.42	1988
M.V. Shis – 2	38.56	7.93	2.89	273.42	1987
M.V. Mohammad	38.52	7.01	1.86	211	1989
M.V. Hamming Bard	38.5	7.92	2.74	273.42	1988
M.V. Al Barkat	38.5	6.4	3	175	1974
M.V. Banglar Nodi	38.41	8.2	3.05	261.88	1990
M.V. New Zakir	38.41	7.77	3.04	254.52	2002
M. V. Mohanpur – 1	38.4	7.92	2.74	251.08	1985
M.V. Neval – 1	38.4	7.92	3.17	262	1992
M.V. Bilu	38.4	7.62	3.11	260.43	1986
M.V. Shathi – 1	38.4	7.62	3.08	237.27	1992
M.V. Israt Pass	38.3	8.53	2.75	173.35	2007
M.V. Shobuj Shathi – 1	38.26	7.62	3.81	250	2008
M.V. Al- Modina – 2	38.26	9.45	3.13	248.48	2008
M.V. Foisal – 1	38.25	7.68	2.99	243.51	1986
M. V. Bayzed – 1	38.2	7.32	3.05	250	2002
M.V. Amira	38.2	7.62	2.75	250	2004
M.V. Al-Quddus	38.18	7.92	2.9	235.82	1985
M.V. Ruposi Meghna	38.18	7.7	3.07	242.2	1993
M.V. Banani	38.17	6.86	2.06	189.39	1992
M.V. Hazrat Shah Fatullah-1	38.11	7.06	2.6	197.64	1991
M.B. Boshudhara logistics-6	38.11	8.23	3.35	230.1	1996

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Tanjil-1	38.1	8.54	2.6	135.3	2005
M.V. Ma Amena – 1	38.1	6.7	2.79	150.54	2002
M.V. Habib – 4	38.1	7.9	3.3	245.53	2002
M.V.Sarder – 2	38.1	7.77	2.99	263.97	1986
M.V. Masura	38.1	7.31	2.69	220	1998
M.V. Dewan	38.1	6.7	2.71	156.54	2001
M.V. Hatighata	38.07	7.68	3.32	251.37	1990
M. V. Anwar Hossain Bhuiyan	38.06	8	3.2	267	1989
M.V. Mizan – 2	38	8.23	3.35	299.5	2002
M.B. Hasan – 3	37.97	6.71	2.9	79.13	2006
M.V. Minto	37.95	7.68	3.05	246.45	1985
M. V. Ripon	37.95	7.68	3.05	246.45	1985
M.V. Zoinob	37.95	7.77	3.02	236.02	1989
M.V. Auronima	37.95	7.8	2.99	247.51	1986
M.V. Rumi-2	37.95	7.77	2.99	253.86	1984
M.V. Narisha	37.89	7.62	2.97	201	1988
M.V. Pakhi	37.88	7.77	2.93	244.98	1987
M.V. Choa	37.79	7.31	3.35	245	2001
M.V. Mahmood Rayhan-2	37.73	7.8	2.68	232.89	1987
M. V. Al Tayed	37.7	7.62	3.05	235.81	1990
M. V. Master Shajib – 1	37.67	7.77	3.02	233	1987
M.V. Yead Moula – 1	37.65	5.75	2.8	127	1989
M.V.Aftab	37.5	8.16	3.2	245	2006
M.V. Zebu – 8	37.49	7.77	2.9	237.89	1986
M.B. Choto Ma	37.49	7.77	3.05	240.39	1987
M.V. Anwar Ali	37.49	7.86	2.44	250	1986
M.V. Master Noyan	37.37	7.62	2.99	244.87	1986
M.V. Al-Nayem – 1	37.34	7.93	3.05	229.69	2002
M.V. Joint – 1	37.34	7.54	2.74	215	1981
M.V. Ferdous – 2	37.34	7.68	3.05	235	1991
M.V. Shafina	37.31	6.8	2.51	149.33	1990
M. V. Shaheen	37.28	7.68	2.9	230.13	1987
M.V. Noor	37.24	7.01	2.56	187.97	1991
M. V. Salman Alam - 1	37.21	7	2.75	221.2	1987
M.V.Koira	37.21	7	2.75	221.2	1987
M.V. Panipath	37.2	7.02	2.6	204.11	1989
M.V. Ashfiq – 1	37.18	7.39	3.23	229.33	1990
M.V. N. Jahan	37.18	6.55	2.75	181.8	1996



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Nargis – 1	37.11	7.06	2.57	188.46	1992
M.V. Abdullah	37.03	7.68	2.99	244.49	1985
M.V. Badhon – 1	37.03	7.8	2.99	246.57	1985
M.V. Naf	37.03	7.68	2.99	246.57	1985
M.V. Rizvi Ahammad Rupom	37.03	7.47	2.87	221.62	1994®
M.V. Khaled Hasan	36.96	8.08	2.57	229.78	1988
M. V. Bashundhara Logistics- 8	36.88	8.03	3.35	254	2001
M. B. Tatoi Tola	36.88	8.28	3.25	285.93	2007
M.V. Magpai	36.82	6.7	2.91	195.75	2008
M.V. Umama	36.79	7.59	3.17	224.08	1992
M.V Ma	36.75	5.5	3.05	172	19.98
M.V. Mim Rim	36.74	8.69	3.5	243.43	2004
M. V. Voizer	36.67	7.71	2.9	214.11	1986
M.V. Boshundhara – 1	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 2	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 3	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 4	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 5	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 6	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 7	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 8	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 9	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 10	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 11	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 12	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 13	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 14	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 15	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 16	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 17	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 18	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 19	36.63	6.7	2.44	130	2002
M.V. Boshundhara – 20	36.63	6.7	2.44	130	2002
M.V. Shishir	36.61	6.09	2.55	157.9	1993
M.V. Robiul Islam Shamol	36.6	8.55	3.05	207.6	2008
M.V. Tanveer Hossain	36.5	7.1	3.35	273	2000
M.B. Bed Beauty – 2	36.39	7.31	3.17	219	1995
M.V. Ratul – 1	36.36	7.92	2.59	235.02	1987

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Aksha	36.35	7.16	2.64	183.27	1999
M.V. Beauty of Ferousi	36.33	7.31	3.2	222.26	1989
M. V. Master Rony	36.29	6.77	2.74	172.26	1984
M.V. New Abirvab	36.1	6.91	3.12	216	2007
M.KV. Wazer	36.1	8.15	3.2	225	2006
M.V. Chotorango	36.05	8.55	3.05	201.79	2006
M.V. Mohtaram	36.04	7.47	2.86	203.9	1987
M.V. Shafia	35.81	7.47	2.9	212	1982
M.V. Dipasa	35.81	7.31	2.86	203.55	1988
M.V. J.N.C. – 1	35.75	7.47	2.74	206.88	1986
M.V. Brothers – 2	35.75	7.16	2.74	201.26	1983
M.V. Kashem – 2	35.67	8.64	3.05	228	2008
M. V. Al Ahtasham	35.66	7.77	2.99	227.26	1987
M. V. Sun Shaine	35.66	7.16	2.74	193	1986
M.V. Babul Express – 1	35.66	6.76	2.34	168.21	1995
M.V. Desh Bondhu	35.57	8.08	3.35	268.58	2002
M.V. Yeada Mostofa – 1	35.43	8.48	3.15	256.2	1991
M.V. Zikron	35.37	7.62	2.6	125	2001
M.V. Nehar	35.36	6.71	2.59	176	1996
M.V. Chayabithi	35.36	7.95	3.14	235.67	2002
M.V. Aboshor	35.1	7.31	1.83	384	1997
M.B. Desh Bhromon	35.06	8.23	2.74	81	2007
M.V. Tasded	35.06	7.32	2.9	220	2003
M. V. Nashek – 1	35.05	7.82	2.8	52	2007
M.V. Bina	35	7.47	2.13	103	2003
M.V. Orz	34.96	8.54	3.1	209.26	2007
M.B. Beauty of Kaniz	34.75	5.79	2.28	46.79	2008
M.V. Mosto Mia	34.74	7.28	2.74	187.2	1981
M. V. Ma Amina	34.62	7.49	2.92	208.7	1982
M.V. Ashfiq – 2	34.59	7.16	2.71	185.9	1982
M.V. Feary – 1	34.59	7.16	2.89	202.3	1983
M.V. Beauty of Keraniganj	34.44	7.01	2.74	177.43	1984
M.V. Ali Akbar – 2	34.44	7.13	2.62	168.74	1990®
M.V. Zogazog	34.44	7.25	2.83	212.2	1975
M. V. Jhento	34.32	7.49	2.92	198.3	1982
M. V. Al shohag	34.29	7.28	2.9	197.8	1980
M.V. Kochi	34.29	7.39	2.89	197.08	
M.V. Habibur Rahman	34.29	7.39	2.9	197.8	1980

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Sayed Ahmed	34.15	7.32	2.58	196	1984
M.V.Albatris	34.15	7.01	2.74	176.6	1981
M.V. Sadman	34.15	6.1	2.6	11	2004
M. V. Malikanda	34.14	7.55	2.74	199.06	1989
M. V. Salam	34.14	6.25	2.59	147.03	1985
M.V. Nizampur	34.14	7.92	3.35	242	2002
M.V. Urbi – 1	34.11	7.01	2.82	180.52	1988
M.V. Moharaz	33.92	7.07	2.62	176	1980
M.V. Shapna Tari -1	33.83	7	3.05	192.33	1990
M.V. Ababil	33.83	6.55	2.09	160	1984
M. V. Romiz Uddin	33.71	7.1	3.23	192.01	1981
M.V. Mafia – 2	33.64	7.01	2.86	136.4	1982
M.V.Sent Carrier – 2	33.54	8.24	2.9	110	2003
M.B. Shanta Sagar – 2	33.1	7.97	2.64	71.03	2006
M.V. Titu – 4	33.09	9.6	4.27	625	2003
M.V. Green Bard – 7	33.07	7.87	3.2	213	2001
M. V. Ali Akbar-3	33.02	6.05	2.34	118.89	1991
M.V. Memori	32.62	4.9	2.19	80.7	2001
M.V. T. L. N. – 6	32.47	9.05	1.67	108.8	2005
M. V. Dany	32.38	5.85	2.36	117.77	1990
M.V. Saibar	32.33	6.3	2.52	126.4	1983
M.V. Glory of Shohag Dol	32.32	7.65	3.2	226.45	1997
M.V. Hera Parban – 1	32.32	8	3.35	233.28	2002
M.V. Bosundhora – 29	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 30	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 32	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 31	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 33	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 34	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 36	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 35	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 21	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 22	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 23	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 25	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 24	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 28	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 26	32.25	6.7	2.44	130	2002

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Boshundhora – 38	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 37	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 39	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 39	32.25	6.7	2.44	130	2002
M.V. Boshundhora – 44	32.25	6.7	2.44	53.78	2006
M.V. Boshundhora – 27	32.24	6.7	2.44	130	2002
M.V. Asia	31.93	8.2	2.94	269.59	1987
M.V Chowdhury	31.7	7.32	2.6	176.81	1995
M.V. Ador	31.7	6.1	1.93	233.47	2000
M.V. Ador	31.7	6.1	1.93	233.47	2000
M.B. Karim Mohsin	31.4	6.58	1.82	38.35	2006
M.V. Anab	31.31	6.3	2.34	126	2006
M.V. Anab	31.31	6.3	2.34	126	2006
M.V. Brothers – 3	31.22	6.22	2.35	113.42	1995
M.V. Rupali	31.08	7.11	2.89	170.5	1981
M.B. A.R. W. -1	30.8	7.45	1.7	39.78	2007
M.V.Choian – 1	30.78	6.7	2.43	201	1980
M.B. Sonia – 2	30.77	8.28	2.17	53.67	2006
M.V. Mafia	30.76	6.4	2.56	123	1992
M.V. Al Borak	30.17	7.92	3.2	201.32	1990
M.B. M. N. – 1	30.06	7.08	1.73	37.02	2005
M.B. King of Parjoar – 1	30	6.4	2.52	50	2003

**Category – 1 of Cargo Vessels (L<30 m)**

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.B. Mabilia Mahbub	29.8	7.1	1.85	39.92	2006
M.B. Sk. Shahjahan	29.8	6.85	2.74	40	2003
M.B. Fakir 2	29.7	8.53	2.28	59.01	2006
M. B. Noore Mohammadi	29.7	7.8	2.05	48.44	2006
M.B. Takwan	29.65	6.12	2.33	45.12	2005
M.B. Shah Poran	29.57	3.28	1.75	15	2008
M.B. Jayeda Omar	29.51	7.58	2.2	20	1998
M.V. Shakura	29.27	7.62	2.82	185	1997
M.V. Purnima	29.27	7.62	3	155.52	2003
M.V. Vai Vai	29.26	5.79	2.44	113.2	1986

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.V. Jummon	29.26	7.01	3.02	159.56	1990
M.B. M.B. Shatota – 1	29	7.62	1.98	25	2003
M. B. Allahar Dan Meghna-2	29	7.1	2	43	2006
M.V. Hera Parbat – 2	28.7	7.32	3.05	167.73	1999
M.B. J. D. N	28.7	6.8	1.8	35.89	2005
M.B. Shovo	28.63	5.56	1.88	30.56	2008
M.B. Sheikh Farid – 2	28.58	5.18	1.65	24	2008
M.B. Allow – 1	28.5	6.91	1.85	37.17	2006
M.B. Doi Nayon	28.35	5.3	1.64	26	2007
M.V. Romiz Uddin – 2	28.02	6.35	2.84	123.27	1992
M.B. Ali Noor	27.97	7.48	2.06	20	2003
M.B. Ali Noor	27.97	7.48	2.06	20	2003
M.V. Simi – 1	27.81	8.08	2.59	180.43	1999
M.V. Makbul – 2	27.75	6.4	1.75	91.06	2001
M.B. Kamlaghat	27.51	6.7	2.2	41.36	2009
M.V. Prince of Rayenda – 1	27.45	6.1	2.6	107.6	1999
M.B. Darus Sunnat	27.37	4.57	1.4	17.86	2008
M.B. Zobair – 2	27.26	6.07	2.26	38.14	2005
M.B. FM Enterprise	27.12	6.65	2.03	30	2003
M. V. Himu	27.1	7.62	3.62	301.52	2005
M.V. Ameratos Friendship Hospital	27.07	11	2.23	285	2008
M.B. Tarer Ghat Paribahan 1	26.94	6.8	1.95	36.44	2006
M.B. S. A- 1	26.82	6	2.1	40	2005
M.V. Milu	26.6	6.1	1.55	75	1981
N.B. Gorebe Azam	26.52	5.64	1.52	23	2009
M.B. Vai Vai Nau Paribahan-1	26.52	7.01	2.13	40.39	2007
M.V. Trina	26.5	6.25	1.35	100	2003
M.B. Al Utshob	26.43	6.7	1.55		
M.B. Tarer Ghat Paribahan 2	26.4	6.62	2.1	37.43	2006
M.B. Tarer Ghat Paribahan-3	26.4	6.06	2.1	37.43	2006
M.V.H.S. Shapla	26.31	7.62	2.54	336	2000
M.B. Sheikh Yousuf	26.22	6.7	1.67	29.92	2008
M.B. Noor – a – Sircina – 1	25.92	5.34	2.02	24	2009
M.B. Suravi Pass	25.91	5.48	1.52	22.09	2009
M.B. Prince of Nanduhar	25.91	5.15	1.4	17	2009
M.V. Kokil Moni	25.9	6.71	1.67	136.6	2008
M.B. Shahkur – 1	25.47	6.67	2.18	42	2004

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Lauha Jong	25.4	5.18	1.83	77.53	1995
M. V. Ameer	25.35	6.1	1.7	91.61	1984
M.V. Rokiraka	25.15	4.88	2.1	90	1997
M.B. Noor-E-Zannat – 1	25	6.7	1.98	33.83	2005
M.B.Shakila Noman	25	5	1.52	17	2008
M.B. Sheikh Farid – 1	25	4.37	1.83	20.39	2008
M.B. Raz	25	4.57	1.52	16	2009
M.B. Chowdhury Paribahan	24.72	4.6	1.77	20	2007
M. V.New Pacific	24.7	6.7	2.6	113.53	2001
M.B. Porosh	24.7	6.4	1.98	31.92	2008
M.B. Prince of Agrogati	24.69	4.26	1.21	13	2008
M.B. Ovi	24.69	4.87	1.98	25	2008
M.B. Agragoti	24.39	3.96	1.21	11	2008
M.B. Nusrat	24.39	3.96	1.14	10	2009
M.L. Pingki	24.14	4.95	1.83	42.07	1997
M.L.Beauty of Ashan	24.08	5.34	1.98	67.67	1994
M.B. Memory – 3	24	6.4	2.28	35	2009
M.B. Jomjom Tak	23.93	4.66	1.34	15	2009
M.B. Ammajan	23.78	4.87	1.67	19	2008
M.B. Mohammad Ali	23.78	6.7	1.83	29.73	2007
M.B. Allah Shorboshaktiman	23.78	4.9	1.27	16	2008
M.B. Shonar Kakon	23.63	5.34	1.22	16	2009
M.B. Shahid Paribahan	23.48	4.75	1.22	14	2008
M.B. Vati Laximipur	23.47	5.49	1.52	19.97	2008
M.B. Chader Alo	23.32	4.6	1.25	10	2009
M.L. Amzad – 1	23.25	5.75	1.55	50	2003
M.B.Rahman Nau Transport	23.17	4.5	1.6	17.28	1979
M.B. Allah Meherban	23.17	4.8	1.22	14	2008
M.B. Chandpur Express	23.17	4.87	1.49	15	2008
M.B. Masum Billah – 1	23.17	3.96	1.21	12	2009
M.V. Toshar	23.16	5.13	2.29	67.15	1989
M.B. Baharul Hasan	23	5	1.7	15	2008
M.B. Sharif Paribahan	22.86	4.75	1.22	14	2008
M. B. Shorif Paribahan	22.85	5	1.6	20	2006
M.V.Allah Borosha	22.71	5.47	1.72	18	2005
M.B. Mayer Doa	22.7	5.33	1.5	18.97	2006
M.V. Ratul – 1	22.3	5.33	1.83	59.23	1984
M.B. Eman Hossain	21.95	3.15	0.93	22	2008

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.B. Mayer Nayon	21.95	4.83	1.05	12	2008
M.B. Maher Doa	21.75	4.37	1.25	13	2008
M.B. Shahparan – 7	21.64	3.81	1.32	11	2008
M.B. Shah Nesar	21.64	5.18	1.73	15	2009
M.B. Bahadur – 2	21.62	4.9	1.6	18	2007
M.B. Vai Vai – 16	21.6	4.4	1.17	11.34	2007
M.B. Afridi Paribahan	21.5	3.07	1.4	10	2008
M.L. Sindabad – 1	21.41	4.26	1.53	14	2008
M.B. Allahar Dan	21.34	4.26	1.12	10.38	2008
M.B. Shamol Paribahan	21.34	4.77	1.14	12	2008
M.B. Doyamoy Paribahan	21.34	3.65	0.91	7.22	2009
M.B. Bismillah – 17	21.04	5.03	1.77	19.1	2008
M.B. Gazi Paribahan	21	4.75	1.09	10	2009
M.B. Molla	20.9	3.88	1.04	8.6	2008
M.B. Ma Enteprise	20.82	3.96	1.18	9	2009
O.T. Shumon Express	20.73	5.3	2.1	50	2003
M.B. Allahor Dan	20.73	4.19	1.14	11	2008
M.B. Hasan – 1	20.73	3.96	1.09	9	2008
M.B. Shorikol	20.73	4.26	1.21	10.98	2008
M.L. Al Helal	20.73	5.26	1.9	50.76	1988
M.V. Jitu	20.6	4.72	1.96	20	2007
M.B. Sundarbon	20.37	4.3	1.5	14	2007
M.B. Shohel	20.32	4.27	1.22	10.79	2008
M.L. Mithamoin Express	20.12	3.96	1.22	45.82	1999
M.B. Laileer Ma 3	20.12	3.75	1.21	9	2009
M.B. Khalifa	19.89	4.5	2	19	2007
M.B. Hawlader	19.82	4.2	1.63	13.25	2008
M.B. Hafizer Rahman	19.82	4.27	1.22	11	2008
M.B. Neamat	19.82	3.84	1.25	9	2008
M.B. Khaza Baba	19.81	3.84	1.4	11.86	2008
M.B. Roza – 1	19.64	4.25	1.63	15	2007
M.B. Mayer Doa	19.6	3.96	1.25	10	2007
M.B. Khan - 10	19.56	4.29	0.96	8.22	2008
M.B. Mia Zamir Shah	19.5	4.3	1.6	14	2005
M.B. Miraz	19.41	4	1.2	9	2007
M.L. Sindabad – 3	19.4	3.73	1.04	7.67	2008
M.B. Bismillah – 12	19.35	3.56	1.27	10	2007
N,, Noor Jahan	19.26	4.7	1.6	15.23	2005

<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M. V. Murad – 3	19.2	3.96	1.45	67.81	1988
M.L. Prince of Sundarban	19.2	4.88	1.83	46.06	1988
M.B. Khan Express	19.04	3.55	1.35	20	2002
M.B Hazi and Sons – 1	19	4.3	1.5	13	2006
O.T. Al Hemail	18.9	4.87	1.82	48.45	2003
M.B. Islamia Paribahan	18.9	3.5	1.06	8	2007
M. B. Prince of Shumi-1	18.71	3.65	1.4	10	2008
M.B. Shohan Paribahan	18.6	4.27	1.52	12.31	2008
M.B. Gaowdia	18.29	3.65	0.91	6.19	2009
M.L. Borkot	17.98	4.57	1.78	35.08	1989
Patarhat Paribahan	17.88	3.7	1.3	9	2005
M.L Halim – 2	17.68	8.72	1.37	17.66	2002
M.L. Kourikhara	17.62	4.72	1.68	36.51	1985
M.L.Shipa – 3	17.58	4.55	5.05	49	1991
N.B. Gazi Paribahan	17.18	3.8	1.25	8.32	2009
M.B. A.B.C.	17.15	3.88	1.26	8	2006
M.L. Udayer Aloo	17.13	4.63	1.68	35.45	1985
M.T. Mirmodan	17.06	4.41	2.13	40	1971
M.B. Promod	17	2.9	1.38	9.5	2008
M.B.Gonga Paribahan	16.99	3.37	1.19	Jul-00	2005
M.B. Khaja Gorib-E-Newaz	16.95	5.27	1.61	15	2007
M.B. Bai Boan – 1	16.8	3.15	1.1	6	2005
M.L. Sindabad – 7	16.77	3.96	1.37	9.28	2008
M.L. Sindabad – 5	16.77	3.96	1.37	9.28	2008
M.B. Hasan	16.76	3.2	1.68	11.6	2008
M.L Minoti	16.58	3.5	1.8	25.67	1996
N.B.Zoti	16.46	3	1.25	8.5	2008
M.L. Aleef	16.31	3.44	1.31	16.57	1987
M.B. Ridhoi – 1	16.16	3.35	1.98	10.93	2008
M.B. Abdul Rashid	15.95	2.9	1.4	8	2008
M.B. Karikor – 1	15.62	3.43	1.2	7	2006
M.B. Karikot – 4	15.55	3.45	0.96	6	2006
M.V. Shovon – 2	15.54	8.23	3.5	385	1996
M.L. Lima Express	15.5	4	1.5	26	2001
M.B. Atroshi	15.24	4.57	0.92		2007
M.L. Herashiko	14.98	4.14	1.25	19.04	2003
M.L. Mushfiq -1	14.86	4.32	1.33	25	2003
A.B. Mizan and Sifat Drager	14.8	3.76	0.76	9	2007



<b>Name</b>	<b>L</b>	<b>B</b>	<b>D</b>	<b>Dead Weight</b>	<b>Year</b>
M.B. Zononi – 2	14.64	3.25	1.32	6.41	2007
M.T. Probal	14.56	4.5	1.77	20	1987
M.L. Bono Mrigo	14.47	2.85	1.41	1364	1932
M.L. Bismilla – 2	14.3	3.3	1.09	13.36	1991
M.B. Karikor – 3	14.2	3.1	1.2	6	2006
M.B. Janoni – 1	13.87	3.13	1.22	5.4	2007
M.T. Light – 6	12.5	3.2	1.12	21	2005
M.B. Labony	12.5	2.9	0.85	4	2007
M.L. Millon	12	3.6	1	25	1987
M.B. Karikor – 2	11.96	2.92	0.96	5	2006
M. L. Bahar - 2	10.67	2.44	0.91	6.75	1988
M.V. Tin Vai -1`	8.632	7.92	3.35	275.87	1990
M.V. Shamina Sharmin				245	2005
M.V. Asia – 4					1990
M.V. Mahmood Akter				201.68	1992



**JAMUNA OIL COMPANY LTD****PARTICULARS OF COASTAL/BAY-CROSSING SHALLOW DRAFT TANKERS**

Name of Tanker	As per Registration Certificate				Carrying Capacity (MT)
	Length (m)	Breadth (m)	Depth (m)	Loaded Draft (m)	
Sea Sky-1	62.00 M	10.10 M	5.7 M	4.00 M	1350 (MT)
Pride of Shah Ali	63.80M	10.10 M	5.7 M	4.00 M	1350 (MT)
Precious One	57.24 M	10.00 M	2.50 M	-	700 (MT)
Anchorage	57.24 M	10.00 M	2.50 M	1.80 M	680 (MT)
Chittagong	45.00 M	10.00 M	2.30 M	1.80 M	750 (MT)
Sealink Bijoy	45.00 M	10.00 M	2.30 M	-	650 (MT)
Sonartory	64.55 M	11.00 M	-	4.00 M	1500 (MT)
Tushan	66.20 M	11.00 M	-	4.00 M	1700 (MT)
Latifa	73.80 M	9.8 M	-	3.7 M	1500 (MT)
Sonar Nao	71.13 M	9.52 M	-	4.26 M	1500 (MT)
Jerusalem	73.00 M	10.00 M	-	4.00 M	1600 (MT)
Monowara	64.80 M	10.40 M	-	5.40 M	1600 (MT)
M T Nurjahan-1	63.80M	10.10 M	5.7 M	4.00 M	1350 (MT)
M T Nurjahan-2	63.80M	10.10 M	5.7 M	4.00 M	1350 (MT)
M T Jamuna	60.25 M	10.00 M	4.50 M	4.00	1050(MT)
M T Chandradeep	60.25 M	10.00 M	4.50 M	4.00	1050(MT)

**PADMA OIL COMPANY LTD**  
**PARTICULARS OF COASTAL/BAY-CROSSING SHALLOW DRAFT TANKERS**

Name of Tanker	As per Registration Certificate				Carrying Capacity (MT)
	Length (m)	Breadth (m)	Depth (m)	Loaded Draft (m)	
Al-Quds	65.32 M	10.00 M	4.05 M	4.00 M	1274 (MT)
M T Koel-2	70.06M	11.40M	5.2 M	4.68 M	1835 (MT)
M T Koel	56.00 M	10.00 M	4.25 M	4.00	1172 (MT)
M T Marcentile-11	70.80	12.50	5.50	4.00	2000 (MT)
M T Marcentile-12	70.80	12.50	5.50	4.00	2000 (MT)
M T Marcentile-13	70.80	12.50	5.50	4.00	2000 (MT)
M T Marcentile-14	70.80	12.50	5.50	4.00	2000 (MT)
M T Marcentile-15	70.80	12.50	5.50	4.00	2000 (MT)
M T Sea view-2	63.80 M	10.10 M	5.70	4.00 M	986 (MT)
M T Seagull	47.20 M	8.00 M	3.45	3.28 M	1036 (MT)
Rhine-2	53.75	11.00	2.70	1.80	900
Sagor Nandini-2	53.00	11.00	3.00	2.50	900

**MEGHNA OIL COMPANY LTD**

**PARTICULARS OF COASTAL/BAY-CROSSING SHALLOW DRAFT TANKERS**

Name of Tanker	As per Registration Certificate				Carrying Capacity (MT)
	Length (m)	Breadth (m)	Depth (m)	Loaded Draft (m)	
Portland-1	45.00	10.00	3.30	2.30	700
Sea Power	45.00	10.00	3.60	1.80	700
TR Shah Amanat	47.00	10.00	3.30	1.80	800
Rhine-1	53.75	11.00	2.70	1.80	900
Karim-3	53.00	11.00	2.70	1.70	800
Karim-4	53.00	11.00	2.70	1.70	800
Karim-5	53.00	11.00	2.70	1.70	800
Sagor Nandini-1	53.00	11.00	3.00	2.50	900
Shipper's World-1	53.00	11.00	3.00	2.50	900
Confident-2	49.50	10.00	2.50	2.00	600
Nova-1	53.75	11.00	2.70	1.80	800
Talmah	53.00	11.00	3.00	1.80	900
King Fisher-8	53.00	11.00	3.00	1.80	900
M T Marcentile-19	70.80	12.50	5.50	4.00	2000
M T Marcentile-20	70.80	12.50	5.50	4.00	2000
M T Marcentile-21	70.80	12.50	5.50	4.00	2000
M T Marcentile-22	70.80	12.50	5.50	4.00	2000

**SAOCL**

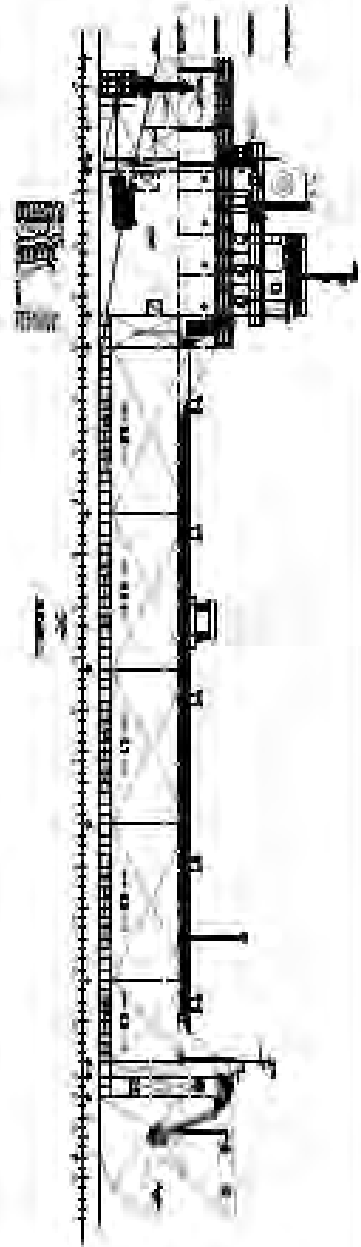
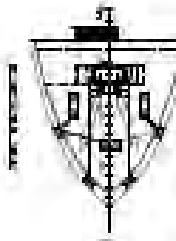
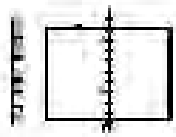
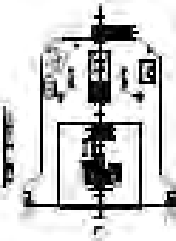
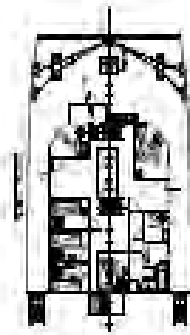
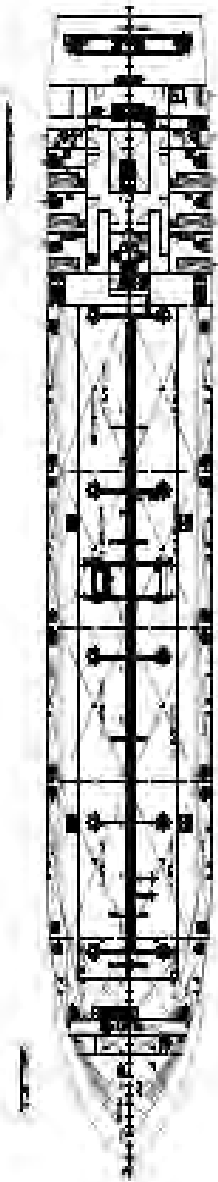
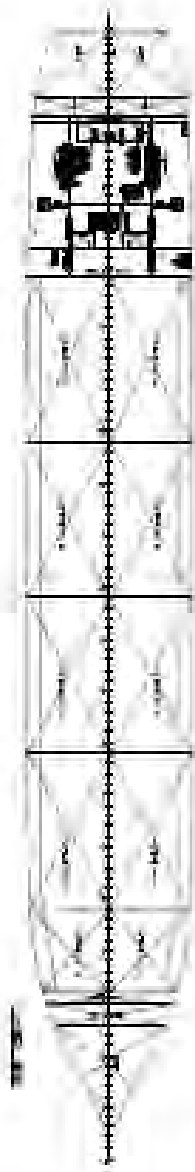
**PARTICULARS OF SHALLOW DRAFT TANKERS**

Name of Tanker	As per Registration Certificate			Carrying Capacity (MT)
	Length (m)	Breadth (m)	Loaded Draft (m)	
O T Shipu	38.40	7.62	3.81	500
O T Moni	32.00	6.86	2.60	300

**TANK CAPACITY OF VARIOUS OIL TANKERS**

Name of Lighter	A/C NO	Cargo Tank Capacity In MT						Total
		P1S1	P2S2	P3S3	P4S4	P5S5	P6S6	
Al-Quds (JETA-1)	74/704	225	340	375	335	-	-	1275
Al-Quds1 (JETA-1)	74/705	300	310	310	330	-	-	1250
Amena-1	74/200	165	260	275	425	365	-	1490
Bitta	74/723	390	505	460	440	-	-	1795
Desh-1	74/186	220	300	345	350	-	-	1215
Doel	74/168	320	515	520	415	-	-	1770
Ebadat	74/703	340	405	425	-	-	-	1170
Ebadee-5	74/721	150	285	225	220	285	-	1165
Fuji Maru	74/731	245	325	325	255	-	-	1150
Javed-1	74/165	430	410	410	-	-	-	1250
Javed-3 (Jeta-1)	74/165	220	270	270	306	300	-	1366
Jerusalem-1	74/200	525	610	570	690	-	-	2395
Karim-6	74/742	380	455	440	-	-	-	1275
Karim-7	74/742	385	450	430	-	-	-	1265
Karim-8	74/742	385	450	435	-	-	-	1270
Koel	74/720	270	325	325	255	-	-	1175
Koel-2	74/720	415	280	450	340	350	-	1835
Makkah-1	74/721	315	380	370	375	340	-	1780
Mayur	74/190	235	335	405	425	345	-	1745
Mayur Pankhi	74/167	40	230	305	300	-	-	875
Mercantile-11	74/747	240	565	570	570	605	-	2550
Mercantile-12	74/736	230	575	550	570	595	-	2520
Mercantile-13	74/745	235	565	570	565	605	-	2540
Mercantile-14	74/737	235	560	565	560	600	-	2520
Mercantile-15	74/746	235	565	570	565	600	-	2535
Moina	74/164	135	410	615	540	360	-	2060

Name of Lighter	A/C NO	Cargo Tank Capacity In MT						Total
		P1S1	P2S2	P3S3	P4S4	P5S5	P6S6	
Pankauri (Jeta-1)	74/189	250	300	325	350	-	-	1225
Pride of S-Jalal	74/730	175	275	350	350	400	-	1550
Rajanigandha-1	74/702	235	320	325	220	-	-	1100
Rhine-2	74/741	375	435	390	-	-	-	1200
Sagor Nandini-2	74/739	265	465	545	-	-	-	1275
Saptadinga-2 (Jeta-1)	74/167	195	395	400	390	-	-	1380
Samia-1	74/721	40	270	325	225	245	320	1425
Samia-2	74/740	260	490	365	395	465	-	1975
Sea-Gull	74/732	195	265	305	265	-	-	1030
Sealink Ananda	74/735	240	325	390	-	-	-	955
Sea View	74/724	285	415	435	325	-	-	1460
Sea-View-2	74/729	140	300	300	245	-	-	985
Sea World-2	74/725	220	220	240	245	240	-	1165
Sejda	74/705	215	455	470	-	-	-	1140
Shankhachill-1	74/181	335	515	520	505	-	-	1875
Shariah	74/705	230	220	195	205	-	-	850
Shyama	74/183	160	230	215	-	-	-	605
T-1049	74/701	190	360	360	-	-	-	910
T-1054	74/708	110	400	400	400	-	-	1310
T-1057	74/711	275	445	435	-	-	-	1155
T-1058	74/722	260	345	345	270	-	-	1220
T-1059	74/716	260	335	335	265	-	-	1195
T-Korangi	74/704	450	400	410	-	-	-	1260
T-Teknaf	74/705	345	345	345	-	-	-	1035
Zafira	74/738	270	475	465	-	-	-	1210
Zarmina	74/738	270	475	465	-	-	-	1210
Nova-2	74/746	-	-	-	-	-	-	-



Technical drawing of a ship's hull showing the internal structure and deck layout. This drawing is oriented horizontally on the page. It provides a detailed view of the hull's internal framework, including the main deck, lower deck, and various structural supports. The drawing is labeled with various components and dimensions.



**LIST OF SAND CARRIER****Category – I of Sand Carrier (L≤30 m)**

Vessel Name	Light Weight	Year of Built	L	B	D
M.B.B.S Enterprise -2	58	2006	30	8.8	2.16
M.B. Rony and Khaled – 4	36.95	2006	30	6.9	1.75
M. B. Shiplu & Immon-1	38.72	2007	30	7.11	1.78
M.B. Zulhas Bepari – 1	49.8	2006	30	7.94	2.05
M.B.Shuvo Nau Paribahan-1	51.38	2006	30	7.3	2.3
M.B. Murad Mithila	46.42	2005	30	7.74	1.96
M.B. Hazi Shomsher Ali – 1	61.44	2008	30	8.23	2.44
M.B. Zoinopuri – 4	42.89	2008	30	6.46	2.17
M.B. Prepshu – 3	40	2006	30	7.16	1.83
M.B. Authi – 1	44.68	2009	30	7.3	2
M.B. Masuma	25	2003	29.988	7.5	2.091
M.V. Khaleque Nou Pari	44.78	2006	29.96	7.32	2
M.B. Nobowat	50.7	2007	29.96	7.9	2.1
M.B. Razon – 1	29.95	2006	29.95	7.5	2.07
M.B.Showan Sagar – 3	51	2006	29.95	7.15	2.23
M.B. Hazi Mortuja Ali	56.53	2007	29.95	8.08	2.29
M.B. Shuborna	34	2004	29.95	6.09	2.1
M.B. Sheikh Farid	27.68	2008	29.93	6.17	1.47
M.B. Taijuttin	33.48	2004	29.93	6.77	1.62
M.B. Roton Enterprise	40	2007	29.93	6.86	1,91
M.B. M.M.Enterprise – 3	37.01	2006	29.92	7.35	1.65
M. B. Hamid Enterprise	46.51	2006	29.9	7.44	2.05
M.B. Hazi Enterprise	43.92	2005	29.9	7.2	2
M.. Roni and Khaled – 3	48.35	2005	29.9	7.55	2.1
M.B. Allah Vorasha – 3	32.34	2006	29.89	6.8	1.56
M.V. Makka Madina	62.05	2006	29.88	8.08	2.52
M.B. Farik Bhuiyan	40.81	2005	29.88	6.71	1.98
M.B. Hazi Layes	73.5	2007	29.88	8.77	2.75
M.V. Zubok – 1	43.2	2007	29.88	7.46	1.9
M.V. Uzzal – 1	40	2003	29.88	8.23	2.13
M.. Ma Babar Doa	48.8	2008	29.88	7.52	2.13
M.B. Chandura	35.57	2005	29.88	5.48	2.13
M.B. Tin Tara – 2	56.68	2007	29.88	8.23	2.26
M.B. Bismillah Navigation – 2	37	2007	29.88	5.94	1.75

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Irteza -1	46	2006	29.87	7.3	2.08
M.B. Khaza Baba Faridpuri	42.71	2007	29.87	7.08	1.98
M.B. King of JJhonki	38.96	2007	29.87	6.09	2.1
M.B.Hira Mukta	55.8	2005	29.86	8	2.29
M.B.Amerat – 2	49.29	2006	29.85	7.8	2.08
M.B. Faria & Shilpi	38.3	2006	29.85	6.8	1.85
M.B. Rahdoy Rima-1	45	2006	29.84	7	2.06
M.B. Humaun – 2	28.43	2009	29.82	6.15	1.52
M.B. Triratna – 2	50	2006	29.81	8	2.2
M.B. Kdanchon – 1	46.73	2006	29.8	7.5	2.05
M.B. Mahbubu – 1	60.57	2006	29.78	8.17	2.44
M.B. Ashraful Ashik	40.5	2006	29.78	6.7	2.13
M.B. Jheleemilee – 1	38.7	2008	29.78	7	1.82
M.B. Prince of Nibur	49.17	2006	29.77	7.99	2.05
M.B. Mayer Ador - 1	33.48	2006	29.77	6.3	1.75
M.B.Zahura, Nau Paribahan-1	46.73	2007	29.75	7.23	2.13
M.B. Dishari – 1	47.43	2006	29.74	7.41	2.11
M.B. Baba Mayer Dan Four Star	33.24	2006	29.73	6.85	1.6
M.B. High Active – 2	40.33	2008	29.72	6.72	1.98
M.B. Ferdous	25	2003	29.72	7.27	2.15
M.B. Apon Tithi Roni	36.83	2006	29.71	7.15	1.7
M.B. Roman -3	41.17	2006	29.71	7.15	1.9
M.B. A.G.S. – 3	41.17	2006	29.71	7.15	1.9
M.B. Sadia Sunjida – 1	45.38	2006	29.71	6.9	2.17
M. B. Noore Mohammadi	48.44	2006	29.7	7.8	2.05
M.B. Bondhon Nau Paribahan – 6	43.71	2004	29.7	7.4	1.95
M.B. Three Brothers Enterprise	39.76	2007	29.7	7.5	0.75
M.B. Amena	51.91	2008	29.7	8.36	2.05
M.B. Taher	47.44	2006	29.7	6.96	2.25
M.B. Nahtaz	38.04	2006	29.68	6.98	1.8
M.B. Hazi Chan Mia	65.61	2009	29.68	8.6	2.52
M.B. Two Friend	41	2006	29.67	6.09	2.22
M.B. D Ohi	43.12	2005	29.65	6.12	2.33
M.B. Sk. Rohan Roli Nau P	47	2006	29.65	7.4	2.1
m.b. D Tanjil – 2	43.12	2005	29.65	6.12	2.33
M.B. Ridowan	43.12	2005	29.65	6.12	2.33
M.B. Torag Enterprise	32.52	2009	29.63	6.81	1.58
M.B. Mujahid Paribahan-1	48.06	2005	29.63	7.95	2
M.B. Rupashi Bangla	45.23	2005	29.62	7.6	1.97

Vessel Name	Light Weight	Year of Built	L	B	D
M.b. Sagor Tori	45.23	2005	29.62	7.6	1.97
M.B. Trisha – 2	42.6	2006	29.6	6.7	2.13
M.B. Mahabuba – 1	26.1	2009	29.59	5.18	1.67
M.B. Tintara – 1	60.5	2007	29.58	8.39	2.39
M.B. Jinnah Alam	40.45	2008	29.57	7.62	1.76
M.B. Two Friends	56.92	2006	29.57	8.54	2.21
M.B. Khokon	38.54	2006	29.57	7.02	1.82
M.B. G.N. Paribahan	25.48	2009	29.57	5.03	1.68
M.B. Mohtadi-2	32	2003	29.55	6.7	2.05
M.B. Green Land – 3	56.29	2005	29.55	7.5	2.49
M.B. M.M. Enterprise – 2	38.5	2006	29.55	7.3	1.75
M.B. Rajmoni	35.85	2007	29.54	7	1.7
M.B. Sukria	23.73	2009	29.52	5.63	1.4
M.B. Nahtaz 4	36.32	2006	29.5	7.1	1.7
M.V.Tamanna Nau Paribahan – 1	44.84	2006	29.5	7.45	2
M.B. Shopnil Enterprise	46.6	2005	29.5	7.14	2.17
M.B. Asheke Rasul – 1	53.73	2008	29.5	8.8	2.21
M.B. T.S.B.	44.87	2005	29.5	7.24	2.06
M.B. Azizul Hakim – 1	43.33	2006	29.5	6	2.4
M.B. Apurupa	36.31	2006	29.49	7.1	1.7
M.B. Blue – Bird	33.32	2007	29.47	7.72	1.65
M.B. Banglar Alo	27.72	2009	29.47	6.23	1.48
M.B. Taher Enterprise-2	39.35	2008	29.45	6.55	2
M.B. Shohan & Alef Khan	49.34	2008	29.45	7.64	2.15
M.B. Two Brother Paribahan	34.46	2006	29.44	6.75	1.7
M.B. Baba Mayer Doa	54.51	2006	29.43	7.93	2.29
M.B. Delower-2	36.22	2006	29.42	7.1	1.7
M. B. Baba Rashid Shah	52.75	2005	29.42	6.95	2.53
M.V. Ibrahim and Ismail	37.34	2006	29.42	7.03	1.77
M.B. Zolloraz Nau Paribahan – 1	52.81	2007	29.42	8	2.2
M.B. Vai Vai Enterprise	36.4	2006	29.42	6.63	1.83
M.B. Prottasa	46.97	2006	29.41	7.6	2.06
M.B. Liza Manam	45	2006	29.4	7.58	2
M.b. Babar Smriti	38.96	2006	29.4	7.14	1.82
M.b. Rayhan Manam	49	2006	29.4	7.7	2.1
M.B. Mohammadi – 2	41	2003	29.4	7.3	2.35
M.B. Mohammadi – 2	41	2003	29.4	7.3	2.35
M.B. Ridwan – 2	40.2	2006	29.4	6.71	2
M.B. Chowrangi Express	35.68	2007	29.4	7	1.7

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Aziz – 1	36.03	2005	29.39	6.46	1.89
M.B. Mashud Alam	35.98	2006	29.39	7.1	1.75
M. B. Nirman	33.73	2006	29.38	6.62	1.7
M.B. Duranto	30.37	2005	29.37	6.54	1.55
M.B. River Shetu – 1	47.62	2005	29.36	7.4	2.15
M.B. Khezir Paribahan	46	2007	29.35	7.64	2.05
M.B. Sonargaon – 4	25	2003	29.34	6.7	2.09
M.B. M.B. Nosib Paribahan	32.87	2007	29.33	7	1.57
M.B. Nadi Bilash – 1	36.43	2006	29.32	6.92	1.76
M.B. G. M. C. Enterprise	37	2006	29.32	7.1	1.7
M.B. R. K. Khan – 3	33.8	2004	29.3	6.8	2.45
M.B. Wazed	4035	2005	29.3	6.75	
M.B. Jhumur	34.04	2008	29.3	5.45	2.09
MB Zafrin	46.5	2005	29.28	7.31	2.13
M. B. Minaz Uddin	30	2003	29.28	5.5	2
M.B. Bismilla Entepriase -2	30	2006	29.27	6	1.68
M. B. Rengun Express	38.79	2006	29.27	6.1	2.13
M. B. Beauty	38.25	2007	29.27	7	1.83
M.B. Zakia Noor	27.85	2008	29.27	6.1	1.53
M. B. Khan Jahania	40.57	2005	29.27	6.86	1.98
M. B. Mayer Smriti	165	2006	29.27	7.75	1.72
M.B. Sagar Shathi	33.08	2006	29.27	5.54	2
M.B. Al Chistia – 2	50.42	2006	29.27	7.93	2.13
M.B. Khan Parobahan – 1	39.94	2006	29.27	7.31	1.83
M.B. Zilani – 2	54.65	2005	29.27	8.1	2.26
M.b. Shane Madina	51.63	2006	29.27	8.08	2.14
M.B. Murad and Samir	24.75	2008	29.27	5.64	1.47
M.B. S. Parvez	43.28	2006	29.27	7.32	1.98
M.B. Al Ameen	57.27	2008	29.27	8.23	2.36
M.B. Iva Nau Paribahan-1	47	2007	29.27	7.32	2.13
M.B. Abir & Shaker	37.2	2006	29.26	6.85	1.82
M.B. Mhedhi Hasan Maushi	36.79	2006	29.26	6.85	1.8
M.B. Ma Khadeza	35.68	2006	29.26	7.16	1.67
M.B. Zahid	45.44	2006	29.26	8.23	1.85
M.B. Sazedul Hoque	47.63	2007	29.26	7	2.28
M.B. Hoque	47.63	2007	29.26	7	2.28
M.B. Gaffrun	37.2	2006	29.26	6.85	1.82
M.B. Abid and Anisha	29.76	2008	29.26	5.48	1.82
M.B. Tonmoy & Ratul N.P	48.75	2008	29.26	7.67	2.13

Vessel Name	Light Weight	Year of Built	L	B	D
M. B. Munim – 1	55	2003	29.25	5.6	2.58
M.B. M.R.	38.06	2004	29.25	7	1.85
M.B. Mukta & Sweety	49	2006	29.24	7.95	2.05
M.B. Desh Bangla	47.41	2004	29.2	7.92	2.01
M.B. Razib & Mashud Khan	46.75	2008	29.2	7.37	2.13
M.B. Konika	41.36	2006	29.2	7.31	1.9
M.B. Ma Babar Doa – 1	49.61	2006	29.19	7.34	2.27
M.B. Taef	52.82	2006	29.18	7.52	2.36
M.B. Zaflong	52.82	2006	29.18	7.52	2.36
M.B. Gazaria – 1	39.93	2004	29.17	6	2.27
M.B. Al Abdullah	20	2003	29.16	7.53	2.13
M.B. Ireen Rahat	25	2003	29.16	7.01	2.13
M.B.Y.M. Nau Paribahan	40.47	2006	29.15	6.84	1.99
M.B Nil Shemana	40.6	2008	29.12	7.47	1.83
M.B. Rumana – 1	38.7	2006	29.11	5.5	2.37
M. B. Allah Varasha – 2	32.6	2006	29.1	6.54	1.68
M.B. Anwar Khan	48.74	2005	29.1	7.01	2.28
M.B. Yeah Hakimo	46.87	2005	29.1	7.4	2.13
M.B. Bagdad	50.89	2005	29.04	7.47	2.3
M.B. Nadia Faisal	42.93	2006	29.04	7.32	1.98
M.B. Hakaloki	46.05	2009	29.02	7.04	2.21
M. V. Zeashan - 1	46.05	2005	29	6.8	2.29
M.B. Mayer Achol	28.36	2008	29	7	1.67
M.B. Allar Dan Fatema	38.55	2007	29	6.86	1.9
M.V. Al-Motin-3	52	2003	29	6.07	2.13
M.B. Zhelon Shuman Rinki	50.8	2003	29	7.01	2.45
M.. Prince of Postogola	55	2003	29	7.01	2.05
M.B. Fahad & Faiz – 1	36.85	2005	29	6.05	2.06
M.B. Ali Nau Paribahan – 2	46.34	2006	29	7.46	2.1
M.B. Juboraj Bonnay	43	2006	29	7	2.08
M.B. Sattar	26.37	2009	28.98	6.07	1.47
M.B. Abdul Hamid	60	2006	28.97	7.75	2.44
M.B. Holy Mother Land	58	2003	28.96	6.71	2.99
M. B. Afsar	31.12	2007	28.96	6.09	1.7
M. B. Noor-e-Kaba	49.55	2005	28.96	7.39	1.27
M.B. J. B. – 1	43	2007	28.96	6.7	1.98
M.B. Mama Vagina - 2	52	2007	28.96	28.23	2.13
M.B. Zibon Tory	48.22	2006	28.96	7.16	2.24
M.B. Mohabbat Ali Gazi-1	36.02	2007	28.96	6.7	1.82

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Vai Vai – 1	43.09	2006	28.96	6.85	2.13
M.B. Ambor Ali Shah-2	57.32	2007	28.96	7.7	2.52
M.B. Z.R.M. Enterprise	43.89	2008	28.96	7.62	1.96
M.B. S. Islam – 1	50.5	2007	28.96	7.32	2,00
M.B. Bhaggocul	40.26	2008	28.96	6.4	2.13
N.B. Real	56.14	2008	28.96	8.3	2.29
M.B. Shopna	23	2008	28.96	4.93	1.58
M.B. Tanjina	22.72	2008	28.96	4.87	1.58
M.B. Hawlader and Shampa	24.32	2008	28.96	5.68	1.45
M.B. Siraj Nau Paribahan	54	2008	28.96	7.96	2.31
M. B. Al Wali	37.63	2006	28.95	7	1.82
M.B. Shawan Shagor-2	41	2003	28.95	7	2
M.B. Rasel Moni	36.61	2006	28.93	7.09	1.75
N.B. Pial Shoikot, Nau Pari.	38.76	2007	28.92	7.3	1.8
M.B. Mou Badhon – 1	27	2005	28.91	6.04	1.52
M.B. Hakim Uddin Dewan	35.74	2006	28.9	7.05	1.72
M. B. Al – Eakone	40.23	2006	28.89	7.46	1.83
M.B. Zajira – 2	36.43	2005	28.88	5.57	2.22
M.B. JolPoddo – 2	36.29	2006	28.88	7	1.76
M. B. Shajib Rayhan	20	2003	28.86	7.42	2.36
M.B. Auliul Alam	45.24	2005	28.85	7.32	2.1
M.B. Mashrafi	54	2008	28.85	7.92	2.31
M. B. M.A. Hossain 01	41	2006	28.84	7.03	1.98
M. B. Mayer Kola	34.2	2007	28.83	6.65	1.75
M.B. Akash	41	2006	28.83	6.9	1.93
M.B. Al Hafiz	49.06	2005	28.82	7.32	2.28
M. B. Fair -1	44.71	2003	28.81	6.98	2.18
M.B. Nisha Moni	44.5	2003	28.81	5.48	2.13
M.B. Shapla – 1	39.65	2008	28.78	7.3	1.85
M.B. Monimukta – 1	38	2007	28.78	7.31	2.13
M.B. R. Rafi – 1	45	2005	28.75	6.18	2.5
M.V. Nabbi	47.36	2006	28.74	7.88	2.05
M.B. Kakon – 1	25	2004	28.73	8.07	1.91
M. B. Hena	51.55	2006	28.73	7.36	2.39
M.B. Rohis Shah	52.85	2006	28.73	8.16	2.21
M.B. Noorjahan	35.73	2007	28.73	6.7	1.82
M.B. Raihan -3	35.53	2006	28.7	7.14	1.7
M.B.A.K. Enterprise	35.86	2007	28.7	7	1.75
M.B. Mithu Rashel – 2	37.19	2005	28.69	7.1	1.79

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Hazrat Shahjalal ®	42.59	2004	28.69	7.35	1.98
M.B. Gram Bangla Nau-Paribahan	44	2006	28.67	7.19	2.08
M.V. Allah Borasha – 3	40	2003	28.66	7.62	2.13
M.V. Allah Vorasha – 2	40	2003	28.66	7.62	2.13
M.B. Shotota Nau Paribahan	48.87	2005	28.66	7.85	2.13
M.B.Anwara – 2	51.81	2006	28.66	8.13	2.18
M.B. Hafsha	38.78	2008	28.66	6.7	1.98
M.B. Anni Anika – 1	42.29	2008	28.65	7.31	1.98
M.B. Shotorupa	25	2007	28.65	5.21	1.82
M.B. Yeah Fattah	36.68	2006	28.65	6.86	1.83
M.B. Mozaddadia	37.62	2006	28.65	6.96	1.85
M.B. Takwa	36	2003	28.65	7	1.85
M.B. Afifa & Juel	34.49	2007	28.64	7.07	1.67
M.B. Shuvo	23.56	2008	28.63	5.56	1.88
M.B. Shayel Shanto-2	39.46	2007	28.6	7.01	1.93
M.B. Zolojan Paribahan	39.9	2005	28.6	7.2	1.9
M.V. Ndahtaz – 3	38.33	2005	28.6	7.3	1.8
M.B. Anis – 1	26.02	2008	28.6	6.07	1.47
M.B. Maria	35	2008	28.6	6.5	1.85
M.B. Mashud	38.04	2008	28.59	7.37	1.77
M.B.Amoon	50	2005	28.59	6.7	2.39
M.B. Anwar Nau Paribahan-1	47.1	2006	28.58	7.55	2.14
M.B. Salma Nadia	30	2003	28.58	5.18	2.05
M.B. Shajib and Shakib	33.41	2007	28.57	6.95	1.65
M. V. Dhumkato – 1	44	2005	28.56	7.75	1.95
M.B. Shumon Shipon – 1	51.47	2006	28.55	7.82	2.26
M.B.Quium Nau Paribahan-5	40.19	2006	28.55	6.9	2
M.B. Abid Mahmood Shuvo	37.67	2006	28.52	7	1.85
M.B. Noor-A-Modina – 1	25	2004	28.52	2.28	2.39
M.B. Akter Enterprise	37.67	2009	28.52	7	1.85
M.B. Kazimuddin	31.66	2006	28.5	6.6	1.65
M. B.Reyen	37.64	2006	28.5	7	1.85
M.B. Islam	30.04	2007	28.5	6.89	1.5
M.B. Nilnod	23.52	2008	28.5	5.66	1.43
M.B. Inshaf	38.35	2006	28.5	7.2	1.83
M.B. Urman - 1	156.21	1989	28.47	7.47	1.95
M.B.Sonia – 1	42	2004	28.46	7.23	2.02
M.B. New Vai Vai Enterprise	35.51	2005	28.45	6.8	1.8
M.B. Tipu – 2	45.92	2006	28.44	7.76	2.04

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Mumu and Mim	26.8	2009	28.44	6.16	1.5
M.B. Tashin	62.2	2006	28.43	7.8	2.75
M.B. Mayer Asherbad – 4	49	2006	28.42	7	2.28
M.B. Queen Sadaf	39.5	2005	28.4	6.63	2.06
M.B. Riyad and Shampa	22.84	2008	28.37	5.64	1.4
M.B. Shonar Tari – 5	44.66	2006	28.36	7.05	2.19
M.B. Malik Varasha	45.35	2006	28.35	7.92	1.98
M.B. Mayer Moni Shanta	33.88	2006	28.35	6.96	1.86
M.B. Isha Noor – 2	43.8	2008	28.35	7.11	1.13
M.B. Romantika – 1	35	2003	28.35	6.71	2.44
M.B. Allahar Dan – 1	33.32	2007	28.35	6.86	1.68
M.B. Al Mahbub – 2	45	2006	28.35	7.32	2.13
M.B. Shompod Nau Paribahan	39.43	2008	28.35	7.14	1.91
M. V. Bismillah-2	47.66	2006	28.34	7.36	2.24
M.B. Mayer Badhon	27.67	2006	28.3	6.86	1.93
M.V. Al Dayan	35	2006	28.3	6.89	1.76
MV. Musa	34.76	2007	28.3	7.3	1.65
M.B. Allah Mohan	34.51	2006	28.3	6.95	1.72
M. B. Al Amin Sikder	48.63	2006	28.28	7.63	2.21
M.B. New Shatota, Nau Pari	40.85	2007	28.28	7.02	1.98
M.B/ Milinium	25	2003	28.28	7.12	2.15
M. B. Modhupur -1	-	2007	28.26	6.85	2.13
M.B. New Amena	25	2003	28.253	7.3	2.12
M.B. Manik – 1	36.12	2008	28.25	5.18	2.42
M.B. Sumon Enterprise	36.74	2009	28.23	6.94	1.83
M. B.R. N.	37.7	2006	28.2	6.9	1.9
M.B. Zalaraj Nau Pari-2	41	2006	28.2	6.9	2.08
M.B. Mayer Smriti – 2	40	2003	28.2	7.31	2.74
M.B. Noor Hasan – 1	25	2003	28.2	7.44	2.01
M.B. Monir Hossain	41.93	2006	28.18	6.85	2.31
M.B. Hanifa Ramzan	50	2007	28.18	7.5	2.3
M.B. Doyal Vorasha – 4	47.74	2009	28.18	7.55	2.2
M. B. Gangchil	40	2007	28.17	6.98	2
M.B. Mayer Achol – 1	34	2006	28.17	6.86	1.72
M.B. M.M. Enterprise – 4	32.87	2007	28.15	7.03	1.06
M.B. Shornotori – 1	37.01	2006	28.15	6.8	1.9
M.B. Sonar Horin – 1	37.01	2006	28.15	6.8	1.9
M.B. Shaheen – 2	44	2007	28.15	6.3	2.4
M.B. Allah Shahi-1	48.51	2005	28.14	7.38	2.29



Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Monir Enterprise	28.57	2008	28.13	6.55	1.52
M.B. Hafizur Rahman – 1	50	2003	28.13	6.5	2.74
M.B. Al- Makka	35.39	2006	28.12	6.76	1.82
M.B. Al Saudia – 1	52	2006	28.1	7.75	2.31
M. V. Hafez – 1	37.64	2006	28.1	7.1	1.85
M.B. Tazrian	50	2006	28.1	7	2.5
M.B. Zahir and Imon Enterp	30.72	2007	28.1	6.7	1.6
M.B. Modina	37.98	2008	28.1	7.05	1.88
M.B. Azizul Hakim – 3	33.71	2006	28.1	5.6	2.1
M.B. Jui	34.54	2005	28.08	6.45	1.87
M.B. Al Mahabub – 3	40.58	2006	28.08	7.23	1.96
M.B. Moon	25.12	2009	28.07	6.5	1.35
M.B. Al Saudia – 2	55	2006	28.05	6.58	2.29
M.B. N.S.	27.67	2006	28.05	6.86	1.93
M. B. Sanu Nau Paribahan	39.7	2006	28.05	7.93	1.75
M.B. Alihi Vorosha	50.39	2007	28.05	8.23	2.14
M.B. Rony Enterprise – 1	41	2005	28.05	6.71	2.14
M.B. Doial	47.62	2006	28.05	8.08	2.06
M.B . JolPoddo – 1	35.25	2006	28.05	7	1.76
M.B. Imon	41.85	2006	28.05	7.7	1.9
M.V. Anni Munni	34.9	2006	28.04	6.78	1.8
M.B. Jannatini Hena	37.1	2007	28.04	6.09	2.13
M.B. Nana Natin	36.43	2006	28.04	7	1.82
M.B. Ibrahim	19.43	2008	28.04	4.72	1.44
M.B. Ma Morium	29.08	2009	28.04	6.09	1.67
M.B. Tania Tahsina	53.4	2007	28.04	7.31	2.65
M.B. Hazrat Ambar Ali Shaha	49.91	2008	28.03	7.46	2.34
M.B. Madinar Pathe	30.6	2005	28.03	6.68	1.61
M.B. Hazi Md. Anar Alli	30	2007	28	6.25	1.68
M.B. Masha Allah	30.81	2006	28	6.58	1.64
M. B. Ramisha	33	2004	28	7.6	2.4
M.B. Ma –Nau Paribahan – 1	38.27	2005	28	6.7	2
M.B. New Abee Jomjom	40	2003	28	7.62	1.98
M.B. Labib	30.63	2006	28	6.5	1.64
M.B. Allahar Rahamater Pepso	38	2006	28	6.73	1.82
M.B. Suborna – 1	43.81	2008	28	6.7	2.29
M. V. Roman Shohagi	40.62	2006	27.97	6.3	2.26
M.B. Bhandari Paribahan	60	2005	27.97	8.48	2.44
M.B. Mayer Achol – 2	35.57	2006	27.95	6.97	1.79

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Bismillah – 3	20	2004	27.95	7.47	2.16
M.B. Swapna Chura	37.6	2007	27.94	7.21	1.83
M.B. R.K.M. Paribahan – 1	41.94	2007	27.94	7.45	1.94
M.B. Roman	41.15	2005	27.93	6.75	2.14
M.B. M.M. Enterprise	28.6	2006	27.92	6.48	1.55
M.B. S.R.	38.1	2007	27.91	7.12	1.88
M.B. Nadim Sadia	29.28	2006	27.9	7	1.5
M. B. Bandhan – 2	43.54	2004	27.9	6.9	7.15
M. B. Bandhan Nau Paribahan-3`	37.31	2004	27.9	6.6	6.9
M.B. Bismilla Paribahan	43.43	2007	27.9	7.41	2.06
M.B. Shoukhin	37.05	2008	27.9	7	1.86
M.B. Bepari – 1	38.79	2005	27.9	6.4	2.13
M.B. Shobebarat – 2	44.19	2008	27.89	6.14	2.53
M. B. Sagar Robin – 4	35.38	2004	27.84	6.77	1.84
M.B. Al-Akib	39.49	2006	27.84	6.1	2.28
M.V. Al-Mozadded	44	2006	27.82	7.05	2.11
M.B. Siam – 1	39.09	2006	27.82	7.1	1.94
M.B. Akhi Rubel Paribahan	37.3	2008	27.8	7.11	1.85
M. B. Rasul Khema	29.54	2006	27.8	6.13	1.7
M.B. Apon and Swapan	32.28	2009	27.8	6.9	1.65
M.B. Alam	23.17	2009	27.79	5.45	1.5
M.B. Alam	23.17	2009	27.79	5.45	1.5
M.B. Milton	44.72	2006	27.75	6.84	2.31
M. V. Pias	39.92	2006	27.75	6.88	2.05
M. B. Imtiaz	39.92	2006	27.75	6.88	2.05
M.V. Jihad Jilan	39.21	2006	27.75	7	1.98
M.B. Boshir	49.61	2007	27.75	8.23	2.13
M.B. Ima Dolon	35	2003	27.75	6.4	1.85
M.B. Sadia Enterprise	26	2009	27.75	5.5	1.67
M.B. Issanoor -1	45.5	2008	27.74	5.89	2.13
M.B. Prince of Rubel	28	2007	27.74	5.97	1.89
M.V. Shugondha	40.22	2006	27.74	7.18	1.98
M. B. Japan Express`	37.53	2006	27.74	6.7	1.98
M.B. Faugia Islam – 4	50	2008	27.74	7.31	2.4
M.B. Alfi Islam	38	2003	27.74	7.6	2.28
M.B. Anabil	37.09	2006	27.74	6.9	1.9
M.B. Samiha – 3	40.9	2005	27.74	7.05	2.05
M.B. Prince of Mama Vagina	29.34	2008	27.74	6.21	1.67
M.B. Oishi Zomir, Nau Parib.	41.73	2006	27.74	4.27	2.06

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Talukder Express	28	2007	27.74	6	1.61
M.V. Babar Doya Enterprise	37.56	2006	27.74	7.1	1.87
M.B. Hakkani – 1	48.51	2006	27.72	7.98	2.15
M.B. Allahar Dewa Newamat	34.58	2008	27.7	6.8	1.8
M.B. Tri – Ratna	30	2003	27.67	7.68	2.13
M.B. Molla – 4	33.47	2008	27.66	6.78	1.75
M. V. Altafunnessa	36.3	2006	27.65	6.5	1.98
M. B. Gulay Amena	36.3	2006	27.65	6.5	1.98
M.B. Hazi Alauddin – 2	33.27	2006	27.65	6.86	1.72
M.B. Ameer Hamza	30	2008	27.65	6.07	1.7
M.B. Bismillah – 8	33.92	2006	27.64	6.4	1.88
M.B. Insha Allah	29.72	2007	27.6	6.6	1.6
M.B. Fouzia Islam-2	36.65	2004	27.59	6.1	2.135
A.B. G. S. – 7	35.65	2007	27.59	7.24	1.75
M.B. Sanaullah	28.97	2007	27.56	6.65	1.55
M. B. S. Haque	41	2005	27.55	24.4	7.08
M.B. Taher Sarder	27	2006	27.55	4.9	1.95
M.B. Kaynat – 1	37	2005	27.55	6.31	1.79
M.B. Kaynat	25	2003	27.55	6.31	2.9
M.B. Kaif – 2	38.01	2006	27.52	6.84	1.98
M.B. Kanon – 1	25	2003	27.51	7.96	2.27
M.B. Kishore Nau Paribahan	36.32	2004	27.5	6.7	7
M.B. K. R. S.	34.2	2005	27.5	6.7	1.82
M.B. Shazer Maya	27.28	2008	27.5	5.79	1.68
M.B. Three S. Paribahan	36.91	2006	27.5	7	1.88
M.B. Bismillah – 3	36.69	2005	27.5	6.23	2.1
M.B. Sento Enterprise	41.96	2005	27.5	6.8	2.2
M.B. Mojid Bhuiya	38.99	2006	27.5	7.02	1.98
M.B. Khaza Faridpuri	36.68	2006	27.45	7.16	1.83
M.V. Pinaq – 1	55	2003	27.44	6.7	2.44
M.B. Allah Meherban – 3	29.44	2005	27.44	6.3	1.67
M.B. Omar Faruque	41.75	2005	27.44	7.01	2.13
M.B. Badhon – 1	40	2003	27.44	7	2.14
M.B. Shitalakha	24.62	2006	27.43	4.79	1.52
M.B. Allahar Rahmat-2	30.92	2007	27.43	6.28	1.76
M. B. Sabiha and Faisal	25.98	2007	27.43	6.03	1.54
M. B. Habibur Rahman	37.67	2006	27.43	6.8	1.98
M.V. Shapna Bilash Paribahan	27.36	2007	27.43	6.31	1.55
M. B. Lutfa	35.61	2007	27.43	6.7	1.9

Vessel Name	Light Weight	Year of Built	L	B	D
M.B.Alvi	34	2007	27.43	6.7	1.82
M.B. Doyal Vorasha	33.37	2007	27.43	6.7	1.78
M.B. S.K. Enterprise – 2	28.39	2008	27.43	5.97	1.7
M.B. Rownak	42.96	2005	27.4	6.1	2.52
M.B. Sinthia	26.83	2007	27.4	6.4	1.5
M.B. Shamsu Mia Nau Paribahan	46.59	2009	27.4	7.55	2.2
M.B.Mitu Meghla	32.8	2007	27.38	6.71	1.75
M.B. Shoeb and Brothers -2	44.42	2005	27.36	6.68	2.32
M.B. Babuloo Bappi	42.85	2005	27.35	6.65	2.31
M.B. Jalil Mia	41.88	2007	27.35	7.15	2.1
M.B. Rahman Ullah	19.8	2009	27.32	5.64	1.26
M.B. Allaho Meherban	30	2007	27.3	4.8	2.34
M.B. M. Kamal	36.75	2007	27.3	5.5	2.4
M.B. Nipa & Sobuz – 1	37	2006	27.3	7	1.91
M.B. Hazi Azad Mia	41.16	2006	27.3	7.56	2.05
M.B. Shabbir – 2	32	2003	27.28	7.02	1.98
M.B. Shahid – 1	30	2003	27.28	7.02	1.98
M.V. Shujon Paribahan	31.49	2005	27.25	6.09	1.82
M.B. Yeah Rahman	40.83	2008	27.25	5.65	2.6
M.B. Bismillah – 1	40.83	2008	27.25	5.65	2.6
M.B. Banoripara – 1	8108	2004	27.22	5.74	2.41
M. V. Shumon – 1	38.45	2005	27.21	5.49	2.13
M.B. Tree Ratna 1	45	2006	27.2	7.25	2
M. B. Noor-e-Madina	35.83	2004	27.19	7.06	1.83
M.B. Rayhan & Tanjim	36.73	2006	27.15	6.8	1.9
M.B. Nurul Ameen	30.97	2006	27.15	6.99	1.6
M.B. Shamrat	26.64	2006	27.14	6.21	1.55
M. B. Hasimpur	35.25	2008	27.13	7	1.82
M.B. Gauchia	29.36	2006	27.13	5.82	1.75
M.B. Mashallah	40	2003	27.13	6.86	2.6
M.B. Alif – 1	33.74	2006	27.13	6.7	1.82
M.B. Suriya and Sumaiya	35.68	2006	27.13	6.86	1.88
M.B. Shifat Makka	33.74	2006	27.13	6.7	1.82
M.B. Jobal – E – Noor	31.18	2009	27.13	6.55	1.72
M. B. Mimuna – 3	25	2003	27.09	6.32	2.22
M.B. Mithu – 3	39.09	2005	27.09	6.8	2.02
M. B.Sony	32.06	2005	27.08	6.71	1.73
M. B.New Shatota	28.9	2008	27.06	5.72	1.83
M.B. Bismillah	32.52	2007	27.06	6.93	1.7

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Rayhan– 1	29.62	2006	27.05	6.6	1.6
M.B. Zaman Enterprise	18.88	2009	27.03	5.27	1.3
M.B. Shonarga Janani	39.38	2004	27	7.06	2.04
M. B. Al Madina	39	2006	27	7.16	1.98
M.B. Allahhu Akbar	28.69	2007	27	6.24	1.67
M.B Fauzia Islam – 3	40.48	2005	27	7	2.1
M.B. Fahim Paribahan	28	2008	27	5.52	1.8
M.B. Molla – 3	24.78	2007	27	5.92	1.52
M.B. Al Faruque – 1	32.76	2004	26.99	6.33	1.88
M. B. Almadina-2	41.75	2007	26.98	6.96	2.18
M.V. Hazi Hazrat Ali	31	2006	26.98	6.55	1.72
M.B. Islamia – 2	37.32	2007	26.97	6.75	2.01
M.B. Sarmin – 2	39.91	2006	26.92	6.84	2.13
M.B. Modina Nowparabahan – 1	34.77	2008	26.9	6.4	1.98
M.B. Sk. Farid – 3	29.37	2008	26.83	5.56	1.93
M.B. Noor-A-Zannat – 2	39.05	2005	26.83	6.7	2.13
M.B. Showan Sagar – 1	35	2006	26.83	6.3	2.05
M.B. Allar Dan	37.39	2005	26.83	6.9	1.98
M.V. Uzzal – 2	40	2003	26.83	7.01	1.83
M.B. Mayer Doa	40.26	2006	26.83	7.43	1.98
M.B. Star	20	1987	26.82	5.48	1.64
M.B. Causar Khan	20	2007	26.82	5.48	1.64
M.B. Al – Momin – 2	33.35	2008	26.82	6.7	1.82
M. B. Mithila Enterprise	-	2008	26.8	7.01	1.83
M.B. Ma Nau Paribahan – 2	33.76	2006	26.8	6.5	1.9
M.B. A.G. S- 2	39	2005	26.8	6.47	2.21
M.B. Bismillah Enterprise	44.2	2007	26.8	6.94	2.33
M.B. Rina	39.45	2008	26.8	7.4	1.95
M.B. Mayer Doa – 1	34.46	2007	26.76	6.9	1.83
M.B. Titoli	30	2003	26.75	5.49	1.98
M.B. Muzahid – 2	34.48	2006	26.72	7.23	1.75
M.B. Shakil – 3	37.4	2005	26.68	6.94	1.98
M. B. Zeba	36.69	2006	26.64	6.96	1.95
M.B. Fahad & Faiz – 2	50	2004	26.62	7.01	2.13
M.B. Rahoo Rana	36.59	2008	26.6	7.06	1.91
M.B. Reshma Nau Paribahan	33	2006	26.6	6.4	1.9
M.B. Amirat	25	2003	26.6	6.78	2.19
M.B. Razu Enterprise	25.84	2007	26.6	6.35	1.5
M.B. Shirina	30.7	2006	26.55	6.67	1.7

Vessel Name	Light Weight	Year of Built	L	B	D
M.B.Vai Vai Nau Paribahan	47.07	2007	26.53	7.63	2.28
M.B. Rubel	39.38	2007	26.53	6.8	2.15
M.V. Mokhtadir – 1	30	2003	26.52	6.85	2.28
M.B. Bazar Chartola	45.96	2007	26.52	7.62	2.23
M.B. S.M. Paribahan	32.51	2006	26.5	6.5	1.85
M.B. Saiful Islam	26.81	2006	26.5	6.4	1.55
M.B. Rasel	33.99	2005	26.5	6.45	1.93
M.B. Mayer Tori – 1	36.47	2006	26.5	7.1	1.9
M.B. Mayer Tori – 2	36.47	2006	26.5	7.1	1.9
M.B. Al Shojib – 1	22.9	2008	26.5	5.65	1.5
M.B. Fahem – 1	25	2003	26.472	6.68	1.91
M. B. Abdur Razzak – 1	36.45	2007	26.42	7.1	1.93
M.B. Emon – 1	26.61	2007	26.4	6.59	1.5
M.B. Hazrat Shah Paran	32.84	2004	26.39	6.08	2
M.B. Shahjalal Morshed Paribahan	32.73	2008	26.37	6.76	1.8
M. B. Al Hamdulillah	33.81	2004	26.33	6.88	1.83
M.B. Sobhan Allah	35.33	2004	26.3	6.86	1.92
M.V. Ema – 2	20	2003	26.29	6.71	2.1
M.B. Mohiuddin Enterprise	35.42	2004	26.29	6.62	1.99
M.B. Liton Express	30.91	2005	26.27	6.33	1.78
M.B. Hanif Eterprise -1	25	2003	26.23	6.41	1.81
M.B. Rafit Hasan	20	2004	26.22	6.32	2
M. B. Mohammadia Enterprise	32.89	2005	26.22	6.7	1.83
M.B. Mehedi Mim	32.83	2005	26.22	5.48	2.24
M.B. Trisha – 1	34.75	2006	26.22	6.1	2.13
M.B.S.R. Nau Paribahan	39	2007	26.22	6.71	1.98
M.B. Mim	38	2006	26.21	6.92	2.01
M.B. Kodom Roshul - 1	22	2007	26.21	4.4	2.01
M.B. Gori of Sundarban	22	2006	26.21	5.06	1.7
M.B. Samiha – 2	30.72	2005	26.2	6.05	1.9
M.B. Tohin Nahid	40	2006	26.16	7.24	2.05
M.B. Hazi Abdur Razzak	35.84	2006	26.14	7.02	1.91
M.B. Shahporan	35.24	2006	26.13	6.45	2.05
M.B. Hazrat Shahjalal	36.86	2006	26.1	7.1	1.95
M.B. Nurur Aloo	39.94	2006	26.07	6.56	2.29
M. B. Gausel Azam Gause Pak	22.03	2006	26.06	5.56	1.45
M.V. S. S. Ma Babar Doa	34.41	2007	26.06	6.64	1.9
M.B. Raquib and Ratul	34.89	2006	26.05	6.91	1.9
M.B. M. Saiful	40	2006	26.05	7	2.13

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Pial Shoikot Nau Parib.	33.05	2007	26.04	6.55	1.9
M.B. Ershad	20	2003	26.01	6.56	1.7
M. B.Akter Hossain	32.56	2008	26	6.71	1.83
M.B. Vai Vai – 15	27.85	2007	26	6	1.75
M.B. Rahim	22.55	2006	26	5	2
M.B. Ma Enterprise	35	2009	26	6.63	2
M.B.Al Shojib – 2	21.87	2008	26	5	1.65
M.B.Al Shojib – 3	23.37	2008	26	5.65	1.65
M. B. Habib Shabuj	33.9	2005	25.99	7.01	1.8
M.B. Kazi	20	2003	25.98	6.62	1.89
M.B. Md. Ahmad Bagdadi	36.02	2006	25.98	6.97	1.95
M.B. Roman – 2	39.45	2006	25.94	7	2.13
M.B. Baba Mar Doa	30.85	2006	25.94	7.1	1.83
M.B. Bismilla	30.47	2007	25.92	5.41	2.13
M. L. Bismillah Express-3	35.26	2005	25.92	5.25	2.44
M.B. Tabaschum	34.35	2005	25.92	6.1	2.13
M.B. Al Aksha – 3	37.9	2006	25.92	6.4	2.24
M.B. Nore Borak	39.4	2005	25.91	7	2.13
M. B. Shafin Enterprise	31.21	2007	25.91	7.62	1.55
M.B. Al Madina	20	2008	25.91	4.87	1.82
M.B. Iren Pervez	40.37	2006	25.91	6.7	2.28
M.V. Prince of Motijheel	34.33	2006	25.91	6.1	2.13
M.B. Al Madina – 1	38.16	2007	25.91	6.78	2.13
M.B. Kobita	19.94	2008	25.91	4.87	1.55
M.V. Arief	19.32	2008	25.9	5.54	1.32
M.V. Arif	19.32	2008	25.9	5.54	1.32
M.B. Darus Salam	45	2006	25.9	6.45	2.53
M. B. Ma Paribahan – 5	29.92	2005	25.88	6.55	1.73
M.B. Mozammel	20	2003	25.85	6.64	2.02
M. B. Mimuna – 2	25	2003	25.83	5.8	2.05
M.B. Royel	20	2003	25.8	6.48	1.94
M.B. Alea	37	2005	25.76	6.4	2.2
M.B. Arafat	20	2003	25.74	6.46	2.1
M. B. Shanta Trisna	25	2003	25.72	5.68	1.6
M.B. New Five Star	37.98	2006	25.71	6.93	2.09
M.B. Vai Bon	37.25	2006	25.7	6.64	2.15
N.B. Mama Bhagina Anter-1	27.64	2006	25.67	6.4	1.65
M.B. Bipul Shampa Enterprise-1	27.64	2005	25.67	6.4	1.65
M.B. Ruma and Noortaz-2	29.44	2004	25.64	6.32	1.81

Vessel Name	Light Weight	Year of Built	L	B	D
M. B. Yeasin	20	2006	25.61	6.1	1.22
M.B. Mosta Mia Nau Paribahan		2006	25.61	7.07	1.92
M.B. Rupjhelik – 1	34.7	2006	25.61	6.71	1.98
M.B. Rupjhelik – 2	34.7	2006	25.61	6.71	1.98
M.B. Rupjhelik – 3	34.7	2006	25.61	6.71	1.98
M.B. Rupjhelik – 4		2006	25.61	6.71	1.98
M. B. Beauty of Banari Para	35	2005	25.6	5.8	2.28
M.B. Rokeya	31.84	2007	25.6	6.7	1.82
M.B. Tin Konnay	40	2006	25.6	7.32	2.1
M.B. Razib Sumaiya	17.8	2005	25.6	4.87	1.4
M. V. Perveen Express	17	2004	25.58	6.94	1.63
M.B. Tonni	33.7	2005	25.55	6.53	1.98
N.V. Mayer Smriti	4	2007	25.53	5.53	1.9
M.B. Shahkur – 1	42	2004	25.47	6.67	2.18
M.B. Four Star	28	2005	25.46	6.15	1.75
M.B. Chacha Bhatija N.P-1	33.31	2007	25.46	7.01	1.83
M.B. Mayer Achol	28.8	2007	25.43	6	1.85
M.B. Ima – 1	36.27	2006	25.4	7	2
M.B. Tarek Imtiaz	30	2008	25.39	6.33	1.99
M.B. Bondhon Nau Pariba.-4	29	2006	25.35	6	1.9
M.B. Ishita and Shampa – 1	18.41	2009	25.32	5.66	1.26
M. B. Maria Nayan Pradhan-1	25.73	2005	25.3	5.48	1.82
M.B. Shuchona Enterprise	30.22	2006	25.3	6.4	1.83
M.B. Nesar Nirob	17	2008	25.3	5.18	1.21
M.B.Quium Nau Paribahan-1	28.17	2006	25.3	5.9	1.85
M.B. Ishita and Shampa – 2	19.02	2009	25.3	5.38	1.37
M.B. Alif Mim	24.51	2008	25.3	6.25	1.52
M.B. Yea Gaffar	94.92	2006	25.25	6.15	1.95
M.B. Dada Bhai	36.16	2006	25.25	7.02	2
M. B. Shamiul	28	2008	25.23	5.11	2.13
M.B. Fatema – 1	35	2003	25.22	5.48	1.9
M. B. New Shovessa	18	2003	25.22	6	1.6
M.B. Nina – 1	28.14	2007	25.2	5.15	1.84
M.B. Sonar Tori	25	2006	25.18	5.03	1.95
M.B. Shahjalal Shahparan	12	2008	25.18	4.27	0.91
M. B. Shafin	37.09	2004	25.16	6.85	2.11
M.B. Mayer Toa Ayenta -1	28.63	2006	25.15	6.1	1.83
M.B. Arith	19.82	2008	25.15	5.64	1.37
M.B. Mim and Showan	31	2005	25.12	6.22	1.95



Vessel Name	Light Weight	Year of Built	L	B	D
M. B.Shobhan Paribahan	24.72	2005	25.11	5.96	1.62
M.B.Shondhi Nau Paribahan	25.35	2005	25.1	6	1.65
M.B. Vai Vai	30.11	2005	25.05	6.37	1.85
M.V. Mishu Shomon-2	30	2005	25	5.8	2
M.B. Mishu Shoman-1	30	2003	25	5.8	2
M. B. Al Matin - 4	35.24	2007	25	6.7	2.06
M.B. Tamim	32.06	2005	25	6	2.13
M.B. Karim Mahasin- 2		2006	25	5.48	1.76
M.B. Al Madina	20	2008	25	5.48	1.43
M.B. Kazi Enterprise	30.15	2007	25	6.65	1.8
M.B. Juel Enterprise	34.63	2006	25	7	1.94
M.B. Prince of Polash	32	2004	25	5.2	2
M.B. Zisan	24.25	2006	24.95	6.15	1.55
M.B. Liza	31.84	2004	24.94	6.73	1.86
M.B. Bismillah – 2	25	2003	24.94	5.91	2
M.B. Zilani	15	2008	24.93	5.03	1.21
M.B. Shafi Nau Trans.	16.72	2007	24.92	4.57	1.44
M.B. Al Momin	31.93	2005	24.85	6.3	2
M.B. Janata Paribahan	25	2007	24.82	5.15	1.85
M.B. Hazi Jalal – 3	59.8	2007	24.77	7.55	2.83
M.B. Zaved	39	2005	24.75	6.08	2.54
M.B. Nil Timi- 1	31.68	2005	24.71	6.1	2.06
M.B. Hazi Samad Nau Pa.	27.99	2005	24.71	6.17	1.8
M.B. Nurul Ameen	27.9	2008	24.7	6.05	1.83
M.B. Makka Madina	31.16	2007	24.69	6.25	1.98
M.B. Aikha – 2	27.36	2007	24.69	6.14	1.77
M.B. Shugondha	27	2007	24.67	5.08	2.14
M.B. Maria	57.1	2005	24.65	7.7	2.23
M.B. Loveloo Nau Paribahan – 2	28.71	2009	24.61	6.15	1.86
M.B. Mama Vagina Enter	24.12	2008	24.6	6.2	1.55
M.B. Allahar Dan – 1	14	2008	24.6	4.57	1.2
M.B. Mondinar Alo	38.92	2005	24.58	6.55	2.37
M.B. Shegufa – 1	29.77	2004	24.57	6.06	1.96
M.B. Aligance	29.12	2006	24.56	6.35	1.83
M.B. Mir Sakib Enterprise	30.69	2005	24.56	6.62	1.85
M.B. Al Ameen – 2	25.79	2006	24.54	6.17	1.67
M.B. Bicrompur Enterprise	31.6	2007	24.53	6.38	1.98
M. B. M. F. Rahman	20	2002	24.5	6.3	2.18
M.B. Hafizur Rahman – 2	35	2003	24.5	4.88	2.15

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Rony Enterprise – 2	29	2007	24.5	6.45	1.8
M. B. Gias Uddin	25.29	2005	24.47	5.59	1.75
M.B.Quium Nau Paribahan-3	25.02	2006	24.45	5.8	1.73
M.B. Sheikh Paribahan	20	2003	24.43	6.32	1.99
M.B. Shova Nau Paribahan	26.42	2005	24.42	5.82	1.83
M. B. Mizanoor Rahman	33	2006	24.4	6.63	2
M. V. Friendship	30.36	2005	24.4	6.9	2
M.B. S.K. Roni	30.26	2005	24.4	6.4	1.9
M.B. Mama Bhagna	34.48	2006	24.39	7	1.98
M. B. Banshi – 2	31.52	2005	24.39	6.4	1.98
M.B. Pavel – 1	27.57	2006	24.39	6.09	1.82
M.B. Hazi Enterprise	26.56	2005	24.39	6.1	1.75
M.B. Bismilla – 15	25.3	2008	24.39	4.26	1.67
M.B. Saddam Brothers	26.56	2005	24.39	6.1	1.75
M.B. Zahirul Islam	16. 25	2008	24.39	4.27	1.53
M.B. Prince of Asha	23	2008	24.39	4.87	1.82
M.b. Ma Fatema	27	2008	24.39	6.1	1.75
M.B. Mayer Achol	9	2008	24.39	3.84	0.94
M.. Salman	32.05	2005	24.39	6.05	2.13
M.B. Ripa and Riyad	25.39	2008	24.39	5.64	1.81
M.B. Baba Shah Ali – 1	27.27	2005	24.31	6.12	1.83
M.B. Ma Amena	30	2005	24.3	6.1	2
M.V. Shamudra Shoikot	28.1	2005	24.3	6.3	1.8
M.B. Delwar		2005	24.3	6.2	1.9
M.B. Sakaler Suzzo	29.68	2007	24.29	5.65	2.12
M.B. Faisal Rayhan	26.04	2004	24.27	5.88	1.82
M.B. Shah Amanat	29.93	2007	24.25	5.5	2.2
M.B. Sheikh Yousuf – 2	12.56	2008	24.24	4.42	1.15
M.B. Samiha – 1	27.29	2005	24.16	6.15	1.8
M.B.Rashel Rifat	25.5	2007	24.16	5.83	1.7
M.B. Kanon – 2	20	2003	24.16	6.4	2.16
M.B. Mayer Khushi	20.25	2006	24.16	5.48	1.5
M. B. Rabeya	16	2007	24.15	5.2	1.2
M.B. Mithu	15	2007	24.15	4.2	1.4
M.B. Ashrafal	20.61	2006	24.14	5.98	1.4
M.B. Joya – 1	30.17	2008	24.14	6.35	1.93
M.B. Al Bahrain	23.95	2005	24.09	5.8	1.68
M.B. Shuma	28.88	2008	24.08	5.95	1.98
M.B. Hafizul	29.68	2006	24.08	5.81	2.08

Vessel Name	Light Weight	Year of Built	L	B	D
M.V. Vai Boon	25.8	2008	24.05	6.7	1.57
M.B. Zarraf – 2	27.14	2005	24.03	6.05	1.83
M.B.Shuchona Enterprise 1	14.11	2008	24	4.97	1.16
M. B. Asif Sagor	40	2003	24	6.4	2.1
M.B. Asia	17	2004	24	4.88	1.98
M.B.Rabbi – 4	25	2007	24	5.9	1.7
M.B. Molla – 2	23.81	2007	24	6.4	1.52
M.B. Tipu	35	2004	24	7.09	1.83
M.B. Nadia Shumaiya – 1	34	2004	24	7.01	1.83
M.B. Khalur Rahman	29.31	2006	24	6.3	1.9
M.b. Zarin Tasnim	36.14	2006	24	5.54	2.6
M.B. Al Jazira	28	2004	23.99	6.4	1.8
M.B. Mama Bhagna	31	2004	23.99	6.4	1.8
M.B. Allah Shohai – 1	38	2004	23.99	8.5	1.8
M.B. Nadia Shumaiya – 2	26	2004	23.99	6.71	1.8
M. B. Ratool	46.44	2006	23.98	7.85	2.36
M.B. Ashfaqur	65	2004	23.98	5.55	2.4
M.B. Tamzid	30	2004	23.98	5.6	2.27
M.B. Zobair	35	2004	23.96	6.7	2.29
M.B. Queen of Zoti	70	2003	23.96	5.6	2.04
M.B. Dada Vai – 1	17	2007	23.96	4.57	1.52
M.B. Ash Sakir	50	2003	23.96	6.7	1.6
M.B. Hahar – 3	30	2004	23.96	5.7	2.33
M.B. Bahar	30	2004	23.96	6.5	2.5
M.B. Chacha Vatija	20	2003	23.96	5.48	1.84
M. B. Al- Shifa	25	2004	23.95	6.4	1.57
M.B. Shagor Express	26	2004	23.95	5.8	1.67
M.B. Nadia Zohir	35	2003	23.95	6.1	1.9
M.B. Surovi	18	2008	23.94	4.84	1.51
M. B.Aurbit	22.85	2005	23.9	4.73	1.98
M.B. Nipun	30	2006	23.9	5.5	2.2
M.B. Hazi Shahid Mia	29.42	2006	23.88	6.6	1.83
M.B. Shamim Shohel	20	2003	23.87	6.28	1.96
M. B.Mariom Jhorna	19.23	2006	23.78	5.18	1.53
M. B. Allahoo	20.33	2007	23.78	4.58	1.63
M.B. Mohib Rayhan	19.89	2006	23.78	4.88	1.88
M.B. Al Hasan	11	2008	23.78	3.96	1.25
M.B. Sumaiya	17	2008	23.78	4.84	1.52
M.V. Jhorna	28.58	2006	23.78	5.95	1.98

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Allah Meherban	20	2007	23.78	5.49	1.52
M.B. Insaf	27.1	2007	23.78	6.14	1.82
M.B. Allahar Koruna	10	2008	23.78	4.57	1.39
M.B. Baby Enterprise	30	2007	23.78	6.09	1.98
M.B. Bongo Raj	23	2007	23.78	5.79	1.82
M.kv. Five Star Jononi	25	2006	23.78	5.03	2.3
M.B. Cornofully – 2	31	2003	23.75	6.3	1.8
M.B. Hossain Ali Enterprise	21.7	2007	23.75	5.6	1.6
M.B. Dorodi Nau Paribahan	24.18	2006	23.71	5.95	1.68
M.B. Sultana Enterprise	20	2003	23.71	6.03	1.85
M.B.Authi – 2	32	2004	23.7	5.85	1.85
M.B. Fahem	22.18	2006	23.67	6.47	1.42
O.T. Al- Mustofa	50.08	2002	23.6	4.8	2.13
M.B. Masum	28.17	2005	23.55	6.1	1.93
M.B. Vai Vai	15.65	2008	23.48	4.27	1.53
M.B. Vai Vai	15.65	2008	23.48	4.1756	1.53
M.B. Mifta	27.14	2008	23.48	5.5	2.06
M.B. Mim & Mahim	30.95	2008	23.48	5.5	2.35
M.B. Zesmin	20.12	2008	23.48	5.49	1.53
M.B. Shakib	15.64	2008	23.48	4.27	1.53
M.B. Baba Mar Doa	20.11	2008	23.48	5.49	1.53
M.V. Prince of Raquib	30	2008	23.47	5.48	2.28
M.B. Rustom & Hasan – 1	26.02	2005	23.47	5.94	1.83
M.B. Farida Enterprise – 4	26.02	2005	23.47	5.94	1.83
N.B. Hasan Hossain	16	2007	23.47	4.6	1.52
M.B. Suad and Sayed – 1	26.77	2008	23.45	6.15	1.82
M.B.Shornali Express	24	2003	23.44	5.64	1.89
M.B. Sonia Paribahan	10.76	2009	23.42	4.21	1.07
M.B. Auni & Roja Moni	26.2	2005	23.4	6.1	1.8
M.B. Shahed Ali	27.73	2006	23.32	6.55	1.78
M.B. Al Borak	27	2006	23.27	6.1	1.8
M.B. Rahima	10.69	2008	23.27	4.21	1.07
M.B. Momen Mehedi	10.69	2008	23.27	4.21	1.07
M.B. Momen Mehedi – 2	10.69	2008	23.27	4.21	1.07
M.B. Hasina and Rizon – 1	10.69	2009	23.27	4.21	1.07
M.B. Ritu Bornali	52.21	2006	23.23	7.82	1.97
M. B.Newfacific – 2	20	2004	23.17	5.5	1.83
M. B. Hazi Chan Mia	25	2007	23.17	5.48	2.05
M.B. Telu Khan	19.38	2006	23.17	4.88	1.68

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Sundor Ban	25.6	2006	23.17	5.95	1.82
M.B. Makka Paribahan	15	2009	23.17	4.88	1.37
M.B. Nowshad	31.66	2006	23.13	6.1	2.2
M.B. Rustom – 1	25	2003	23.08	6.37	2.14
M.B. Bismilla – 4	20	2003	23.03	5.7	1.93
M.B. Momen Bhuiyan	27.22	2005	23.02	6.1	1.9
M.B. Aminuddin	11.85	2008	23.02	3.97	1.27
M.B. Ashraful	26	2005	23	6	1.83
M.B. Monowara Begum	9.48	2009	22.95	4.01	1.01
M.B. Uzzal Rayhan – 2	30	2003	22.9	4.63	1.87
M.L. Noor-E-Modina Express	52.57	1996	22.87	4.88	1.83
M.B. New Mayer Doa-1	21.85	2007	22.87	4.73	1.98
M.B. Hafiza – 1	23.48	2007	22.87	5.5	1.83
M.B. Islamia – 1	20	2008	22.87	5.79	2.13
M.B. Ayesha Paribahan	22.16	2007	22.87	5.19	1.83
M.B. A. Rahman	25	2004	22.86	5.8	2.6
M.B. Ma Paribahan	26.69	2006	22.86	5.64	2.03
M.B. Tablig	20.8	2005	22.86	4.88	1.83
M.B. Mollah – 1	18.99	2006	22.86	5.36	1.52
M.B. Asa Express	12	2008	22.86	4.57	1.52
M. B. Shorif Paribahan	20	2006	22.85	5	1.6
M.B. Noor-E-Nesarabad	14	2007	22.83	4.2	1.37
M.B. Shawan Saujal	26	2006	22.83	5.5	2.1
M.B. Kamrul Hasan Immo	26	2004	22.8	3.74	0.9
M.B. Sarker Enterprise	21.04	2006	22.7	6.06	1.5
M.B. Noorjahan – 1	87	1986	22.7	6.1	2.19
M.. Razia – 1	14.58	2007	22.7	4.8	1.3
M.B. Razib Khan	1403	2008	22.65	4.94	1.23
M.B. Shuman Paribahan	15.85	2008	22.56	5.03	1.37
M.B. Rafeza	19.66	2004	22.56	5.18	1.65
M.B. Sayma	22.25	2009	22.56	5.79	1.67
M.B. Monir	15	2003	22.5	5.32	1.35
M.B. Sonia Ripa	13	2008	22.32	4.07	1.4
M.B. Bara Pir -2	22.5	2006	22.26	6.3	1.57
M.B. Noor – a – Rasul	12	2008	22.25	5.1	1.21
M.B. Ma Enterprise	17.93	2006	22.2	5.28	1.5
M. B.Baba Mayer Doa	76.63	2007	22.16	4.95	1.75
M.B. Ridoi Rima – 2	49.33	2005	22.11	7.13	2.33
M.B. Promiti – 2	15	2007	22	4.88	1.37

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Mozam Dhali	18	2008	22	4.72	1.7
M.B. Fahad & Aurpa	16.66	2006	22	5.5	1.35
M.B. Kakon	20	2003	21.97	6.46	1.97
N.B.Roushan	16.88	2008	21.96	4.12	1.83
M.B. Abu Salam	16.9	2008	21.96	4.12	1.83
M.B. Mayer Toa	10.54	2008	21.95	3.66	1.53
M.B. Mayer Noyan Moni	14	2009	21.95	4.78	1.25
M.B . Baba Mayer Doa	16.63	2007	21.93	5.53	1.35
M.. Razia – 2	18.14	2007	21.79	5.1	1.6
M.B. Chacha Vatija	15.32	2006	21.64	5.03	1.83
M.B. Soshima	15.58	2005	21.64	4.87	1.45
M.B. Alam	20	2007	21.64	7.21	1.24
M.B. Shumi	30	2005	21.55	4.9	2.05
M.B. Boshundhara	13	2008	21.5	4.6	1.2
M.B. Boshurchar – 1	23.73	2004	21.48	4.88	1.68
M.B. Shonar Madina	15.62	2008	21.47	4.82	1.48
M.B. Khondoker	22.4	2007	21.47	6.2	1.65
M.B. Zahed Hasan – 1	12.03	2008	21.35	3.81	1.45
M. B. Prottasha	25.62	2007	21.34	5.5	2.14
M.B. Golden Igal	13	2004	21.34	5.5	1.52
M.B. New Mayer Doa-2	18.25	2007	21.34	4.58	1.83
M.B. Ridhoi – 2	13.63	2008	21.34	4.12	1.52
M. B. Al Madina	21.21	2006	21.2	5.23	1.83
M.B. Uddayan Nau Trans.	12.72	2007	21.03	4.12	1.44
M.B.Allah Shorboshaktiman	10	2008	21	4.75	1.18
M.B. Shahjalal – 8	10	2008	21	4.75	1.09
M.B. Salma Enterprise	15.84	2006	21	5.1	1.54
M.B. Bahadur – 1	15	2007	20.98	4.47	1.53
M.B. Bahadur-1	15	2007	20.98	4.47	1.53
M. B.Mujib	30	2004	20.95	6.1	1.9
M.B. Auri – 1	16	2007	20.95	4.5	1.6
M.B. Rokiraka – 3	30	2003	20.9	4.88	1.98
M.B. Delwar	12.52	2008	20.79	4.51	1.31
M.B. Mayer Asha	16.8	2007	20.73	5.19	1.53
M.B. Islee	16.8	2007	20.73	5.19	1.53
M.B. Vai Vai – 1	25	2005	20.73	4.87	1.82
M.B. Sakib	10	2008	20.73	3.96	1.09
M.B. Shahajat	9.18	2009	20.67	4.11	1.06
M.B. Roki Raka – 4	30	2003	20.53	4.88	1.98

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Khan	20	2006	20.45	4.52	1.35
M.B. Lutfa – 1	17.04	2008	20.42	4.87	1.68
M.B. Arif – 1	10	2009	20.29	4.3	1.03
M.B. Bismillah – 14	36	2007	20.15	3.6	1.3
M.B. Riaz	8.37	2008	20.13	3.96	1.03
M.V Moral	17	2007	20.04	4.3	1.8
M.B. Rayhan & Shakil – 3	8	2009	20.02	3.89	1.01
M.B. Nahid & Maruf	37.68	2006	20	7	1.82
M.B. Monir	15	2008	20	4.3	1.71
M.B. Anwar	6.3	2008	19.96	2.89	1.07
M.B. Alamgir – 1	6.29	2007	19.96	2.89	1.07
M.B. Vai Vai - 1	20.51	2007	19.93	4.85	2.08
M.B. Ma Moni	14	2007	19.9	4.38	1.5
M.B. Vai Vai – 2	15	2005	19.82	3.82	1.52
M.B. Allar Dan	10.52	2008	19.81	4.27	1.12
M.B. Ma Babar Doa – 1	9.68	2008	19.81	3.96	1.21
M.B. New Pacific – 7	17.3	2006	19.64	4.77	1.42
M.B. Tushar – 4	13	2007	19.6	4.17	1.58
M.B. Tareque	13	2006	19.51	4.57	1.4
M.B. Konok Kona	9.5	2008	19.15	3.2	1.52
M.B. Ayesha and Rashed	7.85	2009	19.07	3.81	1.06
M.B. Khaja	18.8	2006	18.6	4.4	1.5
M.B. Al Modina	16.3	2006	18.6	4.4	1.34
M.B. Ferdous	15	2006	18.54	4.37	1.78
M.B. Luz	13.5	2006	18.4	4.45	1.57
M.B. Hazrat Shahjalal	16	2005	18.39	4.65	1.82
M.B. Rayhan Molla	12	2006	18.3	4.15	0.92
M.B. Khaza Paribahan	16.65	2005	18.29	4.88	1.83
M.B. Shampa Paribahan	7.7	2004	18.29	4.14	1.21
M.B. Char Vai Enterprise	5.8	2009	18.22	3.43	0.91
M.B. Tanzila	9	2006	18.2	3.86	1.18
M. B. Rabbi – 1	20	2007	18.05	4.35	1.5
M.B. Abjal	7	2008	17.99	3.56	1.07
M.B. Purabi – 1	14	2005	17.7	4	1.52
M.B. Amin Paribahan	8	2008	17.69	3.61	1.23
M.B. Razu – 2	12.13	2008	17.53	4.04	1.68
M.B. Sumaiya Paribahan	5.9	2008	17.38	3.66	0.91
M.B. Shukur Paribahan	8	2008	17.15	3.5	1.21
M. B. Mayer Doa	11	2007	17.07	4.14	1.5

<b>Vessel Name</b>	<b>Light Weight</b>	<b>Year of Built</b>	<b>L</b>	<b>B</b>	<b>D</b>
M.B. Rashedul	5.57	2008	17.07	3.17	1.01
M.B. Liza Express – 1	5	2008	16.77	3.5	0.84
M.B.Shahera	8.76	2008	16.77	3.66	1.4
M.B. Shakila Express	9	2006	16.76	3.66	1.37
M.B. Durjoi Paribahan	4.95	2008	16.69	3.2	0.91
M.B.Alauddin	5.6	2005	16.05	3.34	1
M.B. Razu – 1	10.03	2008	16	3.22	1.91
M.B. Aunirban	7.5	2006	16	3.16	1.4
M.B. M. khan	9	2007	15.6	4.1	1.3
M.L. Nipoo	18.91	2001	15.24	3.66	1.13
M.B Amman	7.61	2008	15	3.8	1.31
M.B.Sikder Paribahan – 2	4	2008	13.84	2.94	0.9
O.T. Sea – Sheel – 3	33	2001	13.42	3.2	1.5
M.B. Dada Vai – 2	5	2007	12.8	3.35	0.91
M.B. Ananda Vromon	15.6	2008	12.3	3.38	1.07
M.B. 501 Sultani Biri	5	2005	5	3.35	1.1



**Category – II of Sand Carrier (L>30 m)**

Vessel Name	Light Weight	Year of Built	L	B	D
M.V. Mou – 1	446.81	2005	49	8.55	3.9
M.V. Redsun – 5	968.63	2003	47.9	8.53	2.25
M.V. Jamal – 2	855	2000	47.2	7.95	2.14
M.B. Allah Mherban – 2	46.64	2006	46.64	7.31	1.95
M.V. New Kutubia – 1	276	2001	46.46	7.31	3.2
M.V. Shahidul Islam-1	334.38	2006	46.04	7.94	3.66
M.V. Nihachuruti	375	2008	45.9	9.17	3.81
M. B.Aman Brothers	43.98	2005	43.98	7.09	2.32
M.V. Prince of Bongotori	286.53	2004	43.9	8.55	3.55
M.V. Koko – 5	734.31	1990	43.28	8.23	2.36
M.V. Fatema	308	2000	43	8.1	2.9
M.L. Jahangir Nagar-1	58.78	2006	42.31	7.32	2.44
M.V. Afzal Khan	256.64	1993	41.94	7.62	2.97
M.B. Mayer Doa – 2	98.82	2006	40.87	8.78	2.7
M.V. Ababil – 1	246.44	2001	40.54	7.92	3.14
M.V. Abdur Rahman	40	2003	40	6	1.8
M.B. Maymuna – 4	93.69	2006	39.98	8.54	2.69
M.B Mayer Doa	90.17	2008	39.93	8.2	2.7
M. B. Noorjahan	102.82	2008	39.9	7.92	3.19
M.B. R.B. Tisha – 1	102.4	2007	39.9	9.15	2.75
M. B. New Asha Suravi	92	2008	39.7	7.52	3
M. V. Oppu & Mahbub	38.74	2007	39.65	7	1.83
M.V. Al Arafat	81.61	2006	39.64	7.34	2.75
M.B. Faridpur Express-1	110	2007	39.64	8.7	2.9
M.B. J.R.B. – 1	101.36	2007	39.64	9.15	2.74
M.B. Ashraf Ali	95.49	2007	39.62	9.76	2.42
M.B. Ridhoy	100	2008	39.6	7.93	3.12
N.B. Rakib Tushar	99.31	2006	39.5	8.5	2.9
M.B. Mayer Doa – 3	122.32	2008	39.45	9.5	3.2
M.B. Rakib Chowdhury	94	2007	39.39	8.75	2.67
N.B. Modern Ittadi – 1	34.75	2009	39.32	6.1	2.29
M.B. Robin	79.54	2006	39.3	7.46	2.66
M.B. Minara	130	2006	39.1	9.15	3.1
M.B. Nayeb Ali – 2	98.19	2007	38.87	8.54	2.9
M.B. river view	84.38	2006	38.8	8.2	2.6
M.B. Shahjahan Dhali – 2	106.63	2008	38.77	9.33	2.89

Vessel Name	Light Weight	Year of Built	L	B	D
M.V. Faisal	273.44	1986	38.77	7.32	3.11
N.B. R. Rafi – 2	102.42	2008	38.72	9.1	2.85
M.V. Dewan – 2	273.4	1988	38.56	7.93	2.89
M.B. Aulindo	76.67	2007	38.5	7.1	2.75
M.B. Ayesha – 1	90	2006	38.5	8.54	2.67
M. B. Doyal Rashid Shah	72.31	2006	38.48	6.7	2.75
M.V. Zabel – e – Noor	94.92	2006	38.42	8.84	2.74
M.B. Tisha	93.25	2008	38.42	7.93	3
M.B. Bristi – 4	102.56	2006	38.3	8.85	2.97
M.B. Data Nati	38.11	2006	38.11	7.02	1.8
M.B. Ma – 1	77	2007	38.11	7.6	2.6
M.B. Niloi – 7	95.8	2006	38.1	8.53	2.89
M.B. Sristi	97.93	2006	38.1	8.69	2.9
M.B. Rownak	96.69	2006	38.1	8.58	2.9
M.B. Scidor – 5	85.88	2009	38.1	8.5	2.6
M. B. Humi – 2	59.13	2007	37.99	7	2.18
M.V. Shilver Star	76.68	2008	37.96	6.57	3
M.B. Shah Amanat -1	71.22	2007	37.9	6.58	2.8
M. B. Prince of Laxmi Pola	67.89	2007	37.89	6.74	2.6
M.B. Sadman Amir	81	2007	37.8	8.54	2.59
M.B. Al Faizer	66	2007	37.8	7.02	2.44
M.B. Sultan	99	2008	37.78	9.32	2.77
M.B. Shamkpan	92.08	2006	37.71	8.43	2.84
M. B. Pallima	125.51	2006	37.68	10.6	3.12
M.B. Piuly	90.26	2006	37.51	8.61	2.74
M.B. Bahok	60	2005	37.5	8.54	2.74
M.B. Super Star – 2	97.06	2007	37.5	8.75	2.9
M. B. Shohag	84.86	2007	37.41	8.08	2.75
M.B. Limon – 2	89	2006	37.4	8.25	2.8
M.B. Sikder – 1	68.5	2008	37.4	6.7	2.68
M. B. Al Arafa	88.92	2006	37.35	8.55	2.73
M.B. Sadika	83	2008	37.35	7.31	2.8
M.B. Ashar Bashar	106.66	2008	37.25	8.38	3.35
M.B. Beauty of Mohanpur -2	79.32	2006	37.2	7.63	2.74
M. V. Kalma	80	1997	37.2	8.5	2.74
M.B. Meghna Lopa	62.53	2006	37.1	5.86	2.82
M.B. Molla Osman Gani	85.594	2006	37	9	2.52
M.B. Oishi	86.48	2006	37	8.65	2.6
M.B. Miraz	85.59	2006	37	9	2.52

Vessel Name	Light Weight	Year of Built	L	B	D
M.b. Shik – 1	86.28	2007	36.99	8.63	2.65
M.B. Mamoni	88.75	2005	36.91	8.3	2.84
M.B. Sent Martin	91.28	2006	36.9	8.54	2.84
M.B. Ambia	76.8	2007	36.89	7.93	2.57
M. B. Noore Shorshina	54.72	2006	36.85	5.99	2.43
M. B. Khokon –nterprise -1	91.88	2005	36.76	8.69	2.82
M.B. Hikari	71	2008	36.68	8.39	2.29
M.B. D. Zobair – 4	96	2001	36.65	8	3.2
M. B. Shuchana Navigation	81.41	2006	36.59	8.39	2.6
M. B.Shuchana Navigation	38.36	2006	36.59	8.39	2.6
M.B. Hera Parbat – 6	74.95	2007	36.59	8.23	2.44
M.B. Talha – 1	76.8	2006	36.58	7.62	2.69
M.B. Master Junied	80.96	2006	36.58	7.92	2.74
M.B. Akib Ashif – 1	91.71	2006	36.56	8.63	2.85
M.B. Kamuchand Shah	68.2	2006	36.51	8.14	2.25
M.B. Akib & Ridhoy	63.92	2008	36.5	7.7	2.23
M.B. Nesarabad	70	2005	36.3	8.43	2.46
M.V. Hera Parbat – 5	71.6	2006	36.28	7.93	2.44
M. B.Himi – 3	55.35	2006	36.25	7	2.14
M.B.Hazi Dayal Paribahan	59.94	2006	36.25	7.41	2.38
M.B. Sonali Ash	36.46	2008	36.2	7.2	2.5
M.B. Zadukata	60.91	2006	36.13	6.19	2.67
M.B. D Tanjil – 4	79.51	2006	36	8.1	2.4
M.B. Ornob	86.44	2007	35.98	7.93	2.97
M.V. Hazi Nawsher Ali-1	55.37	2006	35.98	7.62	1.98
M.B. Shovo Shamrat	70.2	2009	35.98	8.54	2.24
M.B.Queen of Shufia puspita	88.25	2007	35.97	8.53	2.82
M.V. Sharmin Sultana	220.91	1985	35.95	7.5	2.93
M.B. Ma Moni – 2	61.94	2008	35.94	7.64	2.23
M.B. Liza Manam – 2	93.27	2006	35.93	10.06	2.53
M.B. Star – 1	63	2008	35.92	7.14	2.38
M.B. Al Ameen	82.7	2007©	35.87	8.25	2.74
M. V. Hazi Noor Paribahan	101.67	2008	35.83	9.9	2.81
M.B. Mohammadia	80.88	2007	35.82	8.08	2.74
M. B.Faizul Islam Nau Paribahan	92.88	2006	35.78	10.06	2.53
M.B. Hebrun – 5	84.54	2004	35.67	8.38	2.74
M.B. Turjo – 1	85.13	2006	35.67	8.54	2.74
M.B. Shitolakhya – 5	71	2006	35.6	8.2	2.37
M.B. Shopnil Hasan	83.38	2006	35.6	8.38	2.74

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Padakhep	63.5	2006	35.59	8.33	2.1
M.B. Shitolakhya – 4	71	2006	35.54	8.23	2.36
M.B.Syed Miran Shah	102.42	2009	35.5	10.03	2.82
M.B. Zibi Corporation	66.42	2005	35.49	7.52	2.44
M.B. Al Mokka – 1	65.34	2006	35.48	7.4	2.44
M.B. R.K. Khan – 1	72.45	2006	35.47	8.31	2.41
M.B. S.N.Enterprise	54.33	2007	35.38	7.17	7.1
M.B. Bismillah – 1	70.72	2008	35.37	7.81	2.51
M. B. Ahmed – 1	69.69	2005	35.36	7.92	2.44
M. B. R.K. Khan-2	79.85	2005	35.36	8.08	2.74
M.B. Aurono Miad	78.28	2005	35.36	7.92	2.74
M.B. Liza Manam – 1	105.44	2006	35.36	10.67	2.74
M.B.Khokon Enrterprise-2	50	2003	35.33	8.07	2.27
M.B. Shompa – 1	43	2007	35.3	6	2
M. B. Mashfiqu – 1	84.26	2006	35.29	8.3	2.82
M.B. Shonargao – 3	70.66	2005	35.26	8.02	2.45
M. B.River Prince Paribahan	81.41	2006	35.24	8.36	2.55
M.B. Shonargaon – 2	86.46	2005	35.23	8.75	2.75
M.B. Sonar Tori	91.81	2007	35.2	8.61	2.97
M.B. New Hirok	84.01	2006	35.2	8.54	2.74
M. B. Shimaya Enterprise	72	2006	35.13	7.26	2.48
M. B. Shumia Enterprise	72	2006	35.13	7.26	2.48
M.B. Ambor Ali Shah – 3	108.33	2007	35.13	9.88	3.06
M.B. Shonar Modina	81.02	2007	35.1	8.23	2.75
M. B. Khan Navigation-3	64.47	2007	35.08	7.57	2.38
M. B. Banglar Ananda	76.42	2006	35.06	8.48	2.52
M.B. Al – Falah	104	2006	35.06	8.84	3.05
M.B. Hawa Mishu	64.94	2006	35.06	7.93	2.29
M.V. Manik – 3	393	2002	35.05	7.31	1.91
M.B. Moonmoon r	48	2007	35	6.4	2.13
M.B. Bismillah – 1	65.53	2008	35	6.7	2.74
M.B. Member Paribahan – 2	64.17	2005	35	7.85	2.29
M.B. Jomjom	65	2005	35	7.32	2.44
M.B. Shah Ali – 2	65.5	2007	34.98	6.7	2.74
M.B. Erin	74.26	2006	34.94	8.54	2.44
M.B. Bishal Nau Paribahan	94.89	2008	34.91	9.45	2.82
M.B. Mama Bhagna – 1	99.82	2006	34.85	9.75	2.92
M. B. R. J.	87.67	2006	34.84	9.2	2.68
M.B. Shawan Shagor- 4	47.4	2006	34.77	8.38	2.47

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Dishary – 2	70.49	2005	34.77	7.95	2.5
M. B. Khan Navigation	74	2005	34.76	8.06	2.6
M. V. Shumon – 4	83	2006	34.75	8.23	2.78
M.B. Ma	75.32	2005	34.75	8.5	2.5
M.B. Noore Farhad	60.42	2007	34.75	7.82	2.18
M.B. Al Saydul Hoque	73.32	2006	34.73	8.28	2.5
M.B. Bangla	69.37	2007	34.72	8.16	2.43
M.B. Elahi – 2	65.49	2006	34.66	8.42	2.2
M.B. Master Rayan	73.12	2006	34.6	8	2.59
M.B. Mohammadia – 1	56.86	2007	34.6	6.77	2.38
M.B. Razon – 2	57	2007	34.55	8.06	2.01
M.B. United	70.49	2006	34.55	8	2.5
M.B. Allah Hafez – 1	74.27	2008	34.5	7.76	2.72
M.B. Salma	69.5	2008	34.5	8.08	2.44
M.B. Nasib Paribahan	48.58	2006	34.45	6.71	2.06
M.B. Prince of Druti	61	2006	34.45	7.09	2.5
M.B. Aziz Paribahan	63.29	2006	34.45	7.9	2.28
M.B. Afriditi – 1	69.52	2006	34.45	8.64	2.29
M.B. Hazi Faruque	88.45	2008	34.42	8.84	2.85
M.B. Ritoo – 1	46.77	2005	34.41	6.43	2.07
M.B. Nazimul	67.36	2008	34.4	7.68	2.5
M.B. Bepari – 2	69.96	2005	34.38	7.98	2.5
M.B. Al Haramine	46.67	2008	34.37	6.25	2.13
M.B. Allahor Rahmant – 2	62.67	2007	34.35	8.4	2.13
M.B. Gangchil	75.61	2006	34.32	8	2.7
M.B. M.M. Paribahan	76	2006	34.32	9.3	2.52
M.B. Shahjahan Dhali-1	79.16	2006	34.3	8.38	2.7
M.B. Mouri Molla – 1	58.13	2006	34.28	8.11	2.05
M.B. Modina Al Monowara	63.26	2006	34.22	8.02	2.26
M.B. Motiraj	79.52	2006	34.2	8.2	2.78
M. B. Mehedi Hasan	75.13	2007	34.15	8.8	2.44
M.V. Pinaq – 2	72	2003	34.15	7.62	2.59
M.V. Islam Paribahan	46.28	2006	34.15	6.71	1.98
M.B. Noor – E – Madina	74.26	2005	34.15	8.23	2.59
M.B. Karim Newaz	94.1	2007	34.15	9.38	2.88
M.B. Char Vai	68.58	2007	34.15	8.07	2.44
M.B. Doyal Nana Rashid Mostan	70.98	2006	34.14	7.78	2.62
M.B. Joy Razib – 2	71.55	2006	34.14	8.23	2.5
M.B. Al – Rifat Nau Paribahan	90.16	2008	34.14	9.45	2.74

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Munni Nau Paribahan	98.51	2008	34.14	8.84	3.2
M.B. J.P.	71.88	2004	34.12	7.65	2.7
M.B. Razmoni	68.74	2008	34.1	7.32	2.7
M.B. Al-Falowa – 3	64.11	2006	34.05	7.1	2.6
M.B. Moushumi Nau Paribahan-2	73.62	2006	34.04	9.3	2.28
M.B. Al Inam – 2	73.71	2006	34.01	8.89	2.39
M. B. Nagar Enterprise	76.32	2005	34	8.53	2.58
M.B. Dulal Nau Paribahan-1			34	9.3	2.82
M.B. Hazi Jalal – 1	91.56	2007	34	9.6	2.75
M.B.M.B. New Pankouri – 1	83.03	2008	34	8.38	2.7
M.B. Al – Marwa	49.16	2008	34	7.16	1.98
M.B. Shohan – 1	53.34	2006	33.98	8.1	1.9
M. B. New Zajira - 2	61.97	2006	33.97	7.66	2.4
M.N. Naz	62.43	2005	33.94	8.05	2.48
M.B. Shahriar Fahim	62.82	2006	33.9	7.9	2.3
M. B. Dayan – 1	61.38	2005	33.87	7.69	2.31
M.B. Fahim Enterprise	58.51	2006	33.85	7.92	2.14
M.B. Pial	62.5	2005	33.84	6.71	2.6
M. B. Munshiganj – 1	68	2007	33.84	7.92	2.62
M. B. Mimi Rumi Enterprise	68	2007	33.84	7.92	2.62
M. B. Muna Methon	68.12	2005	33.84	7.42	2.66
M.B.Shahjalal Shah Paran-2	84.2	2006	33.84	9.53	2.56
M.B. R. S.	61.38	2006	33.84	7.8	2.28
M.B. Taifa	77.83	2007	33.84	8.23	2.74
M.B.Sea Arth	66.55	2006	33.82	7.42	2.6
M.B. Mallika – 1	68.96	2006	33.8	7.5	2.54
M. B. Mahatadi – 3	49.6	2005	33.8	7.3	1.97
M.B. New Nazma	50	2004	33.73	5.63	2.59
M.B Prince of Jewel	65.3	2005	33.7	6.58	2.5
M.B Jhelemele-3	52.39	2008	33.68	8.38	1.82
M.B. Afriditi – 2	64.01	2006	33.67	8.39	2.36
M.B. Nakib Nawshin	61.95	2008	33.66	7.88	2.29
M.B. Alhamdulillah	56.38	2008	33.66	7.82	2.1
M.B.Sonia – 3	76.61	2006	33.64	8.62	2.59
M.B. Falguni	75.85	2005	33.6	8.2	2.7
M.B. Vaie Vaie	54.12	2006	33.6	8.14	2.13
M.B. Mamoon Syed Navigation	57.89	2007	33.6	8.24	2.05
M. B. Khan Navigation-2	63.57	2007	33.56	7.97	2.33
M.B. Taslima	53	2006	33.54	7.06	2.03

Vessel Name	Light Weight	Year of Built	L	B	D
M. B.Ma	68.7	2006	33.54	8.23	2.14
M.V. Shanto – 2	66.2	2006	33.54	7.93	2.44
M.B.Kento Chadek Nau Paribahan	79.55	2006	33.54	9.53	2.44
M.B. Jewel Nau Paribahan	81.9	2006	33.54	9	2.66
M.B. Sidratul Montaha	60	2006	33.54	6.7	2.71
M.B. Aval Auvizan	60.95	2008	33.54	7.78	2.29
M.B. Progati – 1	68.82	2006	33.54	7.62	2.64
M.B. Shahjalal Nau Paribahan	83.31	2007	33.54	9.98	2.44
M.b. M. Ahmed – 2	55.89	2008	33.54	7.97	2.05
M.B. S. Islam – 2	60	2007	33.54	7.32	2.44
M.B. Khasmahal – 2	59.88	2009	33.54	8.18	2.14
M. B.AI – Madina	55	2003	33.53	7.16	2.59
M. B. Shobar Dia	48.8	2006	33.53	6.7	2.13
M.V. Water King – 8	213	1986	33.53	6.7	1.98
M.B. Siddique	50	2008	33.53	7.92	1.98
M.B. Jheleemilee – 2			33.53	7.93	1.98
M.B. Mira	54	2006	33.53	7.92	2.01
M.B. Banglar Joy-1	62.12	2005	33.52	8.53	2.13
M.B. Alif Data	62.44	2006	33.5	8.5	2.15
M.B. Siam	78.01	2006	33.5	7.9	2.89
M.B. Fatema	75.88	2006	33.46	9.15	2.43
M.B. Tanvir Express	58.31	2006	33.4	8.15	2.1
M.B. Shah Fatullah – 4	59.76	2008	33.4	7.31	2.4
M. B. Vela	54.33	2005	33.35	6.05	2.64
M.B. Katha Moni	63.32	2005	33.34	7.6	2.45
M.B. Shanta Shohel – 2	57.13	2006	33.32	8.2	2.05
M.B. Akota Plaza	51.69	2006	33.32	7.72	1.97
M.B. Dhitpur	43.49	2006	33.31	6.92	1.85
M.B. Sonar Bangla	52.32	2006	33.3	7.9	1.95
M.B. Mobarak Hossain N.P	90	2008	33.29	9.33	2.84
M. B. Hossain – 2	51.88	2006	33.28	7.5	2.03
M.B. Sunrise	59.45	2006	33.25	8.23	2.13
M.B. Mouri Molla – 2	48.12	2006	33.24	7.55	1.88
M. B. Zajira - 3	52	2005	33.23	7.08	2.13
M.B. Joy Nau Paribahan	94.08	2007	33.23	8.84	3.14
M.B. Shohel Nau Paribahan	88.8	2007	33.23	9.29	2.82
M.B. Allah Hefazot	67.77	2009	33.23	8.03	2.49
M.B. Rahbar	55.66	2005	33.2	6.37	2.58
M. B.Venash Moon	54.11	2007	33.16	8	2

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. J. R.	68.55	2005	33.14	8.63	2.35
M.B. Nauraz – 2	63	2005	33.09	7.67	2.43
M.B. Meher Amin -2	66.93	2005	33.08	7.24	2.74
M. B. M.A. Hossain-2	58.34	2005	33.08	7.55	2.29
M.B. Shahed Paribahan	52.43	2006	33.06	7.3	2.13
M. B. Shibchar Zajira	61.98	2006	33.05	7.66	2.4
M.B. Abu Zabir	77.04	2006	33.04	9.15	2.45
M.B. Al Beruni	45.2	2005	33.02	6.2	2.17
M. B. Makka Modina	50.14	2007	33	7.9	1.9
M. B. Bora Enterprise	60.61	2007	33	8.26	2.18
M. B. Shohana – 2	53.29	2007	33	8.7	1.82
M. B. Garib-e-Newaz – 1	54.8	2005	33	7.4	2.2
M.B. Shuprovat	52.32	2006	33	7.9	1.95
M.V. Noor –A-Madina-3	61.34	2005	33	8.1	2.25
M.B. Shahadat	76.53	2007	33	8.58	2.65
M.B. Roman – 2	52.25	2008	33	8.53	1.82
M.B. Allaher Rahmat – 3	42.68	2008	32.95	6.94	1.83
M.B. Hazi Shahida Begum	71.21	2007	32.94	7.85	2.7
M.B. M.M. Enterprise -1	52.27	2007	32.93	7.86	1.98
M.B. Hazi Nau Paribahan – 2	67.47	2006	32.93	8.4	2.38
M.B. Poinna Nau Paribahan	86.67	2007	32.93	9.15	2.82
M.B. Allar Dan Nau Paribah	81.04	2007	32.93	9.07	2.66
M.B. Nadia Tamanna, Nau Parib	71	2006	32.93	9.08	2.53
M.B. Baitullah	60.53	2005	32.93	8.2	2.2
M.B. M.A. Sayed	50.18	2007	32.93	6.7	2.23
M.B. Ittefaque	55.4	2008	32.93	7.93	2.08
M.B. Sheikh Paribahan-2	46.7	2006	32.92	7.31	1.9
M.B. Modhumita	54.72	2006	32.92	8.23	1.98
M.B. Bristi – 5	60.63	2006	32.92	7.92	2.28
M.B. Taifa Eti	54.72	2006	32.92	8.23	1.98
M.B. Allahar Dan Navigation	60.08	2005	32.91	7.92	2.26
M.B. Jui	52.3	2005	32.9	7.32	2.13
M. B. Noor Jahan	53.7	2005	32.9	7.62	2.13
M.B. Madina Monowara-2	64.93	2006	32.9	8.6	2.25
M.B. Mithu Rashel	64.23	2008	32.88	7.98	2.4
M.B. Asif Khan	60.36	2008	32.85	7.57	2.38
M.B. Ma Paribahan-1	65	2006	32.84	8.49	2.28
M.B. Al Arab – 2	61.39	2007	32.82	8.36	2.22
M.B. Bristi Barsha	52.85	2005	32.81	7.05	2.24



Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Baba Shahparan – 2	56.78	2004	32.81	8.42	2.01
M.B. Nahtaz-1	53.16	2007	32.8	8.15	1.95
M.B. Zabale Noor	60.72	2006	32.78	7.93	2.29
M.B. Sania Molla	51.86	2006	32.74	8.13	1.91
M.B. Shamim Bhuian Entp	58.41	2006	32.7	7.68	2.28
M.B. Faisal – 1	43.28	2006	32.7	6.33	2.05
M.B. Allah Param Daylow	41.88	2008	32.7	6.9	1.82
M.B. Jhorna Paribahan	55.68	2005	32.68	7.33	2.3
M.B. Sea Concord	47.25	2005	32.62	6.02	2.36
M. B. M.R. Nau Paribahan	78.91	2006	32.62	9.76	2.43
M.V. Banglar Shamrat	67.65	2007	32.62	7.42	2.74
M.B. Kanika -1	69.74	2008	32.62	7.62	2.74
M. B. Akash	40.18	2007	32.62	6.11	1.98
M.V. A.R. Concord- 1	77.85	2006	32.62	8.54	2.74
M.B. M Ahmed – 3	52.12	2007	32.62	7.32	2.14
M.B. Omar Faruque – 2	69	2007	32.62	7.92	2.62
M.B. Hurey Jannat	57.8	2006	32.62	7.62	2.28
M.B.Limira – 1	66.6	2005	32.6	7.32	2.74
M.B. N.S.	57.06	2006	32.6	7.8	2.2
M.B. Tanzila	61.36	2007	32.57	7.57	2.44
M.B. Sinthi	50.45	2005	32.57	6.81	2.23
M.B. Antaranga	41.51	2007	32.52	7.15	1.75
M. B. Ahmed	39.32	2007	32.52	7.22	1.64
M.B. Bayzed Bostami (R:)	51.33	2006	32.52	7.55	2.05
M.B. Afifa	42.06	2006	32.52	6.4	2
M.B. Hazi Montaz Uddin	84	2008	32.51	8.73	2.99
M.B. Hazrat Shahjalal ®	48	2007	32.47	6.33	2.29
M.B. Sonargaon – 1	25	2003	32.47	7.7	2.47
M.B. Mama Vagina	62	2007	32.47	8.38	2.29
M.B. Mim Akib	57.76	2006	32.45	7.62	2.29
M.B. Shohel Rana- 2	55.26	2006	32.45	7.95	2.1
M.B. M. S. Nau Paribahan	66	2006	32.43	8.1	2.5
M.B. Ishahak	39.63	2008	32.42	6.55	1.83
M.B. Jirno Tari	49.6	2006	32.4	7.9	1.9
M.B. Zuria – 3	52.75	2005	32.4	7.63	2.1
M.B. Mozammel	63	2006	32.4	8.1	2.3
M.B. Shojib Raihan – 2	58.29	2005	32.4	8.4	2.1
M.B. Gram Bangla – 1	56.43	2009	32.4	8.25	2.07
M.B. M.C.M. Cindabad	55.13	2005	32.39	7.32	2.28

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Defodil – 2	85	2003	32.37	7.01	2.44
M.B. Bismilla – 1	25	2003	32.36	6.1	2.43
M.B. Zuria Layba – 4	53.92	2004	32.35	7.6	2.15
M.B. Hazi Keramat Kazi	51.15	2007	32.35	7.95	1.95
M.B. Allah Shoi	55.11	2006	32.34	8.15	2.05
M. B. Faisal	71.18	2006	32.32	8.85	2.44
M. B. Sheikh Aunik	60.63	2005	32.31	8.07	2.28
M.B. Sanu Chadek Nau Paribahan	72.93	2005	32.31	9.07	2.44
M.B. Mohammadia Enterprise-1	47.12	2006	32.31	7.01	2.04
M.B. Zannat	84.29	2007	32.31	9.07	2.82
M.B. Shamim	41	2007	32.31	5.94	2.13
M.b.Tanzil – 9	70	2006	32.31	7.8	2.53
M.B. Hazi Shiru Mia	76.5	2008	32.31	8.38	2.77
M.B. Shohagi Nau Paribahan	81.31	2008	32.31	8.75	2.82
M. B. Mayer Doa	58.8	2006	32.3	8.38	2.13
M.B. Ayesha Navigation	70	2006	32.3	9	2.36
M.B. Hazi and Sons – 2	45	2008	32.3	5.84	2.3
M.B. Dipa & Sobuz – 2	54	2006	32.3	7.85	2.1
M.B. Faysal	61.97	2006	32.25	9.1	2.05
M.B.Ma. Paribahan -2	60.41	2006	32.25	8.31	2.21
M.V. Boshundhora – 41	53.78	2006	32.25	6.7	2.44
M.V. Boshundhora – 45	53.78	2006	32.25	6.7	2.44
M.V. Boshundhora – 43	53.78	2006	32.25	6.7	2.44
M.V. Boshundhora – 42	53.78	2006	32.25	6.7	2.44
M. B.Allar Dan - 1	60.58	2006	32.24	7.55	2.4
M.B. Aklom	50	2007	32.24	6.4	2.31
M.B. Isra Enterprise	52.61	2006	32.24	8	2
M.B. Ridwan	25	2003	32.24	7.4	1.85
M. B. Bookul	70.77	2006	32.23	8.28	2.6
M. B. Ma Paribahan – 4	56.81	2005	32.2	8.15	2.2
M.V. Moular Mohabbat	42.96	2007	32.18	7.7	1.7
M. B. Vai Boon	52.5	2007	32.17	8.08	1.98
M.B. Makka Madina Allah Varasha	70.11	2006	32.16	8.76	2.44
M.B. Hazi Nau Paribahan-1	68	2009	32.16	8.9	2.33
M.B. Triratna – 2	61	2006	32.14	8.25	2.25
M.B. Modina River Lines-3	69.7	2005	32.14	9	2.36
M.B. Modina River Lines-4	69.7	2005	32.14	9	2.36
M.B. Modina River Lines-5	70	2006	32.14	9	2.36
M.V. Shobhan	58.24	2005	32.1	7.96	2.18

Vessel Name	Light Weight	Year of Built	L	B	D
M.B.Rifat Nau Paribahan-1	60	2006	32.1	8.65	2.1
M.B.Zugol	40	2003	32.1	7.92	2.6
M.B. Al Hizrat	60	2006	32.1	7.31	2.62
M.B. Bara Pir – 1	54.96	2006	32.09	8.15	2.06
M.V. K.I		2006	32.06	8.07	1.93
M.B. Ali Akbar – 1	165	2005	32.02	7.32	2.43
M.B. Ruma & Noor Taz-1	55.16	2004	32.02	8.12	2.08
M.B. Igal	66.64	2006	32.01	8.68	2.35
M. B. Talha	50	2006	32.01	7.62	2.01
M. B. Lia	47	2006	32.01	7.13	2.01
M.B. Fateha Sharif	58	2006	32.01	7.31	2.43
M.B.Hazi Shamsoon Nahar	36.78	2006	32.01	6.09	1.85
M.B. Nadira Sultana	63.49	2006	32.01	7.31	2.66
M.B. Shahin & Shanta	80.13	2008	32.01	8.86	2.77
M.B. Shathi	50	2006	32.01	7.62	2.01
M.V. Arabian	56.12	2006	32.01	8.07	2.13
M.B. Fahim Delwar	47.83	2005	32.01	7.92	1.85
M. B. Dhaka Express	48.9	2007	32	7	2.14
M. B. Dream	58.22	2005	32	7.31	2.44
M.V. Zahid Hasan	47.7	2006	32	7.9	1.85
M.B. Shagor Prince	70.4	2006	32	8.84	2.44
M. V. Mohadia Nayan Prodhan	49.35	1985	32	7.2	2.1
M.V. Rihdoi	55.75	2006	32	7	2
M.B. Al –Ziad	40	2004	32	7.09	2.62
M.B.Shoeb and Brother – 1	30	2003	32	7	2.44
M. B. Afifa -1	46	2007	32	6.1	2.3
M.B. Doyal Nau Paribahan	66	2006	32	8.5	2.39
M.B. Al-Arab – 1	47.63	2004	32	6.4	2.28
M.B. Tanzil – 7	45.6	2004	32	7.65	2.44
M.B. Uzzal – 1	45.6	2004	32	7.65	2.44
M.B. Khash Nagar	51.24	2006	32	7.9	1.98
M.B. Zian	66.07	2006	32	8.84	2.29
M.B. S. Nehar Paribahan	53.26	2006	32	7.93	2.05
M.B. Auvilash	40	2003	32	7.92	2.62
M.B. Hazi Mosharrof Hossain	90	2008	32	7.93	3.21
M.B. Bhuiya	58.56	2007	32	7.8	2.3
M.B. Bakul Molla Paribahan	195	2003	32	7.31	2.13
M.B.Rifat Nau Paribahan-3	58	2006	32	8.38	2.29
M.B. Uzzal	45.27	2008	32	7.62	1.82

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Mim	60	2009	32	8.53	2.43
N.B. Nusrat Nahar	60.93	2006	32	7.62	2.45
M.B. Al – Mugni	55.39	2007	32	7.93	2.14
M.B. Shimul – 2	54.24	2005	31.96	7.46	2.23
M.B. Polash Pial	50.93	2006	31.96	7.2	2.17
M.B. Probal Shoibal	58	2006	31.95	8.15	2.18
M.B. Rubina – 2	30.96	2009	31.94	5.84	1.68
M.B. King of Rudra	57	2005	31.94	7.3	2.1
M.B. Khan Enterprise	57.91	2006	31.9	8.24	2.16
M.B. Nagorika	54.4	2006	31.9	7.6	2.2
M.B. Nahar Paribahan-1	27.53	2009	31.87	6.05	1.4
M.B. S.S. Nau Paribahan	69.46	2006	31.86	8.76	2.44
M.B. Babar Smriti	49.17	2007	31.86	7.72	1.96
M.B. Prantor	68.41	2005	31.86	8.92	2.36
M.B. Jakir Dewan	31	2009	31.85	6.28	1.52
M.B. Bondhon Enterprise-7	52.62	2005	31.84	8.1	2
M.B. Noornahanr Rifat	76.94	2008	31.84	8.84	2.68
M.B. Siraj Uddin	31.54	2009	31.84	5.97	1.68
M.B. Mayer Sharan	55.85	2005	31.8	8	2.18
M.B. Hurrey Arab	51.53	2006	31.8	7.75	2.05
M.B. Rayhan & Shakil – 1	30.06	2009	31.79	5.91	1.62
M.B. Mitali	70	2008	31.77	8.45	2.55
M. B. Abdullah	46	2005	31.75	6.46	2.2
M.B. Sohrab	58.42	2005	31.75	8.2	2.2
M.B. Sunrise – 1	44.36	2006	31.73	7.49	1.83
M. B. Sagar Robin – 3	45.11	2004	31.72	7.66	1.82
M.B. Mourtoja Khatoon Nau Paribahan – 2	60.47	2006	31.71	8.46	2.21
M.B. Halima Nau Paribahan	62.66	2006	31.71	8.46	2.29
M.B. Nasirabad	37	2006	31.71	7.01	1.6
M. B.Aumi	52.48	2005	31.7	7.62	2.13
M.V. Shanto	52.48	2005	31.7	7.65	2.1
M.B. Hebrun – 1	63.82	2004	31.7	7.62	2.59
M.B. Humaira	60	2005	31.7	6.6	2.8
M.B. Allahhu Akbar	44.84	2006	31.7	7.62	1.82
M.B. T. R. – 2	49.23	2006	31.7	7.69	1.98
M.B. Lion	49.23	2006	31.7	7.69	1.98
M.B. Manna – 3	60	2008	31.7	7.62	2.31
M.B. Tisha	44.41	2006	31.7	7.63	1.8

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Aziz Co-operative Bk.	44.41	2006	31.7	7.63	1.8
M.B. Shakil – 1	67.38	2005	31.7	9.14	2.28
M.B. Rahbar	48.63	2006	31.7	8	1.88
M.B.T. R. – 1	48.59	2008	31.7	7.59	1.98
M.B.Rafiqul Enterprise	49.23	2007	31.7	7.69	1.98
M.B. Hayet Box	46.86	2007	31.7	7.32	1.98
N.B. Doil	48	2007	31.7	5.79	2.43
M.B. Soyed Ahmed	60.11	2008	31.7	7.62	2.44
M.B. Nana Vai	67.37	2008	31.7	8.54	2.44
M. B. Al- Fallah	61.5	2006	31.65	7.16	2.66
M.B. Mayer Doa – 2	61.62	2006	31.65	8.3	2.3
M.B.Rosmi	63	2006	31.65	8.3	2.34
M.B. Allah Borosha – 2	51.75	2006	31.65	7.82	2.05
M. B. Bandhan -7	61.67	2006	31.64	8.38	2.29
M.B. Allah Vorosha	53.1	2006	31.63	7.42	2.22
M.B. Siddique	64.56	2006	31.63	8.48	2.36
M.B. Tayer Smriti – 1	41	2003	31.62	6.4	2.64
M.B. Robel	62.38	2007	31.61	7.47	2.59
M. B. Mahi Nau Paribahan	53.19	2006	31.6	8.05	2.05
M. V. Hafez Bhuiyan	57.66	2006	31.6	8.4	2.13
M.B.Jamuna	52.83	2006	31.59	7.52	2.18
M.B. Mayer Doa	58.23	2005	31.57	8.22	2.2
M.B. Mithila	57.48	2006	31.55	7.32	2.44
M.V. Alhamdulillah-1	69.68	2005	31.53	8.88	2.44
m.B. Al Falah	57.65	2006	31.52	8.15	2.2
M. B.Newfacific – 1	35	2004	31.5	6.02	2.6
M. B. J.K. Transport	51.32	2006	31.5	7.5	2.13
M.B. Al – Modina	65	2006	31.5	8.23	2.44
M.B. Hanif – 1	62.24	2007	31.5	7.45	2.6
M.B. Khaza Enayetpuri	52.3	2007	31.5	7.94	2.05
M.B. Diptobangla			31.5	7.85	2.1
M. B. Hazi Alim	52.88	2006	31.48	7.84	2.1
M.V. M. S.	66.25	2008	31.48	9.05	2.28
M.B. Bozloo Bhuiyan – 1	55.52	2005	31.48	8.08	2.14
M. B. Alamin	52.56	2006	31.47	7.28	2.23
M.B. Mila	51.31	2006	31.46	7.8	2.05
M.B. J.R. B. Parihahan -2	64	2006	31.44	8.52	2.35
M.B. J.R. B. – 2	64	2006	31.44	8.5	2.35
M.B. Rididi	25	2003	31.44	7.29	1.77

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Hazi Abdul Monnaf Nau P	62	2008	31.44	7.93	2.45
M.B. Rayan	25	2003	31.44	7.29	1.77
M. B. Al Abir	48	2005	31.43	7.4	2.02
M.B. A.F. Mazeda – 2	64.59	2005	31.43	8.76	2.3
M.B. Bhandari Now Paribahan	49	2006	31.4	8.75	1.75
M.B. Arif Dewan	54.15	2007	31.4	6.71	2.52
M.B. Suman Sayed	44.42	2005	31.4	7.5	1.9
M.B. Shapla	37.52	2006	31.4	6.4	1.83
M.B. HaziMiazuddin	40	2008	31.4	7.92	1.82
M.B. Shakim	56.36	2006	31.4	8	2.2
M.B. U.B. – 3	55.35	2008	31.4	5.96	2.9
M.B. Shohel Rana – 1	53	2006	31.4	8.36	1.98
M.B. Al Abdul Ali	56.89	2006	31.4	7.31	2.43
M.B. Khaza	76	2008	31.38	8.8	2.7
M.B. Bonosree – 3	63.86	2006	31.36	8.46	2.36
M.B. Joy Razib	55	2005	31.33	7.35	2.33
M. B. Panch Vai Shakta	76.2	2006	31.3	7.7	3.1
M.B. Shabuj Shumi	60	2006	31.3	6.8	2.65
M.B. Shondhi Nau Paribahan-1	56.9	2005	31.3	8.1	2.2
M.B.Mehedi Hasan Badhon 2	70	2008	31.3	7.2	3.05
M.B. River Shetu – 2	47.19	2005	31.3	6.72	2.2
M.B. Babu and Shojib – 2	56.66	2008	31.27	8.54	2.08
M.B.B.S Enterprise -1	52	2006	31.25	7.9	2.07
M. B. Dredge Bangla- 38	65	2007	31.25	7.16	2.88
M. B. Dredge Bangla-67	65	2007	31.25	7.16	2.88
M. B. Dredge Bangla-66	65	2007	31.25	7.16	2.88
M. B.Arzina Nau Paribahan	59.03	2005	31.25	8.38	2.21
M.V. Pdadma	65.72	2008	31.25	7.16	2.88
M.V. Meghna	65.72	2008	31.25	7.16	2.88
M.V. Surma	65.72	2008	31.25	7.16	2.88
M.B. Amar Desh	48.1	2006	31.25	7.62	1.98
M.V. Dredge Bangla – 72	65.73	2007	31.25	7.16	2.88
M.V. Dredge Bangla – 73	65.73	2007	31.25	7.16	2.88
M.V. Dredge Bangla – 74	65.73	2007	31.25	7.16	2.88
M.V. Dredge Bangla – 75	65.73	2007	31.25	7.16	2.88
M.B. Muslim Nau Paribaan	71.44	2008	31.25	8.62	2.6
M.B. Zefi	65.72	2006	31.25	7.16	2.88
M.B. Hazi Nau Paribahan – 1	55.31	2006	31.2	7.9	2.2
M.B. Shajalal & Shahparan	58.28	2004	31.2	8.4	2.18

Vessel Name	Light Weight	Year of Built	L	B	D
M.B.Shuvo Nau Paribahan-2	57.29	2006	31.2	8	2.25
M.B.Rifat Nau Paribahan-2	58	2006	31.17	8.29	2.12
M.B. Bonosree – 2	63.45	2006	31.16	8.46	2.36
M. B. Shumaiya	47.37	2007	31.15	7.1	2.1
M.B . Shourab	57.78	2006	31.15	8.23	2.21
M.B. Ziman Nau Paribahan	64	2006	31.15	8.8	2.3
M.V. Dredge Bangla – 71	65.52	2007	31.15	7.16	2.88
M.V. Orange – 2	38.62	2007	31.15	7.15	1.7
M.B. Mama Vagina	68.1	2006	31.13	8.76	2.37
M.B. King of Parjoar – 2	51.2	2003	31.1	6.86	2.6
M.B. Abdul Aziz	73.08	2006	31.1	9.07	2.54
M.B. Al Helal	61.6	2006	31.1	8.48	2.29
M.B. Elahi Vorosha	54.83	2006	31.1	8.23	2.1
M.B. Hanif Enterprise – 3	50	2005	31.1	8.23	1.98
M.B. Shakil – 4	64.42	2006	31.1	8.84	2.44
M.B. Bozloo Bhuiyan – 3	66.64	2005	31.1	8.61	2.44
M.B.Hazi Abdul Kader Bepari	65.06	2006	31.1	7.74	2.65
M.B.Beaty of Modhumoti-3	60	2007	31.1	7.16	2.74
M.B. Nadim	47.64	2004	31.1	7.61	1.98
M.B. Anwar Hossain	48.2	2006	31.1	6.1	2.44
M.B. Noor-e-Madina	38.23	2007	31.09	6.09	1.98
M. V. Eather	58.2	2006	31.09	7.31	2.51
M.B. Kind of Pargandaria			31.09	6.4	2.64
M.B. Sundarban Express-1	32	2006	31.09	5.76	1.92
M.B. Banglar Joi – 2	57.93	2007	31.09	8.23	2.22
M.B. Alhamdullilah, Nau Pa.	74.26	2007	31.09	8.77	2.67
M.B. Rayhan & Shakil – 2	30.68	2009	31.09	5.76	1.68
M.B. Rubina - 1	30.84	2009	31.09	5.79	1.68
M.B.Shohel Jewel – 1	42	2008	31.07	5.48	2.62
M.B. Sabbir & Draubo Nau Paribahan	40.13	2005	31.04	6.89	1.84
MB. Zobair – 3	47.06	2005	31	6.1	2.44
M. V. Limon	55.28	2005	31	6.75	2.59
M. B.New Pacific – 4	35	2004	31	7.57	2.59
M.B.Happy Nau Paribahan	57.62	2006	31	8.1	2.25
M.B. Hazi Shahjahan Mia	58	2006	31	8.05	2.27
M.B. Mashrik	49.95	2005	31	7.9	2
M.B. Seven Brothers	60	2007	31	8.25	2.3
M.B. Al Rahbar – 1	49.32	2005	31	7.8	2
M.B. Abdul Hamid Nau Parib.	65.89	2008	31	8.54	2.44

Vessel Name	Light Weight	Year of Built	L	B	D
M.V. Elahi Enterprise	51	2006	30.98	7.47	2.14
M.B. Al Zajira – 1	65	2006	30.98	8.6	2.4
M. B. Zajira -1	53	2005	30.95	7.85	2.13
M.B. Shagotom	41.71	2007	30.95	7.55	1.75
M.B. Ala Hazrat Nau Pari..	57.64	2007	30.95	8.3	2.2
M.B. Tin Vai Paribahan	45	2007	30.95	7.29	1.98
M.B. Rahmat-E-Elahi	47.08	2006	30.94	7.46	2
M.B. Anis – 2	26.61	2008	30.93	5.94	1.42
M.B. J.K. Nau Paribahan – 1			30.87	7.57	2.6
M. B. Uzzal and Dhira Nau Paribahan	57.25	2005	30.86	8.23	2.21
M.B. Anicha	30.96	2009	30.84	5.86	1.68
M.B. Salim & Siddique	27.92	2009	30.84	5.84	1.52
M.B Three Brothers	42.74	2007	30.8	7.16	1.9
M.B. Nabo Roup	55.13	2006	30.8	8.42	2.13
M. B.Shanta Islam – 2	19.47	2004	30.8	6.9	2.1
M. B. Bandhan-1	51.02	2004	30.8	7.7	2.03
M.B. Imon – 2	50	2003	30.8	8.54	2.13
M.B. Imon – 1	50	2003	30.8	8.54	2.13
M.B.Shondhi Nau Paribahan-3	61.43	2006	30.8	8.54	2.29
M.B. Huq Bhandari	60.29	2007	30.8	8.38	2.29
M.B. Zihad	56.23	2007	30.8	8.1	2.21
M.B. Al – Ameen – 1	47	2007	30.8	7.32	2.13
M.B. Parthibo	39	2007	30.79	5.79	2.13
M.B. Titas Paribahan	54	2006	30.79	8.46	2.21
m.B. Yeah Allahu,Nau Parib	61.59	2007	30.79	8.31	2.36
M.V. Oishi Nau Paribahan	59.19	2007	30.79	8.23	2.29
M.B. Hazi Abdul Aziz, Nau.P	77.31	2007	30.79	9.22	2.67
M.B. Al – Borak	48	2007	30.79	7.31	2.13
M.B. Bazlu Bhuiyan – 4	59.27	2006	30.79	8.54	2.21
M.B. Atia – 1	29.75	2009	30.79	5.64	1.68
M. B. Gangchil	60.84	2006	30.79	8.46	2.29
M.B. Josim	57.63	2007	30.79	7.52	2.44
M.B. Marjan	27.1	2007	30.78	5.18	1.7
M.V. Sikder	52.37	2006	30.77	8.14	2.05
M.V. Almotin – 2	48	2003	30.75	5.5	2.28
M.B. Hizrat	40.6	2004	30.74	5.52	2.34
M.B/ Al Hasin	48.74	2006	30.73	8.1	1.92
M. B. Liza – 2	58.72	2006	30.72	8.13	2.05
M.B.Shathi Bithi – 2	54.35	2007	30.71	8.07	2.15



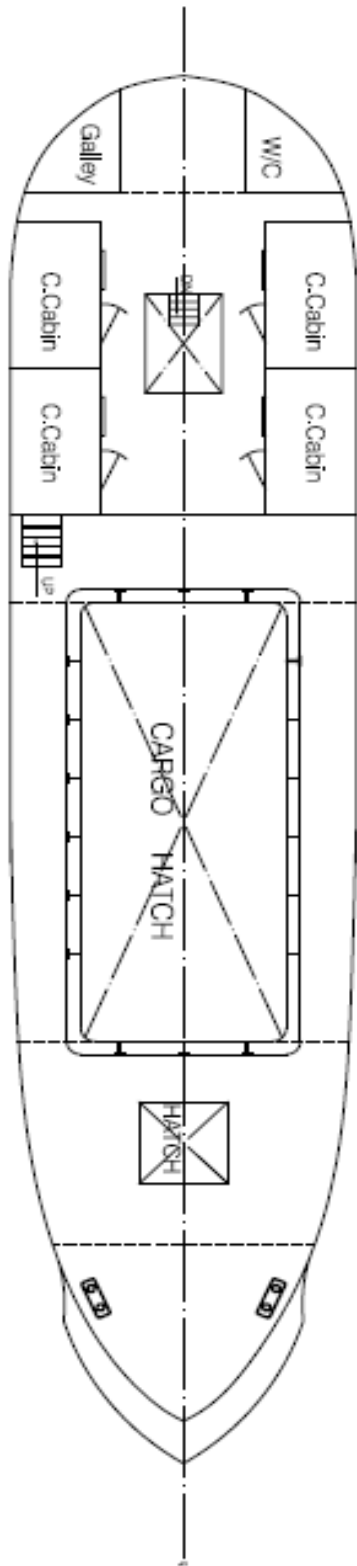
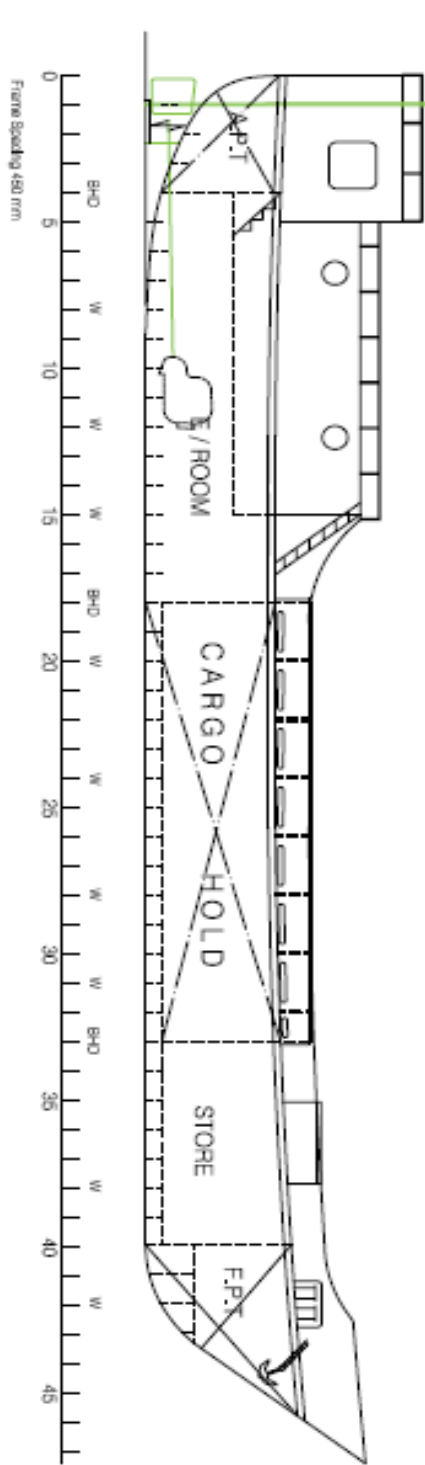
Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Bismillah Enterprise	38.41	2007	30.7	7.01	1.75
M.B. Nazmul Enterprise	27.54	2009	30.69	5.79	1.52
M. B. Rooma & Noortaz-3	52.47	2006	30.68	8.08	2.75
M.B. Shumaiya Enterprise	42.95	2007	30.68	7.5	1.83
M.B. Sk. -1	53.7	2006	30.67	7.4	2.32
M.B. Force Garden – K	52.54	2006	30.67	7.4	2.27
M.B. Ranner	52	2007	30.67	6.4	2.62
M.B.Takwa – 1	52	2007	30.67	6.4	2.62
M.B. National Nauparibahan	54	2006	30.67	7.75	2.22
M. B. Khajza Garib-e-Newaz-2	45.33	2005	30.65	7.25	2
M.B. Zaman Nau Paribahan	52	2005	30.65	7.6	2.19
M.B. Zajira – 4	57.62	2005	30.64	7.09	2.6
M.B. New Chenchury	49.42	2005	30.64	7.1	2.29
M.B. Ennot Ali	42.66	2007	30.64	7.26	1.88
M.B. Esma Azam	47.4	2006	30.64	7.66	1.98
M.B. Tanha Enterprise	27.26	2009	30.64	5.74	1.52
M.B. Sunzida	41	2008	30.62	5.48	2.43
M.V. Noor –A-Madina-2	51	2006	30.62	7.78	2.1
M.B. Zilani Navigation	57.17	2005	30.61	8.4	2.18
M. B.Desh Enterprise	43.8	2006	30.6	7.3	1.92
M.B. Ma Babar Doa	51.44	2007	30.6	7.9	1.9
M.B. Mayer Doa Ashar Alo	57.3	2006	30.6	7.2	2.55
M.B. Turag – 2	34.91	2005	30.59	6.68	1.67
M.V. Shoibal	50.49	2006	30.57	7.9	2.05
M.B. Baishaki Nau Pri– 1	61	2006	30.57	8.23	2.38
M.B. Ami Nau Paribahan	62.18	2006	30.57	8.38	2.38
M.B. Noor-E-Madina	40.4	2006	30.56	7.58	1.7
M.B. Humaiun – 1	32	2009	30.56	5.87	1.75
M.B. Zuria Tithi – 2	47.13	2005	30.55	7.1	2.13
M.B. Bepari Express	41.41	2005	30.55	7.26	1.83
M.B. Load Navigation – 1	45	2006	30.54	7.6	1.9
M.B. Friends Nau Paribahan	39	2006	30.53	6.95	1.8
M.B. Modina River Lines-6	41.65	2006	30.53	7.43	1.8
M.B. Modina River Lines – 1	39	2005	30.53	6.95	1.8
M. B. Anik – 1	58	2008	30.5	6.7	2.75
M.B. Madina River Lines-2	45.7	2006	30.5	6.94	2.05
M.B. Gaushel Azam	35.3	2008	30.5	6.2	1.83
M.B.Ma Nau Paribahan	55.74	2006	30.5	8	2.24
M.B. Taha	36.31	2005	30.5	5.48	2.13

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. Rustom – 2	25	2003	30.5	7.93	2.06
M.B. Sumana – 1	45.27	2005	30.49	7.1	2.05
M.B. Promi Pia Enterprise	48.03	2006	30.49	7.8	1.98
M.B. S.M. Alam	40	2003	30.49	6.4	2.36
M.B. Vorrer Allow	50	2006	30.49	7.92	2.03
M.B. Hasiv & Rayhan	43	2007	30.48	7.31	2
M.B. Zojon	50.32	2007	30.48	7.6	2.13
M.B. Mashid Shabuz	65	2006	30.48	8.61	2.29
M. B.Razzat Rekha	56.45	2006	30.48	7.93	2.29
M.V. Prince of Barkot	60	2007	30.48	7.62	2.89
M. B.Khaza Nau Paribahan	56.81	2006	30.48	8.54	2.14
M. B. Causar	47.83	2006	30.48	7.77	1.98
M.B. Talukder Nau Parib	51.77	2007	30.48	8.54	1.95
M.B. Zugol – 7	60	2005	30.48	8.54	2.13
M.B. Khashmahal Paribahan	45.92	2006	30.48	7.46	1.98
M.B. Altab River Trans.	61.11	2006	30.48	8.33	2.36
M.B. Ammajan Muskan	73.86	2005	30.48	7.92	3
M.B. Ela – 1	47.83	2005	30.48	7.77	1.98
M.B.Quium Nau Paribahan-4	58.89	2006	30.48	8.23	2.29
M.B. Shakil – 2	51.59	2005	30.48	8.38	1.98
M.B.M.B. New Pankouri – 2	43.15	2008	30.48	7.01	1.98
N.B. Balaka	55	2005	30.48	8.23	2.15
M.B. Toshin Nourin	59.66	2005	30.48	8.38	2.29
M.B. Ma Nau Paribahan	55.36	2005	30.46	8.1	2.2
M.B.Sikder Paribahan	42.13	2005	30.45	7.14	1.9
M.B. Pier – 1	35.4	2005	30.45	5.48	2.08
M.B. Sheikh Enterprise	61.52	2006	30.45	8.64	2.29
M.B. Razib Shihad Alamin	49.49	2006	30.44	7.76	2.05
M.B. M.F. Paibahan-2	42.44	2006	30.41	7.09	1.93
M.B . Mumu Nau Paribahan	55	2008	30.41	8.56	2.5
M.B. Kiron	39.96	2006	30.4	7.16	1.8
M. B. Sagar Robin – 2	41.21	2004	30.4	6.74	1.97
M.B. Monir	42.15	2007	30.4	5.5	2.5
M.B. Allar Patha – 1	47.3	2006	30.4	7.7	1.98
M.B. Saba Shami	45.78	2005	30.39	7.24	2.04
M.B. F. A.	44.38	2006	30.38	7.7	1.82
M.B. Mayer Hashi	54.18	2006	30.37	8.3	2.17
M. B. Al Faowa – 1	47.98	2005	30.35	7.75	2
M.B. Bozloo Bhuiyan – 2	54.44	2005	30.34	8.54	2.06

Vessel Name	Light Weight	Year of Built	L	B	D
M.B. A Hamid – 2	36.85	2005	30.33	5.62	2.12
M.B. Mizan	57.5	2005	30.32	7.4	2.48
M.B. Allahar Rahamat – 1	34.56	2006	30.31	6.9	1.62
M.B. A.G.S. – 6	48.84	2005	30.31	7.98	1.98
M.B. Paniraj	25	2003	30.31	7.4	1.99
M.B. Paniraj – 2	45	2005	30.31	7.4	1.9
M.B.Shonar Tari – 4	55.75	2006	30.3	8.2	2.2
M.B. Jahangir Alam -1	45	2006	30.3	7.45	2.1
M.B. K.Ali Shah, Nau Parib.	46	2005	30.3	7.4	2
M.B. Sonar Tori – 4	55.75	2006	30.3	8.2	2.1
M. B. Asif Afra	38.36	2006	30.27	7.1	1.75
M.B.Prepsu – 2	30.5	2007	30.25	7.15	1.7
M.B. R.N.M. – 2	38.55	2007	30.25	7.05	1.7
M. B. Bismillah	49	2004	30.24	7.75	2.05
M.B. DolPhin	34.66	2004	30.24	6.77	1.66
M.B. Payel and Akash	39.67	2006	30.2	7	1.84
M. B. Noorani	45.82	2004	30.2	7.4	2.01
M. B. Ma Paribahan – 3	53.27	2005	30.2	7.86	2.2
M.V. Tamanna Nau Paribahan – 1	41.9	2006	30.2	6.8	2
M.B. Feroza Ava	45.5	2005	30.19	7.26	2.05
M.B. Ushamoni	57.53	2007	30.19	7.72	2.42
M. B. King of Parjoar – 3	54.05	2005	30.18	6.78	2.59
M. B. Sabbir Riad -1	55	2006	30.18	6.7	2.67
M.B.Allah Vorasha – 1	50	2003	30.18	8.23	2.13
M.B. Al Chistia – 1	60.55	2006	30.18	8.23	2.39
M.B. Mayer Smriti Nau Pari	61.82	2007	30.18	8.23	2.44
M.B. N.M. Paribahan	45.9	2005	30.18	7	2.13
M.B. M. T. S.	27.09	2008	30.18	5.79	1.52
M.B. Tamanna	61.59	2008	30.18	8.2	2.44
M.V. M.E	45.16	2005	30.16	7.32	1.98
M. B. Fardin	55.99	2006	30.15	8.15	2.01
M.B. Aunika – 1	57	2007	30.15	7.7	2.4
M.B. Desh Janata	39.29	2006	30.15	7.3	1.75
M.V. Shohag – 1	45.76	2005	30.15	7.44	2
M.B. Farzana Nau Paribahan	55.44	2008	30.15	8.27	2.18
M.B. Saba Shamit	46	2005	30.11	7.6	1.96
M.B. Shahjahan Enterprise	39.67	2007	30.1	6.8	1.9
M.B. Razu Enterprise	37.06	2007	30.1	7.1	1.7
M.B. Water Lili – 2	50	2003	30.1	7.32	2.14

<b>Vessel Name</b>	<b>Light Weight</b>	<b>Year of Built</b>	<b>L</b>	<b>B</b>	<b>D</b>
M.B. Salma and Asraful	47.52	2006	30.1	7.74	2
M.B. Allah Vorosha -1	47.52	2005	30.1	7.74	2
M.B. Allahar Rashul	47.52	2006	30.1	7.74	2
M.B. Mayer Doa Mim	37.88	2008	30.07	6.5	1.9
M.B. Bismilla Enterprise	51.58	2008	30.06	7.01	2.4
M. V. Hazrat Khezeer ®	55.92	2006	30.05	7.15	2.05
M.B. Anwara Navigation	50.68	2005	30.05	8.35	1.98
M. B. Baitullah	50.62	2007	30.04	7.51	2.2
M. B. Hossain -1	44.65	2006	30.04	7.25	2.01
M.B. Ema – 3	49.54	2006	30.04	7.7	2.1
M. B. Allah Bhorosha-2	48.11	2006	30.03	7.6	2
M.B. Chowrangi Express	36.63	2006	30.03	7.16	1.67
m.b. Bismilla	48.11	2006	30.03	7.6	2
M.B. Hamza Amanoor	39.22	2006	30.02	7.35	1.75
M.B. Shazid Shanto	47.57	2004	30.01	7.58	2
M.B. Two Friends	47.42	2004	30.01	7.83	1.97

## GENERAL ARRANGEMENT PLAN



PRINCIPAL PARTICULARS			
LENGTH	OA	:	21.34 M
BREADTH	MID	:	4.88 M
DEPTH	MID	:	1.83 M
DRAFT	LOADED	:	1.50 M
MAIN ENGINE		:	ISL60
Model		:	311
		:	40° 30'

**CALCULATION OF POLLUTANTS BY INLAND WATER TRANSPORTATION****Quantification of Marine Pollution by Passenger Ship.**

1. The passenger ships of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Solid Waste
- c. Emission of exhaust gases and pollutants

The detail particulars of inland passenger vessels for the calculation are shown in the table below:

**Table 1: Details of Inland Passenger Vessels of Bangladesh**

<b>Cat (Length)</b>	<b>Total No</b>	<b>Engine Power (HP)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/hr)</b>	<b>Avg Running hr/month</b>	<b>Passenger Capacity</b>	<b>Bilge/ month (Ltr)</b>
Cat – 1 (Up to 30m)	779	125-200	01	25	240	145	450
Cat – 2 (30-50m)	220	450-720	02	70	300	475	750
Cat – 3 (Above50 m)	62	1200-1500	02	120	300	821	950

2. The detail calculation for bilges, solid waste & emission of exhaust gases and pollutants for passenger vessels are shown below:

**Calculation for Bilge - Category -1 (Up to 30m)**

Total No = 779

Average Passenger Capacity = 145

Average running hour/month = 240 Hr

Bilge/Month/ship = 450 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}\text{Bilge thrown/Yr} &= \text{Bilge/month X No of Ship X Month of Operation} \\ &= 450 \times 779 \times 11 \\ &= 3856.05 \text{ ton}\end{aligned}$$

### **Category – 2 (30m to 50m)**

Total No = 220

Average Passenger Capacity = 475

Average running hour/month = 300 Hr

Bilge/Month/ship = 750 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}\text{Bilge Thrown/Yr} &= \text{Bilge/month X No of ship X month of Operation} \\ &= 750 \times 220 \times 11 \\ &= 1815000 \text{ Ltr} \\ &= 1815 \text{ Ton}\end{aligned}$$

### **Category – 3 (Above 50 m)**

Total No = 62

Average Passenger Capacity = 821

Average running hour/month = 300 Hr

Bilge/Month/ship = 950 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}\text{Bilge Thrown/Yr} &= \text{Bilge/month X No of ship X month of Operation} \\ &= 950 \times 62 \times 11 \\ &= 647900 \text{ ltr} \\ &= 647.90 \text{ ton}\end{aligned}$$

$$\begin{aligned} \text{Total Bilge thrown/yr by passenger ship} &= 3856.05 + 1815 + 647.9 \text{ Ton} \\ &= 6318.95 \text{ ton} \end{aligned}$$

### **Calculation for Running Hour, Fuel Consumption and Distance Covered**

#### **Category -1 (Up to 30m)**

Total No = 779

Average running hour/month = 240 hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 6 Kt =  $6 \times 1.825 = 10.95$  km/hr

Fuel Consumption/Hr/engine = 25 ltr

No of Engine = 01

$$\begin{aligned} \text{Total running hr} &= \text{Running hour/month} \times \text{No of ship} \times \text{month of Operation} \\ &= 240 \times 779 \times 11 \\ &= 2056560 \text{ Hr} \end{aligned}$$

$$\begin{aligned} \text{Total distance covered} &= \text{Total running Hr} \times \text{Average speed (Km/hr)} \\ &= 2056560 \times 10.95 \\ &= 22519332 \text{ km} \end{aligned}$$

$$\begin{aligned} \text{Total Fuel Consumption} &= \text{Total running Hr} \times \text{Fuel consumption/ hr} \times \text{No of engine} \\ &= 2056560 \times 25 \times 1 \\ &= 51414000 \text{ Ltr} \\ &= 51414 \text{ Ton} \end{aligned}$$

#### **Category -2 (30m to 50m)**

Total No = 220

Average running hour/month = 300 hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 8 Kt =  $8 \times 1.825 = 14.6$  km/hr

Fuel Consumption/Hr/engine = 70 ltr

No of Engine = 02

$$\text{Total running hr} = \text{Running hour/month} \times \text{No of ship} \times \text{month of Operation}$$



$$= 300 \times 220 \times 11$$

$$= 726000 \text{ Hr}$$

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 726000 \times 14.6$$

$$= 10599600 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/ hr x No of engine**

$$= 726000 \times 70 \times 2$$

$$= 101640000 \text{ Ltr}$$

$$= 101640 \text{ Ton}$$

**Category - 3 (Above 50m)**

Total No = 62

Average running hour/month = 300 hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 10 Kt =  $10 \times 1.825 = 18.25 \text{ km/hr}$

Fuel Consumption/Hr/engine = 120 ltr

No of Engine = 02

**Total running hr = Running hour/month x No of ship x month of Operation**

$$= 300 \times 62 \times 11$$

$$= 204600 \text{ Hr}$$

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 204600 \times 18.25$$

$$= 3733950 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/ hr x No of engine**

$$= 204600 \times 120 \times 2$$

$$= 49104000 \text{ Ltr}$$

$$= 49104 \text{ Ton}$$

### **Calculation for Solid Waste**

Assumed that,

Solid waste/person = 0.5 kg

40% of passenger usage toilet and

Month of operation = 11m (01 month for maintenance)

### **Category -1 (Up to 30m)**

No of Ship = 779

As Cat-1 ships are used for short trip, the toilet used by very less no of passengers.

For calculation purpose let us consider 10 persons per ship

**Solid waste thrown/yr = Solid waste/person X person X no of ship X month of op**

$$= 0.5 \times 10 \times 779 \times 11$$

$$= 42845 \text{ kg}$$

$$= 42.85 \text{ MT}$$

### **Category -2 (30m to 50m)**

No of Ship = 220

**Solid waste thrown/yr = Solid waste/person X person X no of ship X month of op**

$$= 0.5 \times \left( \frac{475 \times 40}{100} \right) 220 \times 11$$

$$= 229900 \text{ KG}$$

$$= 230 \text{ MT}$$

### **Category -3 (Above 50m)**

No of Ship = 62

**Solid waste thrown/yr = Solid waste/person X person X no of ship X month of op**

$$= 0.5 \times \left( \frac{821 \times 40}{100} \right) 62 \times 11$$

$$= 111984.4 \text{ KG}$$

$$= 112 \text{ MT}$$

**Total solid waste thrown by passenger ship = 42.85 + 230+ 112 MT**  
**= 384.85 MT**

**Quantification of Marine Pollution by Cargo Ship.**

3. The cargo ships of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Solid Waste (neglected as the quantity is very small)
- c. Emission of exhaust gases and pollutants

The detail particulars of inland cargo for the calculation are shown in the table below:

**Table 2: Details of Inland Cargo Vessels of Bangladesh**

<b>Cat (Length)</b>	<b>Total No</b>	<b>Engine Power (HP)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/hr)</b>	<b>Avg Running hr/month</b>	<b>Bilge/month (Ltr)</b>
Cat – 1 (Up to 30m)	348	300-350	01	60	150	375
Cat – 2 (30-50m)	1554	300-350	02	60	120	600
Cat – 3 (Above 50m)	311	450-720	02	75	120	675

**Source:** BIWTA, DOS & Survey

4. The detail calculation for bilges & emission of exhaust gases and pollutants for cargo vessels are shown below:

**Calculation for Bilge - Category - 1 (Up to 30m)**

Total No = 348

Average running hour/month = 150 Hr

Bilge/Month/ship = 375 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}
 \text{Bilge thrown/Yr} &= \text{Bilge/month X No of Ship X Month of Operation} \\
 &= 375 \times 348 \times 11 \\
 &= 1435500 \text{ Ltr} \\
 &= 143505 \text{ Ton}
 \end{aligned}$$

### Category - 2 (30m to 50m)

Total No = 1554

Average running hour/month = 120 Hr

Bilge/Month/ship = 600 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}
 \text{Bilge thrown/Yr} &= \text{Bilge/month X No of Ship X Month of Operation} \\
 &= 600 \times 1554 \times 11 \\
 &= 10256400 \text{ Ltr} \\
 &= 10256.40 \text{ Ton}
 \end{aligned}$$

### Category - 3 (Above 50m)

Total No = 311

Average running hour/month = 120 Hr

Bilge/Month/ship = 675 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}
 \text{Bilge thrown/Yr} &= \text{Bilge/month X No of Ship X Month of Operation} \\
 &= 675 \times 311 \times 11 \\
 &= 2309175 \text{ Ltr} \\
 &= 2309.175 \text{ Ton}
 \end{aligned}$$

$$\begin{aligned}
 \text{Total bilge thrown by Cargo Vessel/yr} &= 1435.5 + 10256.40 + 2309.175 \\
 &= 2309.175 \text{ Ton}
 \end{aligned}$$

### Calculation for Running Hour, Fuel Consumption and Distance Covered

#### Category -1 (Up to 30m)

Total No = 348

Average running hour/month = 150 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 6 Kt =  $6 \times 1.825 = 10.95$  km/hr

Fuel Consumption/Hr/engine = 60 Ltr

No of Engine = 01

**Total running hr = Running hour/month x No of ship x month of Operation**  
= 150 X 348 X 11  
= 574200 Hr

**Total distance covered = Total running Hr x Average speed (Km/hr)**  
= 574200 x 10.95  
= 6287490 km

**Total Fuel Consumption = Total running Hr x Fuel consumption/ hr x No of engine**  
= 574200 x 60 x 1  
= 34452000 Ltr  
= 34452 Ton

**Category -2 (30m to 50m)**

Total No = 1554

Average running hour/month = 120 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 6 Kt =  $8 \times 1.825 = 14.6$  km/hr

Fuel Consumption/Hr/engine = 60 Ltr

No of Engine = 02

**Total running hr = Running hour/month x No of ship x month of Operation**  
= 120 X 1554 X 11  
= 2051280 Hr

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 2051280 \times 14.6$$

$$= 29948688 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/hr x No of engine**

$$= 2051280 \times 60 \times 2$$

$$= 246153600 \text{ Ltr}$$

$$= 246153.6 \text{ Ton}$$

**Category - 3 (Above 50m)**

Total No = 311

Average running hour/month = 120 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 6 Kt =  $10 \times 1.825 = 18.25 \text{ km/hr}$

Fuel Consumption/Hr/engine = 75 Ltr

No of Engine = 02

**Total running hr = Running hour/month x No of ship x month of Operation**

$$= 120 \times 311 \times 11$$

$$= 410520 \text{ Hr}$$

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 410520 \times 18.25$$

$$= 7491990 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/hr x No of engine**

$$= 410520 \times 75 \times 2$$

$$= 61578000 \text{ Ltr}$$

$$= 61578 \text{ Ton}$$

**Quantification of Marine Pollution by Oil Tanker.**

5. The oil tankers of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Oily Water Mixture

- c. Ballast Water
- d. Solid Waste (neglected as the quantity is very small)
- e. Emission of exhaust gases and pollutants

The detail particulars of inland oil tankers for the calculation are shown in the table below:

**Table 3: Details of Inland Oil Tankers of Bangladesh**

Cat (Capacity, MT)	Total No	Engine Power (HP)	No of Engine	Fuel Cons (Ltr/hr)	Avg Running hr/month	Bilge/month (Ltr)
Cat – 1 (Up to 1000 )	43	275-300	02	60	90	450
Cat – 2 (1050 to 1750 )	136	550-720	02	75	113	625
Cat – 3 (Above 1750)	31	720	02	75	120	750

**Source:** BIWTA, DOS & Survey

6. The detail calculation for bilges, oily water, ballast water & emission of exhaust gases and pollutants for oil tankers are shown below:

**Calculation for Bilge - Category -1 (Up to 1050 MT)**

Total No = 43

Average running hour/month = 90 Hr

Bilge/Month/ship = 450 ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}
 \text{Bilge thrown/Yr} &= \text{Bilge/month} \times \text{No of Ship} \times \text{Month of Operation} \\
 &= 450 \times 43 \times 11 \\
 &= 212.85 \text{ Ton}
 \end{aligned}$$

**Category – 2 (Above 1050 MT to 1750 MT)**

Total No = 136

Average running hour/month = 113 Hr

Bilge/Month/ship = 625 Ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\text{Bilge Thrown/Yr} = \text{Bilge/month} \times \text{No of ship} \times \text{month of Operation}$$

$$\begin{aligned}
 &= 625 \times 136 \times 11 \\
 &= 935000 \text{ Ltr} \\
 &= 935 \text{ Ton}
 \end{aligned}$$

**Category – 3 (Above 1750 MT)**

Total No = 31

Average running hour/month = 120 Hr

Bilge/Month/ship = 750 ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}
 \text{Bilge Thrown/Yr} &= \text{Bilge/month} \times \text{No of ship} \times \text{month of Operation} \\
 &= 750 \times 31 \times 11 \\
 &= 255.75 \text{ Ton}
 \end{aligned}$$

$$\begin{aligned}
 \text{Total Bilge thrown/yr by Oil Tankers} &= 212.85 + 935 + 255.75 \text{ Ton} \\
 &= 1403.6 \text{ Ton}
 \end{aligned}$$

**Calculation for Oily – Water, Category -1 (Up to 1050 MT)**

Total No = 43

Running Time as Bay Crossing = 03 Months

Two third of ships are used as Bay crossing

Trip/month = 02

Tank Capacity = 225 Ton

No of Ship in Op =  $\frac{2}{3} \times 43 = 29$  Ships

$$\begin{aligned}
 \text{Oily-Water thrown/Yr} &= \text{No of Ship} \times \text{Tank Capacity} \times \text{Month of Op} \times \text{Trip/month} \\
 &= 29 \times 225 \times 3 \times 2 \\
 &= 39150 \text{ Ton}
 \end{aligned}$$

**Category - 2 (Above 1050 MT to 1750 MT)**

Total No = 136

Average Running Period per yr = 11 month (01 month for maintenance)



Trip/month = 03

Tank Capacity = 235 Ton

$$\begin{aligned}\text{Oily-Water thrown/Yr} &= \text{No of Ship X Tank Capacity X Month of Op X Trip/month} \\ &= 136 \times 235 \times 11 \times 3 \\ &= 1054680 \text{ Ton}\end{aligned}$$

### **Category - 3 (Above 1750 MT)**

This type of ship has ballast tank. So no oily water is thrown.

Total Oily Water thrown by oil tankers = 39150 + 1054680 = 1093830 Ton

### **Calculation for Ballast Water**

Only the tankers above 1750 MT has ballast tanks

Total No = 31

Average Running Period per yr = 11 month (01 month for maintenance)

Trip/month = 03

Average Tank Capacity (Ballast tanks) = 300 Ton

$$\begin{aligned}\text{Ballast water thrown/Yr} &= \text{No of Ship X Tank Capacity X Month of Op X Trip/month} \\ &= 31 \times 300 \times 11 \times 3 \\ &= 3,06,900 \text{ Ton}\end{aligned}$$

### **Calculation for Running Hour, Fuel Consumption and Distance Covered**

#### **Category -1 (Up to 1050 MT)**

Total No = 43

Average running hour/month = 90 hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 8 Kt =  $8 \times 1.825 = 14.6$  km/hr

Fuel Consumption/Hr/engine = 60 ltr

No of Engine = 02

$$\begin{aligned}\text{Total running hr} &= \text{Running hour/month x No of ship x month of Operation} \\ &= 90 \times 43 \times 11 \\ &= 42570 \text{ Hr}\end{aligned}$$

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 42570 \times 14.6$$
$$= 621522 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/hr x No of engine**

$$= 42570 \times 60 \times 02$$
$$= 5108400 \text{ Ltr}$$
$$= 5108.4 \text{ Ton}$$

**Category -2 (Above 1050 MT to 1750 MT)**

Total No = 136

Average running hour/month = 113 hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 8 Kt =  $12 \times 1.825 = 21.9 \text{ km/hr}$

Fuel Consumption/Hr/engine = 75 ltr

No of Engine = 02

**Total running hr = Running hour/month x No of ship x month of Operation**

$$= 113 \times 136 \times 11$$
$$= 169048 \text{ Hr}$$

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 169048 \times 21.9$$
$$= 3702151 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/hr x No of engine**

$$= 169048 \times 75 \times 2$$
$$= 25357200 \text{ Ltr}$$
$$= 25357.20 \text{ Ton}$$

**Category - 3 (Above 1750 MT)**

Total No = 31

Average running hour/month = 120 hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 15 Kt =  $15 \times 1.825 = 27.375 \text{ km/hr}$

Fuel Consumption/Hr/engine = 75 ltr

No of Engine = 02

$$\begin{aligned} \text{Total running hr} &= \text{Running hour/month} \times \text{No of ship} \times \text{month of Operation} \\ &= 120 \times 31 \times 11 \\ &= 40920 \text{ Hr} \end{aligned}$$

$$\begin{aligned} \text{Total distance covered} &= \text{Total running Hr} \times \text{Average speed (Km/hr)} \\ &= 40920 \times 27.375 \\ &= 1120185 \text{ km} \end{aligned}$$

$$\begin{aligned} \text{Total Fuel Consumption} &= \text{Total running Hr} \times \text{Fuel consumption/hr} \times \text{No of engine} \\ &= 40920 \times 75 \times 2 \\ &= 6138000 \text{ Ltr} \\ &= 6138 \text{ Ton} \end{aligned}$$

#### **Quantification of Marine Pollution by Sand Carrier.**

7. The sand carriers of inland routes are polluting the marine environment by discharging the following:

- a. Bilges
- b. Solid Waste (neglected as the quantity is very small)
- c. Emission of exhaust gases and pollutants

The detail particulars of sand carriers for the calculation are shown in the table below:

**Table 4: Details of Inland Sand Carriers of Bangladesh**

<b>Cat (Length)</b>	<b>Total No</b>	<b>Engine Power (HP)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/hr)</b>	<b>Avg Running hr/month</b>	<b>Bilge/month (Ltr)</b>
Cat – 1 (Up to 30m)	2065	85 - 165	02	60	30	228
Cat – 2 (Above 30m)	1346	210 - 300	01	60	55	350

**Source:** BIWTA, DOS & Survey

8. The detail calculation for bilges & emission of exhaust gases and pollutants for **sand carriers** are shown below:

#### **Calculation for Bilge - Category -1 (Up to 30m)**

Total No = 2065

Average running hour/month = 210 Hr

Bilge/Month/ship = 228 ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}\text{Bilge thrown/Yr} &= \text{Bilge/month X No of Ship X Month of Operation} \\ &= 228 \times 2065 \times 11 \\ &= 5179 \text{ ton}\end{aligned}$$

### **Category – 2 (Above 30m)**

Total No = 1346

Average running hour/month = 195 Hr

Bilge/Month/ship = 350 ltr

Average Running Period per yr = 11 month (01 month for maintenance)

$$\begin{aligned}\text{Bilge Thrown/Yr} &= \text{Bilge/month X No of ship X month of Operation} \\ &= 350 \times 1346 \times 11 \\ &= 5182.10 \text{ Ton}\end{aligned}$$

$$\begin{aligned}\text{Total bilge thrown/yr by Sand Carrier} &= 5179 + 5182.10 \\ &= 10361.1 \text{ Ton}\end{aligned}$$

### **Calculation for Running Hour, Fuel Consumption and Distance Covered**

#### **Category -1 (Up to 30m)**

Total No = 2065

Average running hour/month = 210 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 4 Kt =  $4 \times 1.825 = 7.3$  km/hr

Fuel Consumption/Hr/engine = 30 Ltr

No of Engine = 02

$$\begin{aligned}\text{Total running hr} &= \text{Running hour/month x No of ship x month of Operation} \\ &= 210 \times 2065 \times 11 \\ &= 4770150 \text{ Hr}\end{aligned}$$

$$\begin{aligned}\text{Total distance covered} &= \text{Total running Hr x Average speed (Km/hr)} \\ &= 4770150 \times 7.3\end{aligned}$$

$$= 34822095 \text{ km}$$

**Total Fuel Consumption = Total running Hr x Fuel consumption/hr x No of engine**

$$= 4770150 \times 30 \times 2$$

$$= 286209000 \text{ Ltr}$$

$$= 286209 \text{ Ton}$$

**Category -2 (Above 30m)**

Total No = 1346

Average running hour/month = 195 Hr

Average Running Period per yr = 11 month (01 month for maintenance)

Average speed = 5 Kt =  $5 \times 1.825 = 9.125 \text{ km/hr}$

Fuel Consumption/Hr/engine = 55 Ltr

No of Engine = 01

**Total running hr = Running hour/month x No of ship x month of Operation**

$$= 195 \times 1346 \times 11$$

$$= 2887170 \text{ Hr}$$

**Total distance covered = Total running Hr x Average speed (Km/hr)**

$$= 2887170 \times 9.125$$

$$= 26345426 \text{ km}$$

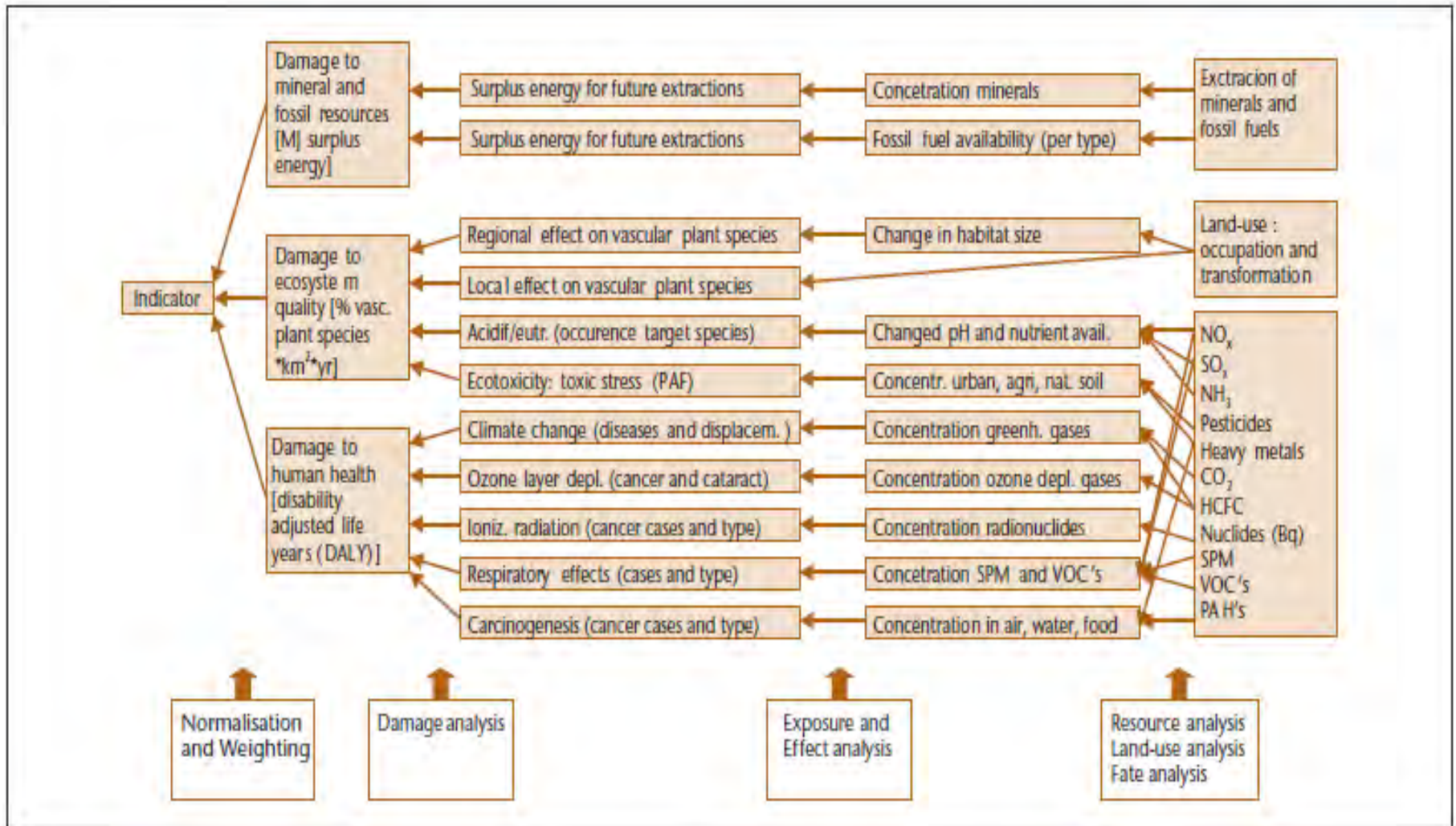
**Total Fuel Consumption = Total running Hr x Fuel consumption/hr x No of engine**

$$= 2887170 \times 55 \times 1$$

$$= 158794350 \text{ Ltr}$$

$$= 158794.35 \text{ Ton}$$

**DAMAGE MODEL OF ECO-INDICATOR 99(I)**



**প্রশ্নাবলী (লঞ্চ সার্ভিস)**

১। আপনি এই জাহাজে কি কাজে নিয়োজিত রয়েছেন?

২। আপনার জাহাজটি কত মিটার লম্বা?

৩। জাহাজে মোট কতজন জনবল রয়েছেন?

৪। আপনারা মাসিক মোট কয়টি Trip দিয়ে থাকেন?

৫। দৈনিক কি পরিমাণ Bilge আপনারা পানিতে ফেলে থাকেন?

৬। প্রতি Trip সাধারণতঃ কত জনবল বহন করে থাকেন?

৭। আপনারদের জাহাজে মোট কতটি টয়লেট রয়েছে এবং কোনো সেফটি Tank আছে কিনা?

৮। এই জাহাজের ইঞ্জিন কয়টি, ইঞ্জিনের ক্ষমতা কত এবং দৈনিক কত ঘন্টা চালানো হয়?

## প্রশ্নাবলী (কার্গো জাহাজ)

- ১। আপনি এই জাহাজে কি কাজে নিয়োজিত রয়েছেন?
- ২। আপনার জাহাজটি কত মিটার লম্বা?
- ৩। জাহাজে মোট কতজন জনবল রয়েছেন?
- ৪। আপনারা মাসিক মোট কয়টি Trip দিয়ে থাকেন?
- ৫। দৈনিক কি পরিমাণ Bilge আপনারা পানিতে ফেলে থাকেন?
- ৬। জাহাজে মোট কতটি টয়লেট রয়েছে এবং কোনো সেফটি Tank রয়েছে কিনা?
- ৭। এই জাহাজের ইঞ্জিন কয়টি, ইঞ্জিনের ক্ষমতা কত এবং দৈনিক কত ঘন্টা চালানো হয়?



## প্রশ্নাবলী (তেলবাহী জাহাজ)

- ১। আপনি এই জাহাজে কি কাজে নিয়োজিত রয়েছেন?
- ২। আপনার জাহাজের ধারণ ক্ষমতা কত?
- ৩। জাহাজে মোট কতজন জনবল রয়েছেন?
- ৪। আপনারা মাসিক মোট কয়টি Trip দিয়ে থাকেন?
- ৫। মাসিক কি পরিমাণ Bilge আপনারা পানিতে ফেলে থাকেন?
- ৬। জাহাজে মোট কতটি টয়লেট রয়েছে এবং কোনো সেফটি Tank রয়েছে কিনা?
- ৭। তেল খালি করার পর Stability ঠিক রাখার জন্য আপনারা কি করেন?
- ৮। আপনার জাহাজে Ballast Tank আছে কিনা? না থাকলে কি করেন?
- ৯। Ballast Tank অথবা সামনের ট্যাংকে কি পরিমাণ পানি নিয়ে থাকেন?

## প্রশ্নাবলী (বালুবাহী জাহাজ)

- ১। আপনি এই জাহাজে কি কাজে নিয়োজিত রয়েছেন?
- ২। আপনার জাহাজটি কত মিটার লম্বা?
- ৩। জাহাজে মোট কতজন জনবল রয়েছেন?
- ৪। মাসিক কি পরিমাণ Bilge আপনারা পানিতে ফেলে থাকেন?
- ৫। জাহাজে মোট কতটি টয়লেট রয়েছে এবং কোনো সেফটি Tank রয়েছে কিনা?
- ৬। আপনার জাহাজে মোট ইঞ্জিন কয়টি?

## SUMMARY OF SURVEY ANALYSIS

### PASSENGER VESSEL (1061)

<b>Cat</b>	<b>Type</b>	<b>Length Range</b>	<b>Total No</b>	<b>Engine Power(HP)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/Hr)</b>	<b>Avg Running hr/month</b>	<b>Passenger Capacity (P)</b>	<b>Bilge/month (Ltr)</b>	<b>Solid waste /month(Ton)</b>
Cat - 1	Small	Up to 30m	779	125 -200	01	25	240	145	450	42.85
Cat - 2	Medium	30m to 50m	220	450 -720	02	70	300	475	750	230
Cat - 3	Large	Above 50m	62	1200 - 1500	02	120	300	821	950	112

### CARGO VESSEL (2213)

<b>Cat</b>	<b>Type</b>	<b>Length Range</b>	<b>Total No</b>	<b>Engine Power (Hp)</b>	<b>No of Engine</b>	<b>Fuel Cons (Ltr/Hr)</b>	<b>Avg running hr/month</b>	<b>Bilge/month (Ltr)</b>
Cat - 1	Small	Up to 30m	348	300 - 350	01	60	150	375
Cat - 2	Medium	30m – 60m	1554	300 -350	02	60	120	600
Cat - 3	Large	Above 60m	311	450 -720	02	75	120	675

### SAND CARRIER (3411)

Category	Type	Length Range	Total No	Engine Power (Hp)	No of Engine	Fuel Cons (Ltr/Hr)	Avg Running Hr/month	Bilge/month (Ltr)
Cat - 1	Small	Up to 30m	2065	85 -165	02	30	210	228
Cat - 2	Large	Above 30m	1346	210-300	01	55	195	350

### OIL TANKER (210)

Category	Type	Capacity (MT)	Total No	Engine Power (Hp)	No of Engine	Fuel Cons (Ltr/Hr)	Avg Running Hr	Bilge/month (Ltr)
Cat - 1	Shallow Water	Up to 1050	43	275-300	02	60	90	450
Cat - 2	Bay Crossing	1050 - 1750	136	550-720	02	75	113	625
Cat - 3	Coastal/ Bay Crossing	Above 1750	31	720	02	75	120	750

### **TANK CAPACITY OF OIL TANKERS**

<b>Category</b>	<b>Tank-1 (MT)</b>	<b>Tank-2 (MT)</b>	<b>Tank-3 (MT)</b>	<b>Tank-4 (MT)</b>	<b>Tank-5 (MT)</b>	<b>Total (MT)</b>
Cat - 1	225	380	395	-	-	1000
Cat - 2	235	335	405	425	345	1745
Cat - 3	235	565	570	565	605	2540