

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES  
DEHRADUN  
COLLEGE OF MANAGEMENT & ECONOMIC STUDIES**



**ESTIMATION OF BUNKER POTENTIAL FROM  
'MAJOR DRY BULKS' SHIPPING IN INDIA**

***Submitted in Partial fulfillment for the  
Award of the Degree  
Master in Business Administration  
(Energy Trading)***

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**CHEMOIL ADANI**

**DECLARATION FROM COMPANY**

This is to certify that Mr. Kailash Srinivasan, pursuing Masters in Business Administration (MBA) in Energy Trading from University of Petroleum and Energy Studies, Dehradun, was a Management Trainee at ChemoilAdaniPvt. Ltd. (CAPL), Ahmedabad for the period 21<sup>st</sup> May 2013 to 19<sup>th</sup> July 2013, and has successfully completed his Summer Internship Training.

As part of the training, the project report titled "Bunker Potential from Major Dry Bulks Shipping in India", submitted by him to the undersigned is an authentic record of his original work, which was carried out under my supervision and guidance.

We wish him all the best for his future endeavors'.

20<sup>th</sup> July 2013

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# Introduction

## 1.0 Introduction

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International sea transportation has been an instrumental factor in world economic activity and international trade. Since time immemorial, sea exploration and subsequently, sea borne trade have been the very forces that have shaped the world as we know today. According to (Lloyd's List Intelligence, 2013) over 90 percentage of world trade is seaborne, 6 percentage by rail and road, 3 percentage by pipeline, and the rest by air. In 1950 the world seaborne trade comprised about 0.5 billion metric tons, which has expanded to an estimated 8,748 million metric tonnes (MMT) in 2012. This consisted of 2,477 MMT of dry bulk commodities (Iron ore, grain, coal, bauxite/alumina and phosphate), 2,796 MMT of liquid bulk commodities, and 3,475 MMT of other dry cargo and manufactured goods (RMT-2012. UNCTAD). The dry bulk shipping market is by far the largest sector of the world's shipping market in terms of cargo volume and weight. At the end of 2012 the cargo carrying capacity of the world dry bulk shipping fleet of 700 MMT or roughly 40% of the total world shipping fleet, and the number of dry bulk ships exceeded 10,175 (Lloyd's List Intelligence, 2013)

There is a high degree of correlation between sea-borne trade and the world GDP that warrants the inference that maritime shipping is indeed an enabler of growth. Figure 1.1 below shows how seaborne trade and World GDP growth have occurred hand in hand. In the year 2009 due to world recession, the largest consumers – the developed countries reduced their consumption, leading to a ripple effect that severely affected many developing countries whose economy was sustained primarily due to exports. This resulted in the negative growth of the sea borne trade and a corresponding contraction of the world GDP.

Primary data from IHS Fairplay indicate that sea borne trade volumes had held steady in 2011, with total volumes reaching a record 8748 MMT. This expansion was driven by the rapid growth of 5.6% in dry cargo volumes that held strong with continued import demand for raw materials in large developing economies, notably

China and India. Notably, with China becoming the world's largest trading economy overtaking USA this quarter, there has been renewed support for dry bulk imports into the Asian Region. China accounted for two-thirds of global iron-ore trade volumes in 2011.

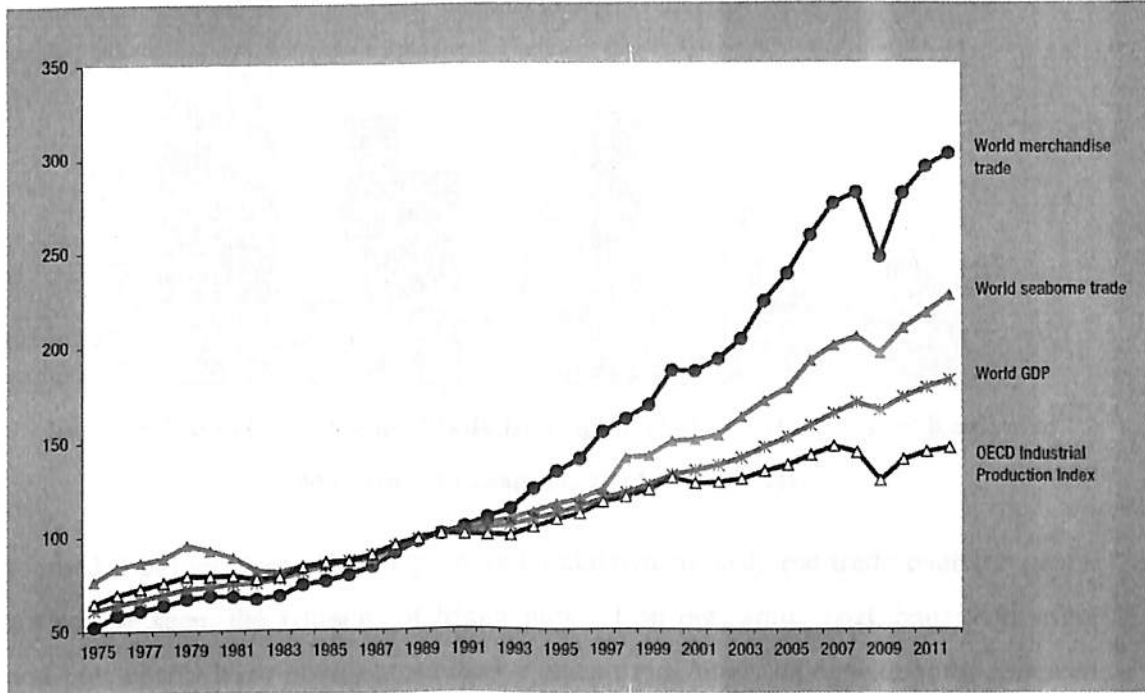
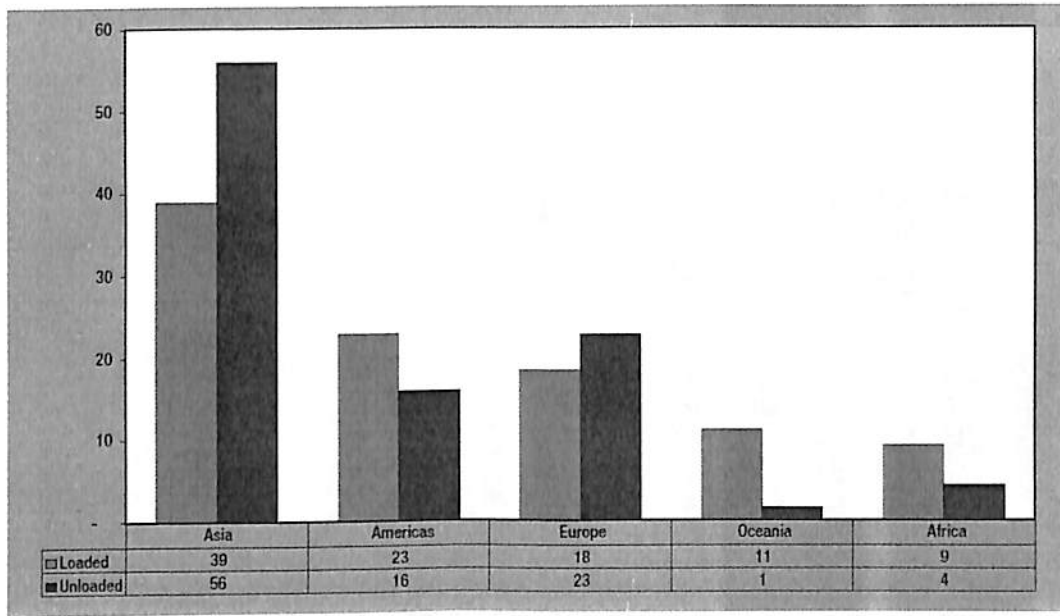


Figure 1.1 World GDP and Seaborne Trade (Source: Review of Maritime Transport, 2012. UNCTAD)

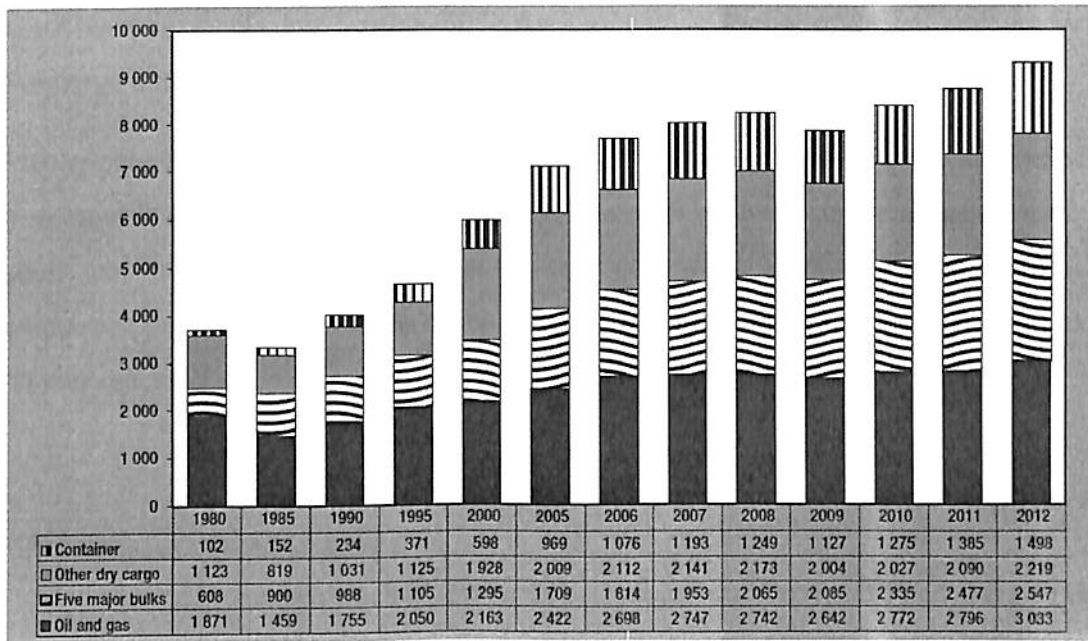
This renewed import interest from the Asian region has contributed in the region occupying a dominant position in world seaborne trade as seen in the following Figure 1.2.



**Figure1.2 World Seaborne Trade by Region (%) in 2011(Source: Review of Maritime Transport, 2012. UNCTAD)**

Figure1.3 below shows the cargo-wise breakdown of seaborne trade over the years. As can be seen, the volumes of Major bulks (Iron ore, grain, coal, bauxite/alumina and phosphate) have grown at a rather constant rate since 2008, with some renewed interest in 2012. As per latest available figures from (RMT 2012, UNCTAD), in 2011, the five major dry bulks accounted for approximately 42 per cent of total dry cargo worldwide. Among the major dry bulks, Iron Ore accounted for the largest share of 42.5%, followed by coal at 38.1%, grains at 14%, and the rest by bauxite/alumina, and phosphate rock. (RMT 2012, UNCTAD)

Growth in the five major bulks remained closely linked to steel production, growing infrastructure development needs of emerging developing countries, urbanization and the evolution of the global manufacturing base. World consumption and production of steel, continued to expand in 2011 despite prevailing global economic uncertainties and slowdowns.



**Figure 1.3 Cargo-wise breakdown of Seaborne trade (Source: Review of Maritime Transport, 2012. UNCTAD)**

Containerised Cargo shipping is more akin to Liner Services that ply regularly along a route with fixed schedules. As such, most Container Lines have fixed bunker lifting schedules by means of long term fuel supply contracts with suppliers. This cannot be generalized to the entire container liner services, and there is a fair amount of container vessels that take bunker off schedule. There is a significant volume of container vessels calling at South Asian Peninsular, predominantly at Srilankan ports, that looks to become a significant trans-shipment port. Most of these vessels however, prefer taking bunker at Colombo, as opposed to other Indian ports, mostly due to the relatively cheaper fuel available.

The Dry Bulk market in contrast, is inherently dynamic due to the fact that Bulk carriers neither operate on fixed schedules nor on fixed routes. It is not rare to see a Bulk Vessel carrying Steam Coal following Discharge at Kandla Port, may clean hatches and load grains for export. Hence the bunker of the bulk market offers lucrative propositions.

Due to many large projects being commissioned in India, such as the Adani and TATA Ultra Mega Power Plant (UMPP) and due to a good harvest this year, there



have been an increasing number of bulkers calling at Indian ports for both import discharge and export loading.

For tapping into this lucrative market, it is important to understand the trade cycles, important load and discharge ports for each cargo, the routes that the bulkers usually take, and finally the price competitiveness of Indian bunker suppliers against competing ports along the route of the vessel. This project is aimed at estimating the bunker potential due to the movement of dry bulkers at Indian ports.

### **1.1 OBJECTIVE OF STUDY**

- To assess the movements of Iron Ore, Coal (all variants) and Food Grains (all variants), in and out of the country
- To understand the dynamics of the underlying market of the selected commodities
- To estimate future volumes of the specified commodities
- To analyse and estimate bunker potential
- To understand commercial and physical aspects of bunkering

### **1.2 SCOPE OF STUDY**

The following dry bulk cargo and their movements via bulkers only are considered.

- Food Grains (all variants)
- Iron Ore
- Coal (all variants)

Other than the above mentioned cargo, there are many other dry bulk commodities with sizeable imports and exports, however, are beyond the scope of this project.

As part of primary data collection on vessel movements, all vessels calling at most major ports of India within the past two months carrying above mentioned cargo is tracked. A larger time span for tracking would increase the vessel database and may increase the accuracy of estimation, but however is not considered due to time and resource constraints.

### **1.3 RESEARCH METHODOLOGY**

#### **Secondary data collection**

- Existing reports and research papers from international journals
- Historical Trade data on Coal, Food Grains and Iron Ore from Dept. of Commerce India, Import-Export Data Bank
- Historical data on Prices at various competing ports

#### **Primary data collection**

- Tracking bulk cargo vessels calling at various ports of India for Export Loading and Import Discharge, using data from EXIM and vessel tracking platform- 'Sea Web'
- Collecting information from Ship owners, operators and agents to determine the vessel itinerary and bunkering schedule
- Data collection by telephonic interviews and by questionnaires

# Introduction to Bunkering

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## 2.0 Introduction to Bunkering

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### 2.1 BUNKERS and BUNKERING

The word 'Bunker' originally referred to the storage area for the fuel that the ships used to drive their engines. In early days of the steamships, these bunkers contained coal, which was burnt to produce steam, powering the ship, much like how a steam turbine works. Following modernisation, almost 98% of the world fleet has moved to oil fired engines, very similar to the diesel engines in car, but on a much larger scale. To understand the scale, a typical engine would be 2-storeys tall, and occupy as much space as two large rooms.

The word bunker now refers to the fuel, and the activity of a ship refuelling is referred to as bunkering. Bunker fuels are classified into two categories, viz. Distillate Oil (DO/GO) and Residual Oil (FO) that is used for running the generators, and the ship's engines respectively. There are various quality parameters that must be met by the bunker suppliers. Such quality constraints and limits are defined by ISO and are listed under **ISO8217:2005**, and **ISO8217:2010**. Furthermore, there are some environment pollution related regulations as set by **IMO (International Maritime Organisation)** under the **MARPOL (Marine Pollution) Annex VI**. As a result there are restrictions with respect to Sulphur content in the fuel burned, specifically in certain defined ECAs (Emission Control Areas). Identical limits are set by both the IMO and the EU, but IMO's regulations are yet to be ratified and EU will not accept any vessels travelling within its waters to burn high-sulphur fuel oil from 2010 onwards. These parameters would be dealt with more deeply in the following sections.

The basic feedstock for the DO/FO is the crude oil. The crude oil is subject to various processes such as Atmospheric and Vacuum distillation, following by cracking and coking. The products of distillation in order of value are ATF, Kerosene, Naptha, Gasoline, Diesel, Lubes and residuals. The bunker market is based on the Residual and Distillate products. Since DO/FO is a by-product of crude, its prices are derived from the crude market as well. This is the reason, why risk managers in Bunkering

Firms often hedge their positions on NYMEX and other commodity exchanges, by trading in crude futures.

Marine distillates historically come from low-grade distillate recycle streams that are unsuitable for upgrading to diesel fuel or other low-sulphur products. However, with the commissioning of newer and more complex refineries such as Reliance's Jamnagar refinery, by repeated processing, these refineries generate almost zero residual. Thus, the supply chain for the marine fuels industry begins with integrated petroleum refineries, where —bottoms from atmospheric and vacuum distillation unit operations are combined to form the bulk of residual fuel stocks. The dominant producers of marine fuels are divisions of the major oil companies such as Shell Trading (STUSCO) and BP Marine. Around the world, these large producers are joined by hundreds of smaller firms that contract to transport, blend, and sell low-grade fuel stocks to the shipping industry.

Most of the worldwide bunker fuel volume is sold to firms that operate bunkering facilities around the world, although some of the major petroleum refiners also contract for and deliver marine fuels. These large refiners, including the Chemoil Group, O.W. Bunker, World Fuel Services, A/S Dan Bunkering, the Chinese government-owned Chimbusco, purchase blended stocks from the producers and also blend, transport, and store some products themselves. As much as 25% of the world's marine fuels are purchased and resold by brokers or other intermediaries that never actually take physical control of the bunker fuel. Arbitrage activities of these firms help keep the worldwide market efficient, as excess price differentials are quickly exploited and eliminated.

The final stage of the marine fuel supply chain is the bunkering itself, which can either be done while the ship is docked or directly from bunker barges while the ship is anchored. There are hundreds of bunkering ports around the world and thousands of firms that provide the actual bunkering service.

Logistics and transport cost factors influence the location of bunker ports. In addition to being located close to supply sources (petroleum refineries) and consumers of transported goods (major population centres), bunkering ports are often strategically located along high-density shipping lanes. In this regard, the world's largest Bunkering Hub is in Singapore and handles more than twice as much bunker fuel volume as the next biggest provider. Singapore monthly bunker deliveries range in excess of 3MMT. Singapore is the world's largest transshipment port, and so, it is very normal for vessels with cargo operations to take bunker. However, with opening of dedicated Bunkering Anchorages in 2005, the number of bunker-only vessel calls has greatly increased. Similarly, the Panama and Gibraltar ports are other examples of strategically located facilities. Another significant bunkering hub is at Fujairah Port in UAE. Owing to the fact that a large percentage of the world's oil is exported from the Middle East via the Hormuz, Fujairah, finds itself very strategically located. Fujairah is the go-to port for almost all Crude and Product tankers calling at Middle Eastern ports. In North America, the largest facilities follow the general pattern suggested by location theory; Los Angeles, San Francisco, New York, Philadelphia, Houston, and New Orleans are close to both refinery supply and transport destinations.

Amidst two major bunkering hubs, India does not enjoy the strategic advantage. Moreover, as Bunkering at OPL is not allowed by the Indian govt., Bunker-only calls are very rare. Hence, a majority of the Indian bunker market depends on the vessels calling at various ports.

## **2.2 PHYSICAL PARAMETER SPECIFICATIONS of HFO and MGO**

As mentioned previously, there are various quality parameters that must be met by the bunker suppliers. Such quality constraints and limits are defined by ISO and are listed under **ISO8217:2005**, and **ISO8217:2010**. Furthermore, there are some environment pollution related regulations as set by **IMO (International Maritime Organisation)** under the **MARPOL (Marine Pollution) Annex VI**. Table 2.1 below lists the required specifications for various parameters of IFO as defined under **ISO8217:2010**.

Parameter	Unit	Limit	RMA	RMB	RMD	RME	RMG				RMK		
			10	30	80	180	180	380	500	700	380	500	700
Viscosity at 50°C	mm <sup>2</sup> /s	Max	10	30	80	180	180	380	500	700	380	500	700
Density at 15°C	kg/m <sup>3</sup>	Max	920	960	975	991	991				1010		
Micro Carbon Residue	% m/m	Max	2.5	10	14	15	18				20		
Aluminium + Silicon	mg/kg	Max	25	40		50	60						
Sodium	mg/kg	Max	50	100		50	100						
Ash	% m/m	Max	0.04	0.07		0.1				0.15			
Vanadium	mg/kg	Max	50	150		350				450			
CCAI	-	Max	850	860		870							
Water	% V/V	Max	0.3	0.5									
Pour point (upper) <sup>b</sup> , Summer	°C	Max	6	30									
Pour point (upper) <sup>b</sup> , Winter	°C	Max	0	30									
Flash point	°C	Min	60										
Sulphur <sup>c</sup>	% m/m	Max	Statutory requirements										
Total Sediment, aged	% m/m	Max	0.1										
Acid Number <sup>e</sup>	mgKOH/g	Max	2.5										
Used lubricating oils (ULO): Calcium and Zinc; or Calcium and Phosphorus	mg/kg	-	The fuel shall be free from ULO, and shall be considered to contain ULO when either one of the following conditions is met:  Calcium > 30 and zinc > 15; or Calcium > 30 and phosphorus > 15.										
Hydrogen sulphide <sup>d</sup>	mg/kg	Max	2										

**Table 2.1 IFO Quality Specifications (Source: ISO8217:2010 Fuel Standard. Fourth Edition, 2010)**

Similarly, Table 2.2 below lists the required specifications for various parameters of IFO as defined under ISO8217:2010.

Parameter	Unit	Limit	DMX	DMA	DMZ	DMB
Viscosity at 40°C	mm <sup>2</sup> /s	Max	5.5	6	6	11
Viscosity at 40°C	mm <sup>2</sup> /s	Min	1.4	2	3	2
Micro Carbon Residue at 10% Residue	% m/m	Max	0.3	0.3	0.3	-
Density at 15°C	kg/m <sup>3</sup>	Max	-	890	890	900
Micro Carbon Residue	% m/m	Max	-	-	-	0.3
Sulphur <sup>a</sup>	% m/m	Max	1	1.5	1.5	2
Water	% V/V	Max	-	-	-	0.30 <sup>b</sup>
Total sediment by hot filtration	% m/m	Max	-	-	-	0.10 <sup>b</sup>
Ash	% m/m	Max	0.01	0.01	0.01	0.01
Flash point	°C	Min	43	60	60	60
Pour point, Summer	°C	Max	-	0	0	6
Pour point, Winter	°C	Max	-	-6	-6	0
Cloud point	°C	Max	-16	-	-	-
Calculated Cetane Index		Min	45	40	40	35
Acid Number	mgKOH/g	Max	0.5	0.5	0.5	0.5
Oxidation stability	g/m <sup>3</sup>	Max	25	25	25	25 <sup>c</sup>
Lubricity, corrected wear scar diameter (wsd) 1.4 at 60°C <sup>d</sup>	um	Max	520	520	520	520 <sup>e</sup>
Hydrogen sulphide <sup>e</sup>	mg/kg	Max	2	2	2	2
Appearance			Clear & Bright <sup>f</sup>			<sup>h, c</sup>

**Table 2.2 MDO Quality Specifications (Source: ISO8217:2010 Fuel Standard, Fourth Edition, 2010)**

It is vital for every bunker supplier to ensure that the supplied fuel meets these specifications. In case one or more parameters do not fall under the specified range, the supplied fuel would be deemed 'off-spec'. In such cases, the vessel operator may issue claims for refund, or at times require the fuel to be de-bunkered (The process of returning the supplied fuel due to quality issues). As a result, the Bunker supplier may have to bear additional costs involved in settling claims and/or de-bunkering costs and results in loss of reputation. There are many reputed fuel-testing organisations such as



DNV, GeoChem, Integra, Intertek and other that provide these services. The sampling procedure would be discussed more deeply in following sections.

Each of these quality specifications are discussed in depth in the following pages.

### **2.2.1 Density**

Density is the relationship between mass and volume at a stated temperature, the SI units is  $\text{Kg/m}^3$ . ISO defines a limit of 920- 1010  $\text{kg/m}^3$  for HFO, and 890- 900  $\text{kg/m}^3$  for MDO. The density of HFO is limited to 991 $\text{kg/m}^3$  to facilitate effective centrifuging during water and residues separation in the centrifuge. Hence, greater the difference in density between the fuel and water (1000  $\text{kg/m}^3$ ), better the separation. However, HFO with density up to 1010 $\text{kg/m}^3$  can be accepted, if clarifiers are used. Density plays a vital role in determining the actual amount of fuel delivered, wrongly reported densities often lead to short lifting. Higher density increases the carbon residue and the pour point.

### **2.2.2 Kinematic Viscosity**

Kinematic viscosity is the ratio of the absolute viscosity to the density, wherein viscosity is a measurement of the resistance of a liquid to shear or flow. The unit of Kinematic Viscosity is Stokes (ST). As the viscosity of marine fuels are very high, these values are divided by hundred and are expressed in centistokes (cST). Viscosity is inversely proportional to temperature, and hence for marine fuels, they are quoted and tested with reference to a specific temperature.

Viscosity of the HFO plays a pivotal role in the temperature range required for satisfactory injection at the fuel atomizer, and for efficient combustion. Higher density fuels require large pumps for transfer and required higher heat for atomisation. The different grades of HFO are grouped as per their viscosity.

### 2.2.3 Flash Point

The flash point of a liquid is the lowest temperature at which sufficient vapour is given to produce a flash on application of a flame under specified test conditions. The flash point hence is a minimum limit, and ranges from 43°C to 60°C for MGO and 60°C for HFO. This limit is set to minimize fire risk during normal storage and handling.

### 2.2.4 Pour Point

The pour point is the lowest temperature at which a marine fuel oil can be handled without excessive amounts of wax crystals forming out of solution. At lower temperatures the wax in the fuel will crystallise, thereby preventing flow. As a result, the pour point determines the storage temperature of the fuel, which is usually stored at 5° - 10° above the defined value. Pour point increases with viscosity and density.

### 2.2.5 Cloud Point

The cloud point of a clear distillate fuel (MGO) is the temperature at which the fuel becomes cloudy because of the formation of wax crystals. Cloud Points are defined only for MGO and specifies the suitability of fuel use in ambient temperatures.

### 2.2.6 Micro Carbon Residue

The carbon residue of a fuel is the tendency to form carbon deposits under high condition in an inert atmosphere, and is expressed in %m/m. Alternatively referred to as Conradson Carbon Residue (CCR), the MCR indicates the amount of carbonaceous deposits on combustion. The maximum limit of carbon residue content in MGO is 0.30 % and for HFO, ranges between 2.5% to 20.0%. Excessive MCR leads to sludge formation, decreases the burning efficiency, and increases wear on engine parts.

### **2.2.7 Water Content**

The water content in the fuel is defined as %V/V, and is normally very low, since utmost effort is made by the supplier to deliver the fuel as dry as possible. The maximum permissible limit is set at 0.30% for MDO and 0.50% by volume for HFO. Water contamination can occur due to tank condensation, leakage of steam from heating coils, incorrect setting on the purifier and bunker tank leakage due to structural defects. Presence of water in fuel leads to retardation in the speed of combustion, corrode tanks pipelines and exhaust valves and promote sludge formation.

### **2.2.8 Ash Content**

Ash is the non-combustible material, which is either naturally present in the fuel or has been introduced from external sources, that on combustion produces oxides, sulphates, and other more complex compounds. These residues mainly occur due to vanadium, sulphur, silicon, aluminium, nickel, sodium, and iron content present in the fuel. The maximum limit of ash content in the fuel is 0.2% m/m.

### **2.2.9 Calorific Value**

The CV of a fuel is the heat energy given out due to combustion of unit mass of the fuel. Heavy fuel oil has a net CV of 38.9 MJ/litre and a gross CV of 41.2 MJ/litre; these values being determined by the calorimetric test. Higher CV fuel produces more energy on burning and consequently delivers greater power.

### **2.2.10 Lubricity**

Lubricity refers to the lubricating property of the fuel. Lubricity reduces the corrosive effects of the fuel and also decreases wear on engine parts. However, excessive Lubricity increases the time to combustion and decreases the engine efficiency.

### 2.2.11 Sulphur

Sulphur is soluble in water therefore it cannot be removed by centrifuge treatment. However there are chemicals that can be used to lower the sulphur content in HFO. Sulphur pre-combustion causes corrosion to the pistons and liners and contaminates the lube oil. Post combustion emits SO<sub>x</sub> in exhaust gases that form Sulphuric acid, causing acid rain. As a result, IMO has defined specific limits on Sulphur present in Fuel. A limit of 1% in the Emission Control Areas (ECA), and a global limit of 3.5% have been imposed. IMO aims to reduce this to 0.1% in the ECAs by Jan 2015, and a global 0.50% by Jan 2020. Low Sulphur Fuel Oil (LSFO) is more expensive than High Sulphur Fuel Oil (HSFO) and so, it is not un-common for vessels for carry different sulphur grades of fuel to burn in the ECA and otherwise.

### 2.2.12 Cetane Index/ Calculated Carbon Aromaticity Index (CCAI)

Both the CCAI and Cetane index refer to the burning capability of the fuel.

The Cetane index is a measure of the time interval between the injection of fuel into combustion chamber and its ignition. The Cetane number is defined for MGO as ranges from 45 to 35 for MGO. Higher CN indicate smaller delays, and hence increases the efficiency of operation. Low CN leads to rough operation leading to increased wear on the engine and reduced power.

The CCAI is similar to the CN, but is defined for HFO, and ranges from 850 to 870. Higher CCAI results in greater pressure on the connecting rods, bearings, exhaust valves and the piston rings.

### 2.2.13 Acid Number

The Acid number is a measure of of the amount of KOH (mg) that reacts with a gram of fuel. The reaction produces COOH (carboxylic acid) that affects the connecting rods, bearings, exhaust valves and the pistons rings and liners. The AN increases with the larger hydrocarbon chains. AN is defined at 2.5 mgKOH/g for MDO.

### **2.3 CHANGES in ISO 8217:2010 COMPARED to ISO8217:2005**

#### **2.3.1 Changes for Distillates**

- A new distillate category designation, DMZ has been added due to the new technical evidence provided by engine manufacturers and users, based on the recent experiences with fuel pumps leakage and wear damage. It was accepted to insert an additional grade with an increased minimum viscosity of 3 cST at 40°C, but is otherwise identical in its Characteristics to the DMA grade.
- The DMC grade, being a blend of residual and distillate components, has been re-classified as a residual fuel RMA10 and moved to the HFO specs table.

#### **2.3.2 Changes for Residuals**

- New grade was added with designation RMA10
- The previous RMA30 and RMB30 grades have been consolidated to a new RMB30 grade
- The previous RMF180 grade has been deleted
- RMG grade has been expanded to cover 4 grades viz. 180, 380, 500 and 700
- RMH 380 and RMH700 grades were deleted
- RMK was expanded to include 500 grade, apart from previous 380 and 700 grades.

### **2.4 SCOPE of ISO 8217:2010 VERSUS ISO 8217:2005**

#### **2.4.1 Changes to both Distillate and Residual Fuels**

- Acid number limits included
- Hydrogen sulphide (H<sub>2</sub>S) limits included

- Acid Number – the limits for Distillate fuels were adopted from the accepted industry's guiding limit of 0.5 mg KOH/g. The limits for Residual Fuels are set at max limit of 2.5 mg KOH/g.
- H<sub>2</sub>S - the new limit will only be applied from 1 July 2012, which will allow the industry to gain global experience of the prevailing levels and with the new test method. Since there is presently no limit, placing a global limit of 2 mg/kg will better protect the end user. The new limit will ensure that the whole industry follows a precautionary practice.

#### 2.4.2 Changes to Distillate Fuels only

- DMA – minimum viscosity was increased to 2 cST at 40°C
- DMZ - minimum viscosity was introduced at 3 cST at 40°C
- DMB - minimum viscosity was introduced at 2 cST at 40°C
- APPEARANCE was modified, as in some countries the distillate fuels are dyed and are not transparent. For such fuels water content shall be determined by KF and be in compliance of 200 mg/kg limit.
- OXIDATION STABILITY was introduced because the refinery processes used to manufacture distillate fuels can lead to products which may be of limited oxidation stability. In addition, today's non-marine distillate fuels can contain a significant amount of bio-derived components, which might impact on the oxidation stability of the fuel.
- LUBRICITY - The lubricity limit is based on the existing requirements for high speed automotive and heavy duty industrial diesel engines, of 520 wear scar diameter. The 460 wear scar limit was required only for a particular form of passenger car fuel injection equipment and therefore not applicable to marine fuel pumps. Engine manufacturers are in the process of reviewing their limits to this value.

### 2.4.3 Changes to Residual Fuels only

- STABILITY – to assess stability Potential Total Sediment (TSP) has been assigned as the reference test method. Accelerated Total Sediment (TSA) has been added as an alternative test method.
- SULPHUR – Due to wide range of various changing limits and requirements, both internationally and locally, the sulphur limits are not included in the table
- ASH limits were reduced
  - for RMA10 – from 0.05 to 0.040 mass%
  - for RMB30, RMD80 and RME180 – from 0.100 to 0.070 mass%,
  - for all grades of RMG – from 0.150 to 0.100 mass %
  - no change for RMK grades – at 0.150 mass%
- VANADIUM limits were reduced
  - for RMA10 – from 100 to 50 mg/kg,
  - for RMB30 grade – no change at 150 mg/kg
  - for RMD80 grade – from 350 to 150 mg/kg
  - for RME180 grade – from 200 to 150 mg/kg
  - all RMG grades – at 350 mg/kg
  - for all grades of RMK – from 600 to 450 mg/kg
- ALUMINIUM AND SILICON limits were significantly reduced
  - for RMA10 – same at 25 mg/kg,
  - for RMB30 and RMD80 – from 80 mg/kg to 40 mg/kg
  - for RME180 – from 80 to 50 mg/kg for all grades of RMG and RMK – from 80 to 60 mg/kg
- SODIUM CONTENT – was added to all residual fuel grades at 100 mg/kg with the exception of RMA10 and RME 180 where the limit is set at 50 mg/kg.

- Used Lubricating Oils (ULO) – Due to changes to lubricating oil formulations, improved criteria for assessing the presence of ULO in marine fuels were included. The new approach to the limit has been derived from extensive statistical survey reports. In view of the difficulty of establishing a wording that fuel is free of ULO, it was agreed that it should be expressed in terms of when a fuel does contain ULO and amend the wording in HFO Table as follows: A fuel shall be free from ULO. A fuel shall be considered to contain ULO when either one of the following conditions is met:  $Ca > 30$  and  $Zn > 15$  or  $Ca > 30$  and  $P > 15$
- CCAI - As an indication of ignition performance, CCAI has been added as in order to avoid fuels with uncharacteristic density-viscosity relationships. For engines and/or applications where ignition quality is known to be particularly critical, Annex F provides a basis for suppliers and purchasers of marine residual fuels to agree on tighter ignition quality characteristics. The basis for including CCAI was as a substitute for a minimum viscosity limit. It is recognised that CCAI of 870 is not a guarantee to pose no risk for engines, but neither is a lower value such as 860. The CCAI limit included in the marine fuels standard is there to prevent abnormal or peculiar fuel blends from finding their way into the market.

## **2.5 COMMERCIAL DEAL IN BUNKERING**

The Bunkering process starts with the buyer seeking offers from sellers to supply the quantity and grade of fuel required. The commercial deal is secured by means of a contract between the buyer and supplier, wherein each party enters into an agreement to meet their obligations under the contract covering various aspects of the deal. These range from the information required to schedule the delivery, actions required by the ships (on behalf of the buyer) and the delivery facility (on behalf of the seller) to expedite the delivery, the production and mutual acknowledgement of the agreed documentation and, finally, the settlement of the



seller's invoice for the product supplied and any agreed additional costs (such as pre-testing, survey fees, delivery charges, etc.).

The commercial agreement is almost always controlled by the sales Terms and Conditions (T & C) of the seller but there may be alternative terms agreed by buyer and seller, especially when the buyer has considerable 'commercial power'. Even when the sale is controlled by the seller's terms, the seller may accept specific buyer's clause – most often with specific remarks on quality, delay or some other issue. Outside the operational obligations of the contract, the next commercial involvement will be the acceptance of the delivery and the submission to the buyer of the proof of delivery, together with the invoice by the seller.

Once the payment is made, and in the absence of any unresolved disputes between the parties, the commercial bunker deal is accomplished.

#### **2.5.1 Bunker Enquiry**

The buyer (or colleagues in the commercial chartering or operations department) has to decide where to buy, when to take delivery and how much to lift. The seller has almost no influence on this and it is actually the area where the buyer's skill and judgment can have the greatest impact on the economic outcome of a voyage. The choice of location is determined by the anticipated future voyages of the vessel, the amount of fuel needed for the intended voyage and the overall cost of the operation at any possible bunkering ports. Additionally, in case the vessel is due for off-hiring and is to be delivered to another charter party, then as per agreement, vessel may need to lift bunker.

The time to launch the enquiry will depend on the logistics of the intended bunker port and the anticipated market movement. Buyers need to be aware that when product is in short supply, delaying the enquiry will at best reduce the number of sellers offering or at worst will mean that all product has been committed to others before he makes his enquiry. Furthermore, the buyer might have to shell out a higher premium due to the fuel being in short supply

The quantity to buy is a balance between the quantity needed for the voyage, the available storage on board and the anticipated cost of fuel at subsequent ports. Buyer must always take into account the draft limitation of the vessel at the bunkering port and subsequent ports and any cargo quantity commitments that the vessel charter might contain.

#### **BUNKER ENQUIRY**

Enquiry should state in full detail the following

- Name and full style of the buying account.
- Vessel name and International Maritime Organization (IMO) number
- Type of vessel, as this will highlight some of the restrictions that may apply to bunkering operations in a port.
- Port and Country of Call
- Place of delivery (OPL/ at Berth)
- Specifications and quantity of each grade required. With ref to ISO8217:2010 standards, and Sulphur requirements
- Buyer's Agent Details
- Restriction regarding bunkering including time/ date of delivery, rate of delivery, surveyors, certificate of quality, customs etc.
- If the buyer intends to burn the fuel in ECAs or in EU berths where there are legal restrictions on the sulphur content of the fuel, then the maximum sulphur level must be clearly stated.
- Enquiry should identify as much scheduling information as is available at the time.
- The quantity must be clearly stated and the quantity units shown. If the exact quantity is not yet known, then a quantity range for each grade should be stated.
- Vessel in Coastal or Foreign run. This is a specific requirement for bunker supply in those countries where sale of FO is subject to CENVAT. In such cases, the vessel must explicitly mention the same.

### 2.5.2 Making an Offer

For the seller, making an offer requires the same degree of care and attention to detail that the buyer has to use in putting out his enquiry and assessing the offer he receives. In general, all of the elements of the offer are as detailed below, but the seller has to be sure before offering to do the job.

- **Price** - Prices may be offered in a general number of different combinations. The basic conditions of offer price is dependent on the market conditions, trader's cost of material, trader's margin, among others. Generally all suppliers in a port tend to offer similar prices there may be significant exceptions.
- **Delivery Method**- The offer should detail the delivery method and should state any particular restrictions associated with it. If the seller has the possibility to deliver concurrent with cargo operations, the same should be mentioned explicitly. The buyer needs to be aware that if the delivery is to be by truck, there may be issues concerning access to the vessel, the provision of additional hoses, and the time taken to deliver. Many countries prohibit truck deliveries at night and some prohibit them at weekends.
- **Concurrent Bunkering**- If bunkers can be taken at the same time as the vessel is loading or discharging its cargo, then the value of the time saved can be significant. However, there are restrictions with regard to availability of pipeline facility at berth, or availability of mooring clearance for the barge. As a result, it is not uncommon for the vessel to contact the bunker supplier prior to berthing. In addition there may be other costs associated with shifting the vessel to a lay berth or an anchorage to take bunkers which must also be accounted for (extra tugs, lay berth fees, missing a tide, etc.)

- **Quality-** The offer should detail the quality or grade being offered. If it is different from the grade requested, then it is advisable to indicate why the requested grade is not offered, if there are any particular exceptions and, if available, if there is a typical analysis.

- **Delivered Cost-** The offer should invariably state the delivered. Typically if a barge or road tank wagon (RTW) delivery is involved, there may be a minimum delivery charge that is stated clearly. With RTW deliveries it is sometimes necessary to use additional lengths of hose and usually incurs an additional cost, which should be stated.

The cost of a barge delivery may be expressed on pro rata basis or may be a single down-payment, and may even be in a different currency. Generally barge charges are expressed simply in \$/MT, but there may be a minimum charge levied as well. Barging is not invariably levied at all port, and is many times waived off. For instance, there are no barging charges in Singapore.

- **Pump back-** If the barge was loaded for one specific delivery and the ship could not take the full quantity, the remainder would be returned to the terminal where there will be a pump back charge levied for the time and fuel cost of pumping the oil off and possibly a downgrading charge if the product has to be returned to a tank that contains an inferior grade. The seller may also seek compensation if the value of the product has fallen because of market movements. However, there may be scope to use an increase in market level to offset some or all of the pump backcharge. Just because there is to be a barge delivery and a barge rate is quoted, that does not preclude other delivery costs in addition to the barge charge. The buyer must especially be aware of pipeline fees and wharfage where a barge delivery is scheduled at a terminal.
- **Other Costs -** There are other additional costs that may be charged, many of which are location dependent. The most common of these are:-

- Calling Costs (usually for bunker-only calls at anchorage or offshore), which normally encompass all the delivery charges
- Taxes (local and national)
- Overtime
- Pipeline fees
- Anchorage charges (some US locations)
- Harbour fees (some US locations)
- MARPOL compliance fee
- Fuel Surcharges on barge delivery costs
- Environmental protection fess and levies
- Ice surcharges
- Wharfage

Many sellers have a specific clause in their terms to cover additional charges.

- **Payment Terms** – This is one of the most important aspects that must be decided prior to supply of fuel. Depending upon the credit worthiness and relations of the operator with the supplier, the following modes of payment may be applied.
  - Payment by cash in advance – Payment before delivery, for new unknown customers, with bad or unknown credit rating
  - Payment xx days after delivery – Usually set at 30 days, this is the most common type of payment accepted in the bunker industry
  - Payment xx days after receipt of fax/electronic invoice.

The seller may require additional security for large invoices by means of an L/C. This particular requirement is discussed in more detail in following sections. The payment method is almost always is electronic transfer, although in some circumstances it may be acceptable to pay by cheque.

- **Sales Terms** - The offers should indicate the applicable sales terms and conditions imposed by both the buyer and supplier. In case of back-to-back

trading, the seller is not the supplier and may be using the supplier's terms rather than his own. This must be mentioned clearly.

- **Commissions** - If the enquiry is through a broker, the offer should either indicate if the price is net of commission or state the level of commission if commission is already in the price. Broker commission are usually in the range of \$0.50 to \$1.00 per MT.
- **Validity** - If the price has a specific validity then this should be stated clearly in the offer. In general, if no validity were stated, then the offer would be valid to close of business at the location where the seller's business is based. If the buyer has asked for overnight validity of a price, this should be either confirmed in the offer or the offer should state that the price is not valid overnight. Usually, overnight validity requires an acceptance before the start of business at the seller's location on the following day.

### 2.5.3 Acceptance of Offer

Once an unconditional offer has been accepted and a price agreed, there is a contract in place (under English Law). The acceptance can be made by email, fax or telex.

However, the contract is not as rigid as it seems and the following flexibilities are allowed

- **Subject to:** It may so happen that there are still some details that need to be resolved in order to complete the contract. These can be very minor (subject to final confirmation of quantity), more significant and operational (subject to barge loading schedule) or potential deal breakers (subject to head owner's acceptance of specification). Both parties should make subjects very clear at the time of acceptance.

- **Date and quantity ranges allowed:** If there is flexibility on quantities and/or the delivery date then the cut- off dates for finalising this information should be agreed. A seller may require the range limits to be narrowed down at time of nomination. The issues for the seller are those of product availability and of exposure to price movements. If a range is agreed, the confirmation should state who will nominate the final quantity (buyer, agent, ship's master) and when the quantity must be declared.
- **Confirmation messages:** Both buyer and seller should send confirmation messages summarizing every element of the contract as per the enquiry and the accepted offer with details of any \_subject', time limits on declarations and special instructions regarding the operation and invoicing. If an intermediary is involved, confirmation messages containing all relevant details must be sent to both principals.

#### 2.5.4 Post Fixture Finalisation

Post finalisation of fixture, the following mentioned information may be exchanged between the master, buyer, and the supplier to ensure smooth operation.

- **Notices** - Buyer must ensure that the master of vessel and/or the agent communicate the ETA and ETB of the vessel and scheduling details to the local deliverer in accordance with the supplier requirements.
- **Time Limits for quantities / dates** - The buyer, vessel or agent must inform the final date/time for delivery and final quantities. The details for declaration of final quantities should be made clear in the confirmation messages.

- **Operational changes** - The buyer, vessel or agent must pass on any operational changes on the vessel programme to the deliverer. The deliverer also must inform any changes in schedule to the agent and seller who, in turn advice the vessel and buyer accordingly.
- **Invoice Processing** - The seller has a responsibility to obtain the documentary confirmation of the delivery (plus any note of protest) and to issue a correct and valid invoice to the buyer.
- **Payment Processing** - The seller must make sure that the invoice has full details to allow the buyer to pay in accordance with the agreed method. If the payment is late and the seller has correctly submitted the documents required in good time, then the buyer would be liable to pay interest as laid down in the terms of sale.
- **Document / Process control** - Many buyers, brokers, traders and suppliers use formal procedures to control and communicate the bunkering process. For instance, many use the Singapore Standard Code of Practice for Bunkering – SS600.

#### 2.5.5 De-bunkering

There are occasions where the only resolution to a claim may be in removing the fuel from the vessel. There are other occasions where, for operational reasons, it is necessary to remove fuel from a vessel even though the fuel quality is good (such as a need to gain access to a fuel tank for mechanical repairs or to reduce the amount of fuel on board prior to dry dock).

Ship owners or time charterers can only claim reasonable losses. For example, where the fuel oil does not conform to the specification ordered, but may nonetheless be used by the ship with little or no risk to the ship, it would be unreasonable to incur the cost and the associated loss of time involved in de-bunkering. The bunker supplier would be able to argue that because the decision to de-bunker was unreasonable, they should not be liable for the costs involved.



Where it is unclear whether or not the ship can use the fuel oil supplied, the ship-owner should evaluate carefully the risks of doing so. The ship-owner should consider whether, in light of the information to hand, it could be considered reasonable to go to the time and expense of de-bunkering or to attempt to use the fuel oil because the risk of damage or difficulty is small. Factors that should be considered when making this evaluation include

- Whether there is a risk of damage and/or excessive wear to the ship's machinery
- Whether the ship's performance might be inhibited.

The following costs are associated with de-bunkering of a vessel, if so decided.

- **Quality survey costs** - When de-bunkering, it is critical to ascertain the actual quality of product removed (which may well be a blend of fuel mixed with fuel ROB). This will be checked by analysis of samples taken by a surveyor during the transfer and the cost will typically be between \$1,000 and \$1,500.
- **Quantity survey costs** - The quantity transferred will normally be taken from the receiving barge tanks and there will usually be monitored by a surveyor with a cost of about \$1,000.
- **Barging hire** - The barge will have to be paid for from the time it leaves its terminal to the completion of the pumping off of the de-bunkered product. The time delay may extend up to few days to a week, depending upon the background legal proceedings. Hire rates vary according to the age, size and location of the barge but will be a matter of between \$2,000 and \$8,000 per day.
- **Storage costs** - If product has to be kept in storage onshore for a period (for example, whilst a ship is being repaired) then there will be a charge for storage. This is impossible to quantify as the charge varies by port and

berth. On an average, large quantities can be stored for a charge of about \$1 per tonne per month, but smaller quantities can cost much more.

- **Cost of lost time of vessel** - This depends on the market rates for the vessel at the time and the ownership / charter arrangements. If the vessel has no immediate employment prospects then the time of the vessel is 'free'. If there is plenty of available work, then the vessel will lose employment valued at the current daily charter hire rate. If the lost time causes the vessel to miss a fixture for which she was already contracted, there may be other cost consequences.
- **Equipment hire** - It may be necessary to hire additional hoses or additional fendering to expedite the transfer from a ship to a barge.
- **Licenses, taxation and duties** - In many ports, de-bunkering requires special permissions from the port authorities. In case of countries where the Fuel is subject to CENVAT for domestic sales, that is waived off for export, then as the fuel loaded on to the barge/ship is duty free, there are Customs implications if it is 're-imported' or is 'imported' into a different country. Revenue authorities in major ports are familiar with de-bunkering and can accommodate this without too much red tape, but there are locations where the regulations make de-bunkering extremely difficult and expensive.

## **2.6 PHYSICAL BUNKER SUPPLY**

There are mainly 3 methods of supplying the bunker to a ship, viz.

- Supply through tanks trucks by deploying mobile pumping unit.
- Supply through barges for vessels at anchorage, berth or at OPL.
- Supply through fixed pipeline for vessels at berth.

Various technicalities involved in supply by the three methods is discussed in the following sections

### 2.6.1 Supply through tanks trucks at berth

- **Master's Requisition** - Receipt of intent from the agent / master of vessel for quantity of fuel required along with specifications.
- Informing the Agent / Master regarding the port and method of Supply, date and time.
- Processing the documents for Customs / Port clearance.
- Indenting for Tank Trucks / Mobile Pumping Unit.
- Loading of Tank Trucks, Weighment, Sealing under customs supervision.
- Joint witness / signing of the Weighment slip by port, customs and surveyor.
- On arrival of the vessel at the jetty, discussions with the chief Engineer as under.
  - Test report & specifications of the product to be supplied.
  - Method of sampling for retention sample.
  - Method of supply, i.e. through mobile pumping unit.
  - Jointly signing of pre-bunkering check list.
  - Physical checking of cargo by vessel representative for quality & quantity.
  - Permission to connect the hose to vessel manifold and starting of physical bunkering.
- Start of physical pumping of cargo to the vessel.
- After completion of bunkering, signing and sealing of retention sample.
- Signing of bunker Delivery Note, Shipping Bill, Post Bunkering checklist.

### 2.6.2 Supply through fixed pipeline for vessel at berth

- Receiving of indent from the agent/ Master of vessel for quantity of fuel required along with the specification.( Master Requisition)
- Information the agent/Master about the method of supply and port of supply, date and time.

- Processing the documents for Customs/Port clearance
- Discussion with Liquid terminal and issuance of written note for pumping of cargo for bunker supply through fixed pipeline.
- Gauging of storage tank for stocks before pumping, witnessed by port, surveyor and customs.
- Bleeding of pipeline at jetty end for purging.
- Taking safety precaution, hose connection
- Discussions with the chief engineer as under:-
  - Test report and specification of the product being supplied.
  - Method of sampling for retention sample.
  - Method of supply i.e. pumping through pipeline.
  - Jointly signing of pre-bunkering checklist.
  - Physical checking of cargo, ullage and sampling by vessel representative and/or surveyor for quality and quantity.
  - Shipboard Oil Pollution Emergency Plan (SOPEP) and Ship Marine Pollution Emergency Plan (SMPEP) regulations
  - Permission to connect the hose to vessel manifold and starting physical bunkering.
- Start of physical pumping of cargo to the vessel.
- After completion of bunkering, ullaging of tanks, hose disconnection, signing and sealing of retention sample.
- Gauging of storage tank for stocks after pumping, finalization of OTR to determine the quantity delivered to the vessel.
- Signing of Bunker Delivery Note, 'KK' form for Sales-tax exemption, shipping bill, post bunkering checklist.

**BUNKER DELIVERY DOCUMENTATION**

Documentation is one of the most important parts of bunker delivery. In many countries there are custom clearance requirements for sale of fuel, and so documentation forms a very essential part.

The following is a list of all documents that may be required during bunker delivery in India. Note that, one or more of these documents may be replaced by other as per delivery method

- Master Requisition
- NOC from Agent
- Shipping Bill
- OTR (Out Turn Report)
- Pre/Post Bunkering check list
- Tanker Self Sealing
- Barge Self Sealing
- Sample Bottle
- MSDS (Material Safety Data Sheet)
- Landing Certificate
- Bunker Delivery Note
- Time Sheet for Vessel/Barge
- Tank Ullage Report
- Tanker Gate Pass
- Product Delivery Note
- Contractor Monitoring
- Supplier Feedback

**2.7 DOCUMENTATION & CUSTOM FORMALITIES****Steps for Documentation (SEZ)**

1. Receipt of requisition for bunker supply from master of the vessel/ agent, indicating port of supply, quantity, specifications, etc.

2. Preparation of Performa Invoice, indicating quantity, rate & amount, by CAPL.
3. Preparation of shipping Bill by the CHA.
4. Submission of shipping bill along with agent NOC & Performa invoice to SEZ authorities.
5. Clearing of Shipping Bill by Customs along with grant of permission to load the cargo in T/L or Barge under Customs supervision.
6. Indenting for Tank Lorries, Mobile Pumping Unit or Barge, depending upon mode of supply.
7. Supply of Bunker to the Vessel, endorsement by Master on Shipping Bill, Bunker Delivery Note, etc.
8. In case if short shipment/short delivery, than the quantity indicated in Shipping Bill, filing of short shipment for with customs.
9. Filing of EGM along with Shipping Bill (Duly signed by the Master for Receipt), with customs.
10. In case of supply of bunker cargo at another port by barge, i.e. other than the Port of loading, then landing certificated signed by PO and Master of vessel.
11. Receipt of Requisition for bunker supply from Master of the Vessel/ Agent, indicating Port of Supply, Quantity, Specifications, etc.
12. Preparation of Performa invoice, indicating quantity, rate & amount by CAPL.
13. Preparation of Shipping Bill by the CHA.
14. Submission of Shipping Bill along with Master's Requisition & Performa Invoice to customs, along with Bond U/S 59.
15. Clearing of Shipping Bill by Customs along with grant of permission to load the cargo in T/L or barge under Custom supervision.
16. Indenting for Tank Lorries, Mobile Pumping Unit or Barge, depending upon mode of supply.
17. Supply of Bunker to the Vessel, endorsement by Master on Shipping Bill, '\_KK' Form (for sales tax exemption), Bunker Delivery Note, etc.
18. In case if short loading/short delivery, than the quantity indicated in Shipping Bill, filing of short shipment form with customs.

19. Filing of EGM along with Shipping Bill (duly signed by the Master for receipt), with Customs.
20. In case of supply of bunker cargo at another port, i.e. other than the port of loading, then additional transit Bond U/S 67 is required along with B/G for 25% of the duty amount, to be submitted to Customs before clearing of Shipping Bill.

## **2.8 PAYMENT MODE**

- a) Letter of Credit
- b) Advance Payment

### **2.8.1 Letter of Credit**

In simple terms, a letter of credit is a bank undertaking of payment separate from the sales or other contracts on which it is based. It is a way of reducing the payment risks associated with the movement of goods. Expressed more fully, it is a written undertaking by a bank (issuing bank) given to the seller (beneficiary) at the request, and in accordance with the buyer's (applicant) instructions to effect payment — that is by making payment, or by accepting or negotiating bills of exchange (drafts) — up to a stated amount, against stipulated documents and within a prescribed time limit.

#### **Why use a Letter of Credit?**

The need for a letter of credit is a consideration in the course of negotiations between the buyer and seller when the important matter of method of payment is being discussed. Payment can be made in several different ways: by the buyer remitting cash with his order; by open account whereby the buyer remits payment at an agreed time after receiving the goods; or by documentary collection through a bank in which case the buyer pays the collecting bank for account of the seller in exchange for shipping documents which would include, in most cases, the document of title to the goods. In the aforementioned methods of payment, the seller relies entirely on the willingness and ability of the buyer to effect payment.

When the seller has doubts about the credit-worthiness of the buyer and wishes to ensure payment without risk, the seller can insist that the sales contract provides for payment by irrevocable letter of credit. Furthermore, if the bank issuing the letter of credit (issuing bank) is unknown to the seller or if the seller is shipping to a foreign country and is uncertain of the issuing bank's ability to honour its obligation, the seller can, with the approval of the issuing bank, request its own bank — or a bank of international repute such as JP Morgan, Scotia bank. BNP Paribas —to assume the risk of the issuing bank by confirming the letter of credit.

#### **BENEFITS OF A LETTER OF CREDIT**

##### **To The Exporter/Seller**

- Letters of credit open doors to international trade by providing a secure mechanism for payment upon fulfilment of contractual obligations.
- A bank is substituted for the buyer as the source of payment for goods or services exported.
- The issuing bank undertakes to make payment, provided all the terms and conditions stipulated in the letter of credit are complied with.
- Financing opportunities, such as pre-shipment finance secured by a letter of credit and/or discounting of accepted drafts drawn under letters of credit, are available in many countries.
- Bank expertise is made available to help complete trade transactions successfully.
- Payment for the goods shipped can be remitted to your own bank or a bank of your choice.

##### **To the Importer/Buyer**

- Payment will only be made to the seller when the terms and conditions of the letter of credit are complied with.
- The importer can control the shipping dates for the goods being purchased.
- Cash resources are not tied up.



## 2.8.2 Steps in an import L/C Transaction

- **The Sales Contract**

The sales contract is the formal agreement between the buyer and seller specifying the terms of sale that both parties have agreed upon. The contract should include: a description of the goods; the amount; the unit price; the terms of delivery; the time allowed for shipment and presentation of documents; the currency; and the method of payment.

- **Application & Agreement**

The bank's letter of credit application and agreement forms, when executed, constitute a payment and reimbursement contract between the issuing bank and its customer. It is also the customer's instruction to the issuing bank. The letter of credit must be issued exactly in accordance with the customer's instructions; therefore, it is important that the application be completed fully and accurately, so as to avoid the inconvenience of having to have the letter of credit amended. The agreement constitutes an undertaking by the customer to reimburse the issuing bank for drawings paid in accordance with the terms of the letter of credit, and normally takes the form of an authorization to debit the customer's account.

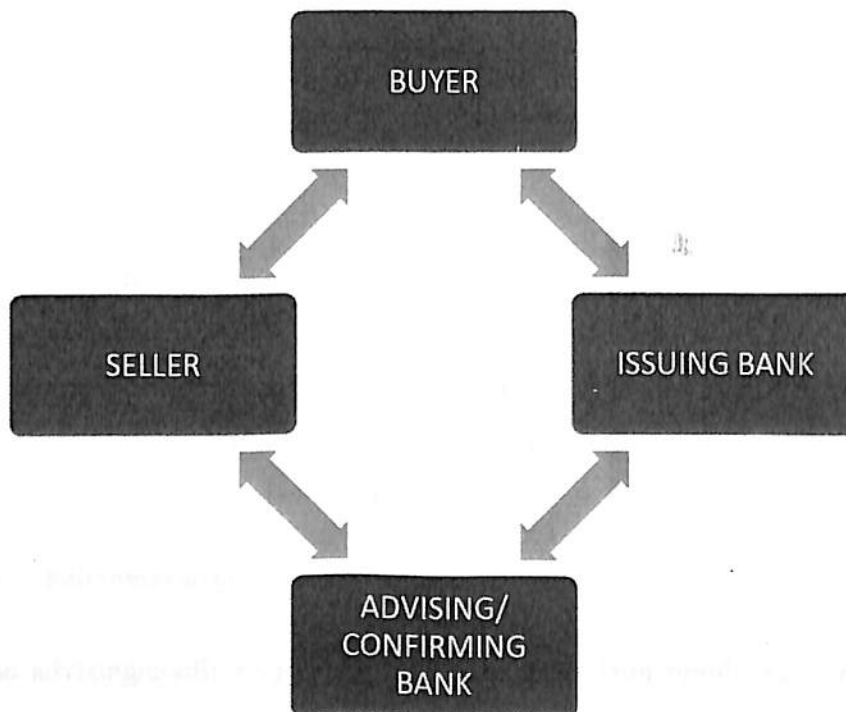
- **Issuance of the Letter of Credit**

The issuing bank prepares the letter of credit as specified in the application and forwards it by tele-transmission or airmail to the advising bank, (a branch or correspondent of the issuing bank). The issuing bank instructs the advising bank as to whether or not to add its confirmation, as per their customer's instructions.

- **Advising**

The advising bank forwards the letter of credit to the beneficiary (seller) stating that no commitment is conveyed on its part. However, if the advising bank has been asked to confirm the letter of credit and agrees to do so, it will incorporate

a clause undertaking to honour the beneficiary's drafts, provided the documents evidence that all terms and conditions of the letter of credit have been complied with.



### 2.8.3 Documents usually required for issuance of L/C

- Draft
- Commercial Invoice
- Consular or Customs Invoice
- Bill of Lading
- Air Waybill
- Insurance Policy or Certificate
- Certificate of Origin
- Inspection Certificate
- Packing List

### 2.8.4 Steps in an export L/C Transaction

- Shipment of Goods
- Presentation of Documents by Beneficiary

- Sending Documents to the Issuing Bank
- Delivering Documents to the Applicant

#### **2.8.5 Payment Procedure**

- **Payment**

On presentation of the documents called for under the letter of credit, provided they are in compliance with its terms, the advising/negotiating bank, in the case of an unconfirmed letter of credit, may pay/negotiate the draft. In the case of a confirmed letter of credit, the confirming bank is obliged to honour the drawing without recourse to the beneficiary.

- **Reimbursement**

The advising/confirming/negotiating bank will claim reimbursement from the issuing bank.

- **Settlement**

On receipt of conforming documents, the issuing bank will also be responsible for checking documents and will charge the applicant's account under the terms of the letter of credit application and agreement forms, effecting reimbursement to the negotiating bank.

#### **2.8.6 Advance Payment**

An advance payment, or simply an advance, is the part of a contractually due sum that is paid or received in advance for goods or services, while the balance included in the invoice will only follow the delivery. It is called a prepaid expense in accrual accounting for the entity issuing the advance.

A supplier may ask the buyer to make an advance payment before the bunker is physically supplied. This is usually done in cases when the Bunker Supplier's

credit lines are tight, and/or the firm is dealing with a new customer with unknown credit history. In such cases, the seller needs to send a Performa Invoice to the buyer, before any payment is received. In India a bunker seller can only receive an advance payment of US\$ 1 Million, but there are no such restrictions in terms of advance payment amount in other countries.

# The Indian Shipping Industry

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## 3.0 The Indian Shipping Industry

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### 3.1 OVERVIEW

Indian ports represent a promising sector for India, given the country's 7500-km long coastline, robust economic growth, abundant raw material, cost-competitive workforce and a strategic location on the trade map.

India's port infrastructure constitutes of 13 major ports and 187 non-major ports. Of the non-major ports, only about 148 are operational; while the rest are only fishing harbours. The 13 major ports are administered by the Central Government through the Ministry of Shipping, and non-major ports are under respective state governments. On the west coast, Kandla, Mundra, Mumbai and Cochin are major ports with lower taxes and excellent cargo handling and storage facilities. Similarly, on the east coast, Haldia, Kolkata, Chennai, and Tuticorin and Vizag are dominant ports and handle significant volumes.

Provisional Total Capacities of all Indian Ports, consolidated as on 31.05.2013 is estimated to be 1235.190 MMT

Gujarat emerged as the leading state in cargo handled. While Kandla port in Gujarat accounted for the highest share (~14 per cent) in major port traffic, non-major ports under the Gujarat Maritime Board collectively boasted the maximum minor port traffic (~71 per cent). This can be attributed to its proximity to the northern hinterland, pro-business government and a dynamic business community.

By data from Indian Port Association, during the first half (April- September) of 2012-13 major and non-major ports in India accomplished a total cargo throughput of 455.8 MMT reflecting an increase of 1.8% over the same period YOY. In contrast, non-major port's growth increased to 10.3% in the first half of 2012-13 compared to 8.2% in the corresponding period of 2011-12. (Indian

Port Association, May 2013). Figure 3.1 below shows the Growth in India's GDP, vis-à-vis India and World Seaborne Trade.

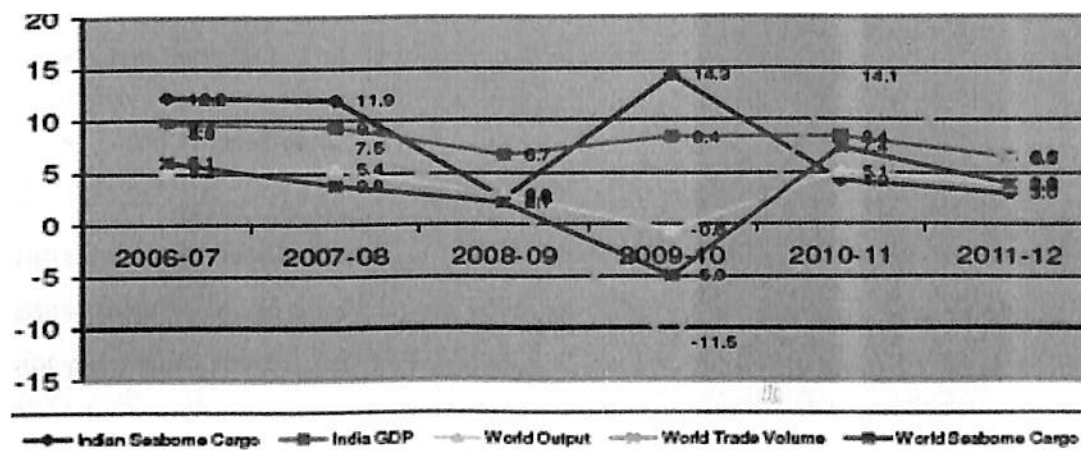


Figure 3.1 Growth in India's GDP, and India Seaborne Trade (Source: Indian Port Association E-Magazine, May 2013)

Furthermore, it is also observed that Port traffic was at a 10-month high in January 2013 on the back strong thermal coal and other cargo traffic and also because of rise in POL traffic. However, it declined again at the level of 47.65 MMT in March 2013. Ennore port reported highest increase of 45.75% YoY, followed by Paradip at 41.83% YoY, New Mangalore at 27.17% YoY, Kandla at 18.71% YoY, Tuticorin at 7.79% YoY, Kolkata 5.88% YoY and Visakhapatnam 2.51% YoY.

Although the sector witnessed significant growth in cargo traffic, it has still not been able to optimize operations owing to technical and institutional constraints. Some key issues are as under

- Capacity Constraints
- Inefficient Cargo Handling and Low Productivity
- Inadequate Drafts and poor connectivity with Other Modes
- Cumbersome Institutional Arrangements and Other Issues
- High Cost Structures

- Different Tariff setting framework for Major and Non Major Ports
- Port Security
- Land Acquisition

Infrastructure development in India is progressing at a rapid pace and consequently, increasingly larger volumes of cargo are handled, thus allowing not only the domestic but the international bunker market to grow by leaps and bounds.

Currently, the world's Bunker market is estimated to be around 200 million tons in size. By bunker volumes, the major bunkering hubs are identified as Singapore, Rotterdam, Fujairah and Houston. These port have been able to generate significant bunker volumes because of their ability to provide competitive prices in comparison to the international bunker market, their strategic location, fast delivery and turnaround times, world class infrastructure and due to a large number of both bunker-only and cargo calls.

In contrast, the Indian Bunker market at present handles a mere 1.5 MMT, as against Singapore's, Rotterdam's and Fujairah's bunker volume of 40 MMT, 30 MMT and 10 MMT, respectively.

The major reason why, India has not been able to attract sufficient volumes may be due to the following factors

- Price not Competitive
- Quality of Fuel and Bunkering Facilities Issues
- Bunkering at OPL not allowed, hence very little bunker only calls
- Government Policies and Taxes
- Comparatively high prices of Bonded Cargo



These factors have hindered the growth of the Indian Bunker Market to a great extent and have often discouraged vessels from taking bunker from Indian ports.

Today, a number of private and public companies have begun physical bunker supply at various major and minor ports of India. But irrespective of the number of players present the volume of bunker fuel being handled in the domestic market is nowhere in contrast to the vessel traffic handled by these ports, hence exhibit significant potential for growth.

Infrastructural development in India is progressing at a rapid pace and thus allowing not only domestic but also the international bunker market to grow rapidly. On the west coast, Kandla, Mundra, Mumbai and Cochin are major ports with low taxes and attractive prices. Barge deliveries are possible. The prices are attractive on the east coast as well. Haldia, Kolkata, Chennai, and Tuticorin are ports with lower pricing and excellent bunker delivery facilities.

The bunker prices in India must be brought to international levels if the bunkering potential has to be exploited in a big way. The difference in bunker prices in India and foreign ports significantly increases due to addition of sales tax, which varies from state to state.

### **3.2 PRESENT OPPORTUNITIES**

India's trade sector is witnessing a long term and sustainable high growth trend driven by the rapid growth of the Indian GDP. International and domestic trade volumes are expanding rapidly and its impact is evident in the burgeoning traffic volumes of the shipping and ports sectors.

This growth trend is expected to continue over the medium term with India continuing to attract global capital inflows into manufacturing and infrastructure sectors and trade tie-ups with the US, EU and China and SE

Asian and South Asian trade blocs get cemented further. This growth in trade would, in turn, translate into additional opportunities and pressures on the Indian bunkering sector.

For ships plying on other international trade routes passing through the Arabian Sea and Indian Ocean, can use Indian ports for bunkering as the Indian coastline is strategically located and easily accessible on these routes.

### **3.3 PRESENT CHALLENGES**

#### **3.3.1 Infrastructural Challenges**

- Indian ports still lag behind their international counterparts in terms of bunkering infrastructure. The sector is facing problems such as inadequate capacity, lack of infrastructure, high costs, in-experienced labour, and obsolete equipment.
- Bunkering infrastructure has not kept pace with port cargo handling infrastructure. A good example would be Mundra Port, with its state-of-art facilities for discharging coal, leading to very fast turnaround times for the bulkers. Unfortunately due to obsolete equipment, pumping rates are very slow in comparison to the bunkering hubs and it often happens that the vessel stay is not sufficient enough to lift the entire bunker quantity leading to short shipment of the fuel.
- Non-availability of Pipelines for bunkering at cargo Jetties and no dedicated bunkering terminal/jetties.
- Short supply of Bunkering barges along the Indian coast
- Non availability of ISO specs compliant fuels on all ports.

#### **3.3.2 Taxation**

- The taxation issue is the biggest hurdle in the development of the Bunkering industry in India.

- On the basic price there are tax levied (VAT, State surcharge, Toll tax, Octroi, CESS) which makes the price in India very uncompetitive compared to other countries.
- The taxation rules are not uniform throughout India. The taxes vary from state to state and are under the directive of the State Governments and not the Central Government. The tax rates are different for different states / grades and type of bunkers being supplied.
- There is added documentation due to the taxation and customs clearances adding to the complexity of the bunkering process

While sales volumes are a long way off those of Singapore, Rotterdam or Fujairah, there is no doubt that tax free or lower taxed bunker would mean much more competitive prices and consequently provide the much needed boost to the bunker market. The Indian government is beginning to take a greater interest in the development of the country's bunker market, with talks of further tax exemptions for international vessels. Introducing tax reductions, developing the port infrastructure and offering consistently competitive fuel prices would provide the added boost to enable strong growth of bunkering in India.

### **3.3.3 Procedural Challenges**

- The tedious documentation procedures of the Indian customs authorities and the complicated Bunker duty calculations act as a hurdle in streamlining Bunker deliveries.
- Documentation and custom process can take up to 1-2 days in India and the time may vary from port to port.
- In India there are 13 major ports located in different states. Local and Public holidays impact the time taken to obtain custom clearances

### **3.3.4 Logistical Challenges**

- FO traded in India are either imported or procured from PSU Refineries. If the product is imported, it needs a storage facility which is again an issue that needs to be resolved.
- On the other hand, if product is procured from refinery at the time of supply, on each occasion the Supplier needs to check the avails with the refineries. Furthermore, refineries have their own internal product planning, and so availability is not always certain.
- FO and Do sold in India is divided into three categories, viz. Bonded (Duty Free for Foreign Going Vessels), Duty Paid (For Coastal Run vessels) and Duty Paid for Foreign Run. From each parcel refineries decide the ratio of product to be sold in each category.
- In case Bonded product is not available, the supplier can take the product from Duty Paid stock for foreign going vessel, known as Duty Paid for Foreign Run, which again costs higher.
- All the above mentioned problems occur because of the differential CENVAT that is applied on products sold.

### **3.4 INFRASTRUCTURE DEVELOPMENT INITIATIVES**

India's goal of emerging as a developed nation by 2020 depends on its ability to sustain growth of over 8.0 % annually over this decade. To achieve this, the Govt. of India has identified the development and modernization of the country's economic infrastructure as a priority step.

- The development and growth of ports and allied infrastructure in particular, is crucial as they play a very vital role in the country's overall economic development; for about 95% by volume and about 70% by value (\$) of India's International trade is seaborne.
- The Govt. Of India in its National Maritime Development Plan (NMDP) has given detailed information regarding the Infrastructural

developments being carried out in ports across the nation and their expected impacts on the economic growth.

- NMDP has been giving due importance to the Ship Building industry with the revival of HSL and HDPEL, modernization and enhancing capacity of the public sector shipyards, setting up of two international shipyards and strengthening of NSDRC to enhance its design and research capabilities. All these initiatives, would enable the building of high capacity Bunker barges at lower costs than purchasing them from overseas shipyards.
- The Indian Government is considering further tax exemptions for International tonnages.
- Lower Tax Rates and Bonded bunkers are being made available at Indian Ports by Indian PSU's Refineries
- Some of the recent developments that have been taking place include, introduction of more high capacity barges; 380 cST fuel is now available at most major Indian ports; better compliance to ISO8217:2005 and Marpol Annex VI

### 3.5 TRAFFIC HANDLED at MAJOR PORTS

(in '000 TONNES)

PORTS	TRAFFIC		% VARIATION Y-O-Y
	2013	2012	
<b>KOLKATA DOCK COMPLEX</b>	2955	2743	7.73
<b>HALDIA DOCK COMPLEX</b>	7071	7270	-2.74
<b>PARADIP</b>	17001	11742	44.79

<b>VIZAG</b>	14566	14896	-2.22
<b>ENNORE</b>	6199	4176	48.44
<b>CHENNAI</b>	12833	13652	-6.00
<b>CHIDAMBARNAR</b>	6779	7274	-6.81
<b>COCHIN</b>	5251	4989	5.25
<b>NEW MANGALORE</b>	9667	8611	12.26
<b>MORMUGAO</b>	2672	9768	-72.65
<b>MUMBAI</b>	13279	15452	-14.06
<b>JNPT</b>	15592	16785	-7.11
<b>KANDLA</b>	23285	21163	10.03
<b>TOTAL</b>	<b>137150</b>	<b>138521</b>	<b>-0.99</b>

**Table3.1 Traffic Handled at Major Ports (Source: Indian Ports Association, 2013)**

As can be seen, there has been fair amount of variation in cargo handled. Most of the reductions in cargo handled at ports other than at Mormugao are not very significant, and are due to cargo being diverted to other port, and due to business cycle variations. The sharp reduction of 72.65% at Mormugao port is entirely due to a ban on iron ore mining in the State. Mormugao was India's premier Iron Ore Export Port, and both traffic at Mormugao and Iron Ore Exports have taken a beating due to this ruling. In a recent ruling on May13 this year, the SC has lifted the 8 month ban, and volumes can be expected to pick up again this year.

Table 3.2 below shows the traffic handled at major port (Iron ore and Coal) broken down cargo wise for the years 2012 and 2013

(In '000 Tonnes)

PORTS	TRAFFIC					
	IRON ORE		COAL			
			THERMAL		COKING	
	2013	2012	2013	2012	2013	2012
<b>KOLKATA DOCK COMPLEX</b>	158	-	-	-	37	3
<b>HALDIA DOCK COMPLEX</b>	1715	3943	1976	2346	4502	4939
<b>PARADIP</b>	1834	6687	21394	16404	4912	5474
<b>VIZAG</b>	12279	16243	2951	3189	6820	6874
<b>ENNORE</b>	-	-	14240	12646	685	465
<b>CHENNAI</b>	52	97	-	610	-	351
<b>CHIDAMBARNAR</b>	-	33	6661	6050	-	-
<b>COCHIN</b>	-	-	28	34	-	-
<b>NEW MANGALORE</b>	2616	3036	2553	-	4357	4022
<b>MORMUGAO</b>	7421	29370	768	1163	6605	5669
<b>MUMBAI</b>	-	-	4210	4321	-	-
<b>KANDLA</b>	1006	992	4064	4064	374	161
<b>ALL PORTS</b>	<b>27081</b>	<b>60401</b>	<b>58845</b>	<b>50827</b>	<b>28292</b>	<b>27958</b>
<b>%VARIATION Y-O-Y</b>	<b>-55.16</b>		<b>15.78</b>		<b>1.19</b>	

**Table3.2 Cargo wise Traffic Handled at Major Ports (Source: Indian Ports Association, 2013)**

# Coal Trade and Shipping



## 4.0 Coal Trade and Shipping

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### 4.1 OVERVIEW

Coal has many important uses worldwide. The most significant uses are in electricity generation, steel production, cement manufacturing and as a liquid fuel. Around 6.6 billion tonnes of hard coal were used worldwide last year and 1 billion tonnes of brown coal. Since 2000, global coal consumption has grown faster than any other fuel. The five largest coal users - China, USA, India, Russia and Japan - account for 76% of total global coal use. (World Coal, 2013)

Coal, mainly used in power generation, is the second most important primary energy source, and has a share of 30.3 per cent of global energy consumption. Data from (IHS Fairplay, 2012 and Clakson Research Services 2012) indicate that global coal consumption grew by 5.4 per cent in 2011 led by China rising by 8.4 per cent y-o-y.

Different types of coal have different uses. Steam coal - also known as thermal coal - is mainly used in power generation. Coking coal - also known as metallurgical coal or met coal - is mainly used in steel production.

The biggest market for coal is Asia, which currently accounts for over 67% of global coal consumption; although China is responsible for a significant proportion of this. Many countries do not have natural energy resources sufficient to cover their energy needs, and therefore need to import energy to help meet their requirements. Japan, Chinese Taipei and Korea, for example, import significant quantities of steam coal for electricity generation and coking coal for steel production.

Other important users of coal include alumina refineries, paper manufacturers, and the chemical and pharmaceutical industries. Several chemical products can be produced from the by-products of coal. Refined coal tar is used in the

manufacture of chemicals, such as creosote oil, naphthalene, phenol, and benzene. Ammonia gas recovered from coke ovens is used to manufacture ammonia salts, nitric acid and agricultural fertilisers. Thousands of different products have coal or coal by-products as components: soap, aspirins, solvents, dyes, plastics and fibres, such as rayon and nylon.

#### 4.2 Coal Reserves

Coal reserves are fairly abundant and spread out across many regions. Figure 4.1 below shows major distribution fossil fuel reserves. As can be seen, there are significant coal reserves in USA, followed by Russia, China, ASEAN nations, India, EU, and South Africa. Due to many large projects that use Coal as a raw material, being commissioned China, Japan, and India, there is a huge demand of coal in the South and South-East Asian regions. China, despite having significant resources has been a net importer of coal since 2011. In India, the production is not able to match with the demand, and many Power Producers, Steel Manufacturers and Cement companies have turned to imports for meeting their demand.

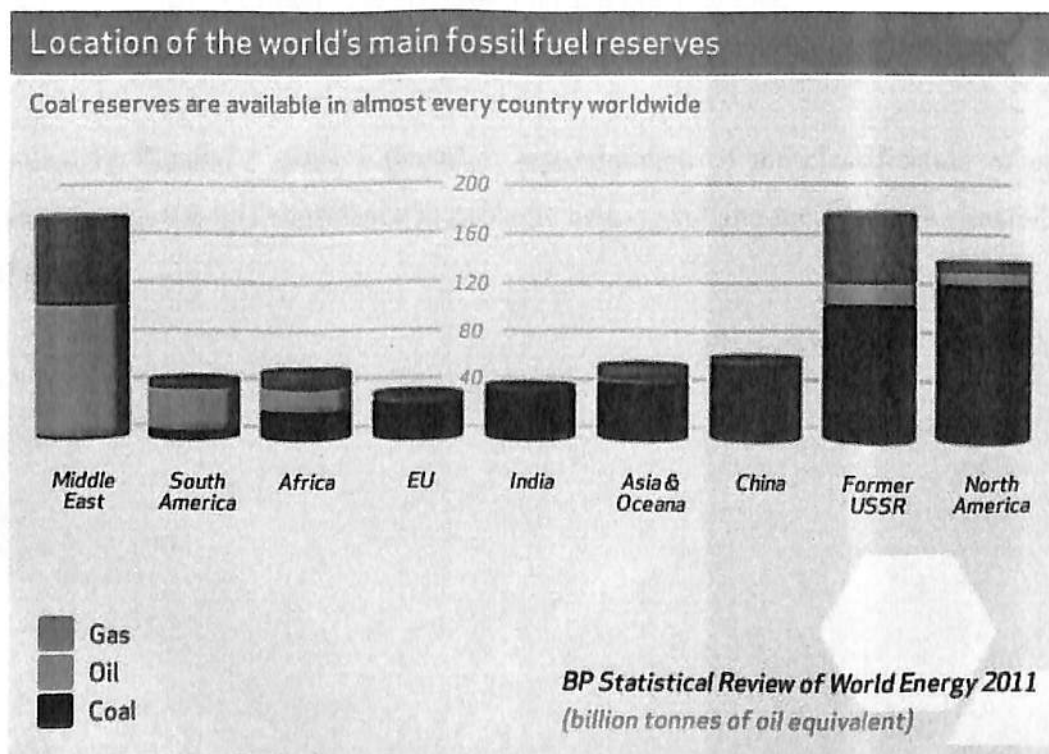


Figure 4.1 World distribution of fossil fuel reserves (Source: BP Statistical Review of World Energy, 2011)

It has been estimated that there are over 861 billion tonnes of proven coal reserves worldwide. Therefore, at current levels of production and consumption, there is enough coal to last us around 112 years. In contrast, proven oil and gas reserves are equivalent to around 46 and 54 years at current production levels.

After centuries of mineral exploration, the location, size and characteristics of most countries' coal resources are quite well known. At this juncture, it is vital to understand the Coal industry differentiation between **Coal Resource** and **Coal Reserves**.

**Coal Resource** refers to how much coal is actually in the ground. The actual amount cannot be known, but is estimated based on both direct measurements and inferences from geology.

**Coal Reserves** of any particular place are defined as the amount of measured resource coal that could be expected to be economically mineable under the current economic, legal and technological conditions. Hence, coal reserves represent a small and changeable percentage of coal resources, changing based on the price of coal, the technology used to extract it, legal restriction and other factors.

Following Figure4.2 gives a graphical representation of the classification of coal based on the level of confidence in geologic assessment and the economic feasibility of mining.

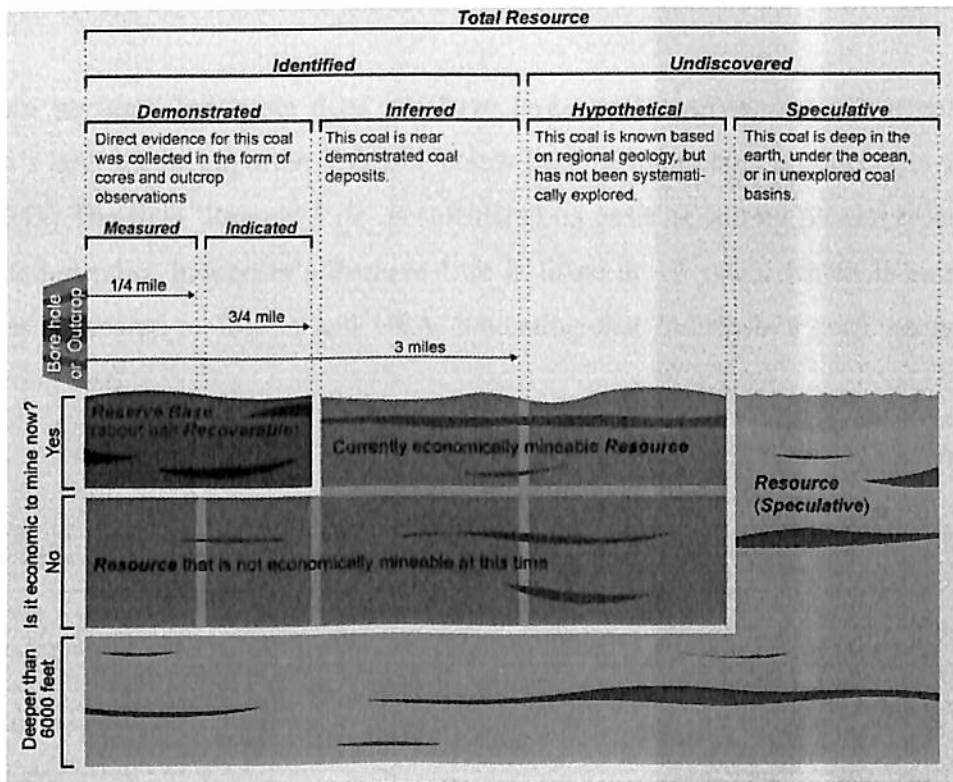


Figure 4.2 Classification of Coal Resources (Source: <http://www.groundtruthtrekking.org>)

Figure 4.3 shows the distribution of Coal Reserves in equivalent British Thermal Units (BTU)

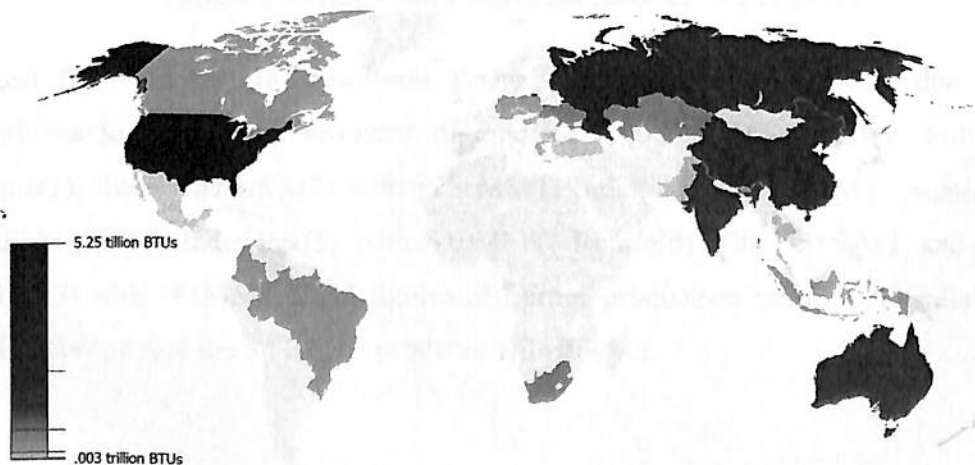


Figure 4.3 Coal Reserves in BTU (Source: <http://www.worldcoal.org>)

As can be seen, Indonesia does not have large coal reserves but is currently the world's largest coal exporter. Table 4.2 below lists the major coal producers as at 2011 in MMT. The field 'Reserve Life' is calculated on basis of current proven reserves to production ratio. Indonesia's Reserve Life is listed at 17 years, which is extremely low as compared to Russia and USA, indicating that Indonesia's coal reserves are depleting fast.

(MMT)

Country	2008	2009	2010	2011	Share	Reserve Life (years)
China	2802.0	2973.0	3235.0	3520.0	49.5%	35
United States	1063.0	975.2	983.7	992.8	14.1%	239
India	515.9	556.0	573.8	588.5	5.6%	103
European Union	563.6	538.4	535.7	576.1	4.2%	97
Australia	399.2	413.2	424.0	415.5	5.8%	184
Russia	328.6	301.3	321.6	333.5	4.0%	471
Indonesia	240.2	256.2	275.2	324.9	5.1%	17
South Africa	252.6	250.6	254.3	255.1	3.6%	118
Germany	192.4	183.7	182.3	188.6	1.1%	216
Poland	144.0	135.2	133.2	139.2	1.4%	41
Kazakhstan	111.1	100.9	110.9	115.9	1.5%	290
<b>World Total</b>	<b>6,795.0</b>	<b>6,880.8</b>	<b>7,254.6</b>	<b>7,695.4</b>	<b>100%</b>	<b>112</b>

Table 4.1 Major Coal Producers (Source: EIA, 2012)

Latest figures from (International Energy Statistics, EIA) indicate that China continues to be the top producer of coal with 3620 MMT in 2012. Following China(1), there was USA(2) with 922 MMT, India(3) with 629MMT, Australia(4) with 431MMT, Indonesia(5) with 410MMT, Russia(6) with 351MMT and South Africa(7) with 261MMT. 2012 figures of Europe production are not yet available. In 2011, Europe was the 3<sup>rd</sup> largest producer with 700MT.

(Million Short Tons, 1 short-ton = 0.90718 MT)


























Country	2008	2009	2010	Share
 Australia	278.0	288.5	328.1	27.1%
 Indonesia	228.2	261.4	316.2	26.1%
 Russia	115.4	130.9	122.1	10.1%
 United States	83.5	60.4	83.2	6.9%
 South Africa	68.2	73.8	76.7	6.3%
 Colombia	74.7	75.7	76.4	6.3%
 Canada	36.5	31.9	36.9	3.0%
 Kazakhstan	47.6	33.0	36.3	3.0%
 Vietnam	21.3	28.2	24.7	2.0%
 China	68.8	25.2	22.7	1.9%
 Mongolia	4.4	7.7	18.3	1.5%
 Poland	16.1	14.6	18.1	1.5%
<b>Total</b>	<b>1,087.3</b>	<b>1,080.8</b>	<b>1,212.8</b>	<b>100%</b>

Table4.2 Major Coal Exporters (Source: EIA, 2012)

Latest figures from (International Energy Statistics, EIA) indicate that Indonesia has overtaken Australia as the largest Exporter. Indonesia exported a total of 309MMT in 2011 amounting to 27% of coal exports. After Indonesia, there was Australia exporting 284 MMT (24%), North America with 132MMT (11%), Russia with 125 MMT (11%), rest of USA with 98MMT (8%). South Africa was ranked 11<sup>th</sup> with 71MMT (6%).

Table4.3 below list the major importers of coal expressed in Million Short Tons as of 2010.

Country	2008	2009	2010	Share
 Japan	206.0	182.1	206.7	17.5%
 China	44.5	151.9	195.1	16.6%
 South Korea	107.1	109.9	125.8	10.7%
 India	70.9	76.7	101.6	8.6%
 Taiwan	70.9	64.6	71.1	6.0%
 Germany	55.7	45.9	55.1	4.7%
 Turkey	21.7	22.7	30.0	2.5%
 United Kingdom	49.2	42.2	29.3	2.5%
 Italy	27.9	20.9	23.7	1.9%
 Netherlands	23.5	22.1	22.8	1.9%
 Russia	34.6	26.8	21.8	1.9%
 France	24.9	18.3	20.8	1.8%
 United States	37.8	23.1	20.6	1.8%
<b>Total</b>	<b>1,083.2</b>	<b>1,039.8</b>	<b>1,178.1</b>	<b>100%</b>

**Table4.3 Major Coal Importers (Source: EIA, 2012)**

Again, updated figures from (International Energy Statistics, EIA) indicate that Japan continues to be the largest importer of coal as at 2011, importing 176 MMT (16% of total coal imports). Japan was followed by China importing 174.63MMT (12%), South Korea 125MMT (12%) and India 79MMT (7%).

#### **4.3 Classification of Coal**

Coal is broadly classified into three major types namely anthracite, bituminous, and lignite. Coal is further classified as semi-anthracite, semi-bituminous, and sub-bituminous as well. Anthracite is the oldest coal from geological perspective, and occurs great depths. Due to high pressure and heat, it is a hard coal composed mainly of carbon with little volatile content and practically no moisture. In decreasing depths following anthracite, we find semi-anthracite, bituminous, sub-bituminous, semi-bituminous and finally lignite. In contrast to Anthracite, lignite is a soft coal with high volatile matter and moisture content with low fixed carbon.

#### 4.3.1 GOI import regulations

There are no restrictions on import of most grades of coal. Or, in other words, there is no requirement of a special import license or the need to import via a designated PSU.

However, there is a differential duty system applied on various grades of coal.

Table 4.4 below shows the major consumers of various grades of coal, and the import duties applied on the same

Type of Coal	Major Consumer	Import Duty Breakdown				
		Basic Duty	CVD	Central Excise Edu. Cess	Customs Edu. Cess	Spl. Duty
Anthracite Coal	Metallurgy	10%	6%	3%	3%	0%
	Chemical					
	Home Heating					
Bituminous Coal	Power	55%	6%	3%	3%	0%
	Metallurgy					
Steam Coal	Power Gen.	10%	6%	3%	3%	0%
Coking Coal	Steel Ind.	0%	0%	3%	3%	0%

**Table 4.4 Grades of Coal and Import Duties (Source: DGFT via eximguru)**

#### 4.3.2 Properties of Coal

Coal is graded, quoted, priced and traded on the following major properties.

- Gross Calorific Value (GCV)
- Volatile Matter
- Moisture Content
- Fixed Carbon
- Sulphur Content
- Ash Content
- Fusion Temperature



India's hard coal (Bituminous and Anthracite) reserves are estimated to be around 246 billion tonnes, of which 92 billion tonnes are proven. Hard coal deposits of 56 billion tonnes are spread over 27 major coalfields, mainly confined to eastern and south central parts of the country. The lignite reserves stand at a level around 36 billion tonnes, of which 90 % occur in Tamil Nadu.

Following Figure4.4 shows variations of above mentioned properties with different grades of coal

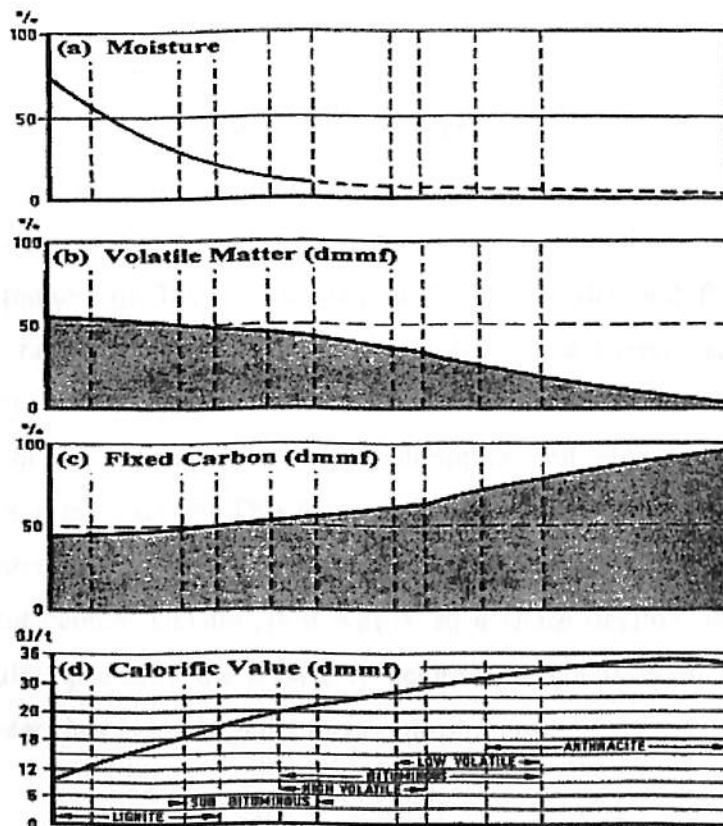


Figure4.4 Properties and Grades of Coal (Source: American Iron and Steel Institute)

#### **4.4 USES of COAL**

##### **4.4.1 Coal & Cement**

The cement industry requires energy to produce cement and coal is an important source of the energy needed.

Cement is critical to the construction industry – mixed with water, and gravel it forms concrete, one of the key construction materials available today. Varying the mix of cement, sand and aggregate enables concrete to be used in a range of applications. Products can be designed, coloured and shaped to accommodate a variety of environmental conditions, architectural requirements and to withstand a wide range of loads, stresses and impacts.

Over 3.3 billion tonnes of cement were consumed globally in 2010. This is 22% more than in 2007. China's cement consumption alone reached over 1.8 billion tonnes, or 38% more than in 2007. The demand for cement is a derived demand, as it depends on industrial activity, real estate, and construction activity. Studies (Daugherty, 2008) have shown that there is a direct linkage between cement consumption and global macro-economic growth and contraction. This was also evident during the oil shock of early 1970's and 1979-80 and also during the East Asian crisis in late 1990s, when the world cement consumption witnessed a sharp decline. At the opposite end of the spectrum, the relatively healthy growth in many economies, in recent years has helped spur cement consumption.

##### **What is Cement?**

Cement is made from a mixture of calcium carbonate (generally in the form of limestone), silica, iron oxide and alumina. A high-temperature kiln, often fuelled by coal, heats the raw materials to a partial melt at 1450°C, transforming them chemically and physically into a substance known as clinker. This grey pebble-like material is comprised of special compounds that give cement its binding properties. Clinker is mixed with gypsum and ground to a fine powder to make cement.

Coal is used as an energy source in cement production. Large amounts of energy are required to produce cement. It takes about 200kg (.2 MT) of coal to produce one tonne of cement and about 300-400 kg of cement is needed to produce one cubic meter of concrete (**World Business Council for Sustainable Development, 2002**).

Coal combustion products (CCPs), such as Fly Ash also play an important role in cement manufacture. Hence cement companies usually import thermal coal for use in their captive power plants, and use the residual fly ash for cement manufacture. The cement industry consumes about 10 MMT of coal annually. Since coalfields like Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL) supply poor quality of coal, the industry has to blend high-grade coal with it. However, non-coking coal and petroleum coke attracts a customs duty of 5%, which increases the cost of production in the sector. Hence, majority of cement producers rely on imports for meeting their demand.

#### **Cement Production**

Cement is produced in 156 countries world over. During 2008, the global production capacity of cement stood at around 2,872 MMT with China accounting for approximately 1,400 MMT and India at a distant second with total production of 183 MMT. The production of Cement is highly skewed with top ten countries together accounting for close to 70% of total cement production. With a total capacity of over 324 MMT as of May 2013, the Indian cement industry has emerged as the second largest market after China, surpassing developed nations like the USA and Japan.

Table 4.4 below shows major players in the Indian Cement Industry

Name of cement company	Installed capacity(MT)
Grasim Industries Ltd	25.65
Ultra Tech Cement Ltd	24.3
JP Associates Ltd	17.15
India Cements Ltd	14.05
Madras Cement Ltd	13.72
Shree Cement Ltd	12
Dalmia Cement Ltd	9
JK Cement Ltd	8.42
Chettiaand Cement	8.2
Century Tetxtiles And ind	7.8
Lafarge India P Ltd	7.55
Birla Corp Ltd	7.38
Kesoram Industries Ltd	7.25
Penna Cement Ltd	6.5
Binani Cement Ltd	6.25
<b>Total Capacity held by majors(77 % of Industry)</b>	<b>175.22</b>
<b>Others (23 % of Industry)</b>	<b>51.68</b>

**Table4.5 Major Indian Cement Manufacturers (Source: S.S. Kothari Mehta & CO)**

#### 4.4.2 Coal & Steel Industry

Steel is an essential material for modern life. The manufacture of steels delivers the goods and services that our societies need – healthcare, telecommunications, improved agricultural practices, better transport networks, clean water and access to reliable and affordable energy.

Global steel production is highly dependent on coal. Metallurgical coal – or more popularly, coking coal – is a vital ingredient in the steel making process. World crude steel production was 1.4 billion tonnes in 2010. Around 721 MMT of coking coal was used in the production of steel.

##### **How is Steel Produced?**

Steel is an alloy of iron and carbon. Currently almost 70% of global steel is produced in Basic Oxygen Furnaces (BOF). Coking coal is converted to

coke, which is then used in the blast furnace to smelt iron ore. The resulting molten iron is then taken to the BOF, where steel scrap and limestone are added. A stream of high purity oxygen is blown through the molten bath to remove impurities, leaving almost pure liquid steel.

For producing steel by BOF, about 770 kg (0.8MT) of coal are required to produce 1 MT (World Coal)

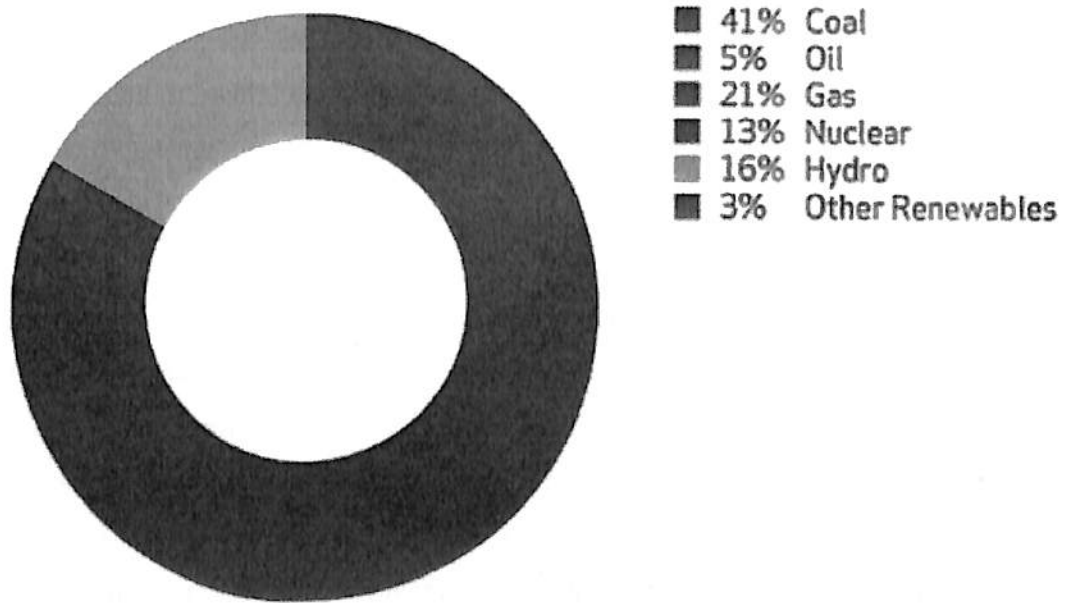
Domestic crude steel production grew at a CAGR of 8.4% in the last few years and is projected to be around 110 MMT by 2012-13. Furthermore, infrastructure projects (like Golden Quadrilateral and Dedicated Freight Corridor) will give boost to the demand in the steel sector in near future.

The coking coal the industry consumes is mostly met by imports mainly due to the following reasons.

- High ash content in domestic coal
- Tends to have poor coke strength
- Domestic coking coal production has remained essentially flat for the past 10 years, gradually declining
- High GCV domestic coking coal unavailable, need for blending

#### **4.4.3 Coal & Power Industry**

Thermal coal is one of the most important and the most voluminous grades of coal traded. Over 40% of world's power generation is by thermal coal fired power plants.



**Figure4.5 World Electricity generation by Fuel (Source: IEA, 2011)**

Coal is first milled to a fine powder, which increases the surface area and allows it to burn more quickly. In these pulverised coal combustion (PCC) systems, the powdered coal is blown into the combustion chamber of a boiler where it is burnt at high temperature. The hot gases and heat energy produced, converts water in tubes lining the boiler to steam. The boiling point of water and the pressure of the closed system are directly proportional. In other words, the boiling point of water increases with increasing pressure, implying an increase in the heat carrying capacity of water. In order to gain higher efficiencies, newer coal-fired power plants are using Super-Critical technology to generate electricity.

The high pressure steam is passed into a turbine containing thousands of propeller-like blades. The steam pushes these blades causing the turbine shaft to rotate at high speed. A generator is mounted at one end of the turbine shaft and consists of carefully wound wire coils. Electricity is generated when these are rapidly rotated in a strong magnetic field. After passing through the turbine, the steam is condensed and returned to the boiler to be heated once again.

The electricity generated is transformed into the higher voltages (up to 400,000 volts) used for economic, efficient transmission via power line grids. When it nears the point of consumption, such as our homes, the electricity is transformed down to the safer 100-250 voltage systems used in the domestic market.

As of April 2013 India had total thermal capacity of 151530 MW, Hydro 39491 MW and 3780 MW of nuclear power capacity. Indian government in the 12<sup>th</sup> Plan ending March 2017 has set an ambitious target of adding 88000MW in generation capacity. By reports from various sources, it is estimated that almost 33% of the installed capacity is idle due to lack of fuel. As a result, many power producers have turned to imports, mainly due to lack of domestic fuel, and also due to the low calorific value and higher ash content of the domestic coal.

On a positive note, Coal India Limited (CIL) achieved its highest ever increase of over 32 Million Tons (MT) in Coal off-take by supplying 465.19 MT during 2012-13. CIL supplied 343.79 MTs of coal to power utilities in 2012-13, and increase of 10.2% against the previous year.

#### **4.5 India's Coal Imports**

India, being a major steel and cement producer, and due to the fact that more than half of India's power is from coal fired power plants, there has always been demand for various grades of coal. India is aiming for an annual average growth rate of 9% during the next five year period starting April 1. This growth will bring increasing demand for power and steel, and consequently for the coal that is needed for both industries.

India's deficit in coal supply is likely to increase much faster than the proposed 6% increase in domestic supplies and hence, much greater volumes are expected this financial year. A number of economic experts say that China's power consumption growth rates are starting to come off the highs of recent years while domestic coal production and transport capacity growth are improving. Power consumption in China

grew 8.5% in 2012 while the nation is expected to add 200 million tonnes of coal production. Furthermore, Mongolia will also play an increasingly important role in supplying coal to China, implying that shipments from Indonesia, Australia and Africa may be diverted to India. As the world's largest thermal coal exporter, Indonesia is well placed to benefit from India's increased demand.

Dozens of Indian companies have invested in coal mines and coal companies in Indonesia in a bid to secure supplies for their plants in the long term and this investment flow shows no signs of slowing.

More than half of India's power generation is fuelled by thermal coal, but as domestic supplies struggle to keep pace with capacity growth in the power sector, power producers are increasingly looking towards imports for meeting their demand.

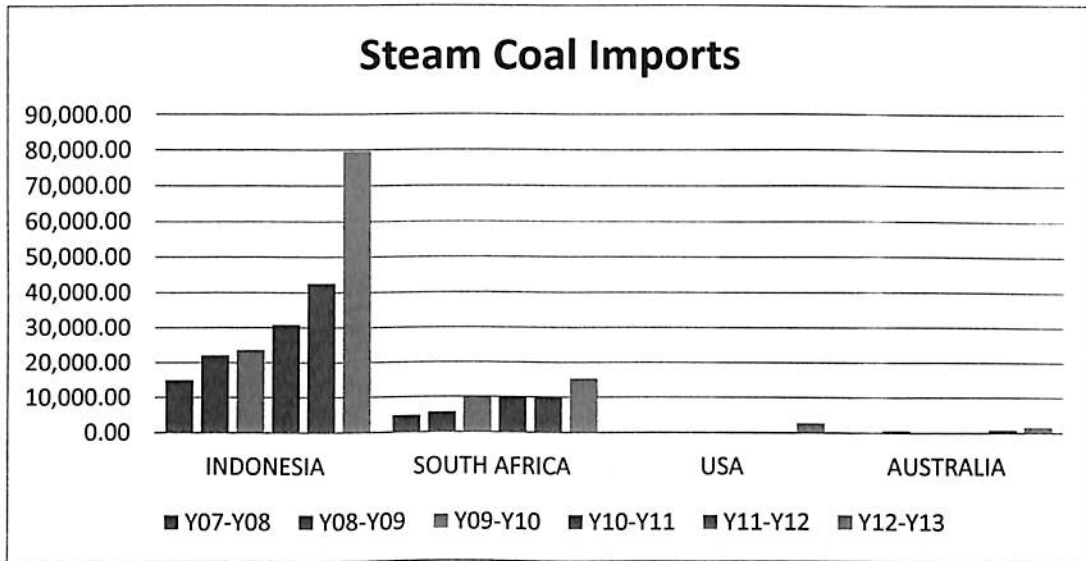
There is no import restriction as far as import of steam/thermal coal is concerned. Buyers have also been drawn to imports by weak global coal prices. Prices for Australian coal, the benchmark for Asia, have fallen about 30 per cent since a record high of \$130 per tonne in 2011 and are down 8 per cent since the beginning of this year.

India's own thermal coal production rose 3.3 per cent in 2012/13 and was up just 0.76 per cent in April to 39.2 MMT (EIA, 2012). It is reported that imports this year to March 31, 2014 could hit 165 MMT to meet the local supply shortfall, another record after total imports touched 135 MMT in 2012/13.

Figure4.6 below shows India's Steam Coal Imports, Figure4.7 showing Steam Coal Import sources over the last five years.



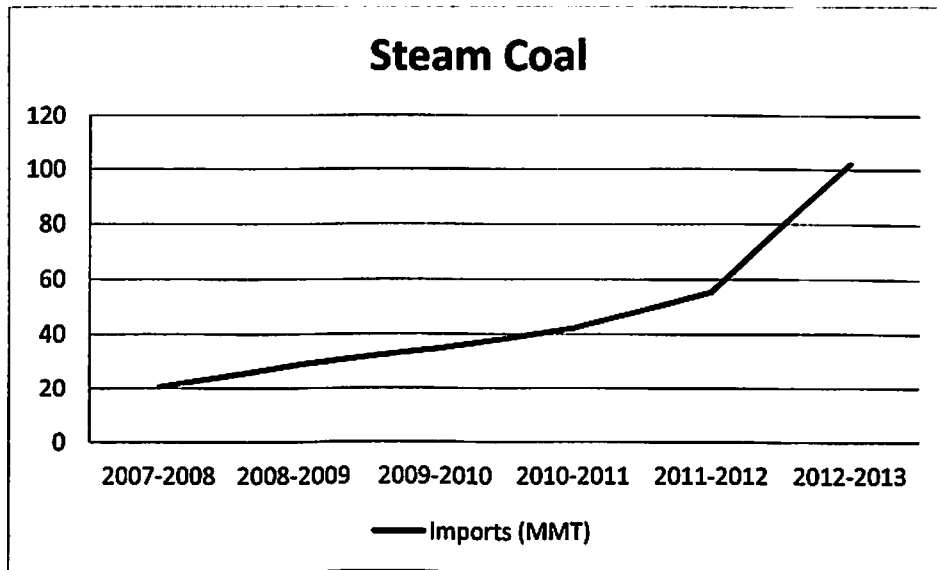
(‘000MT)



**Figure4.6 Steam Coal Imports by Source (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)**

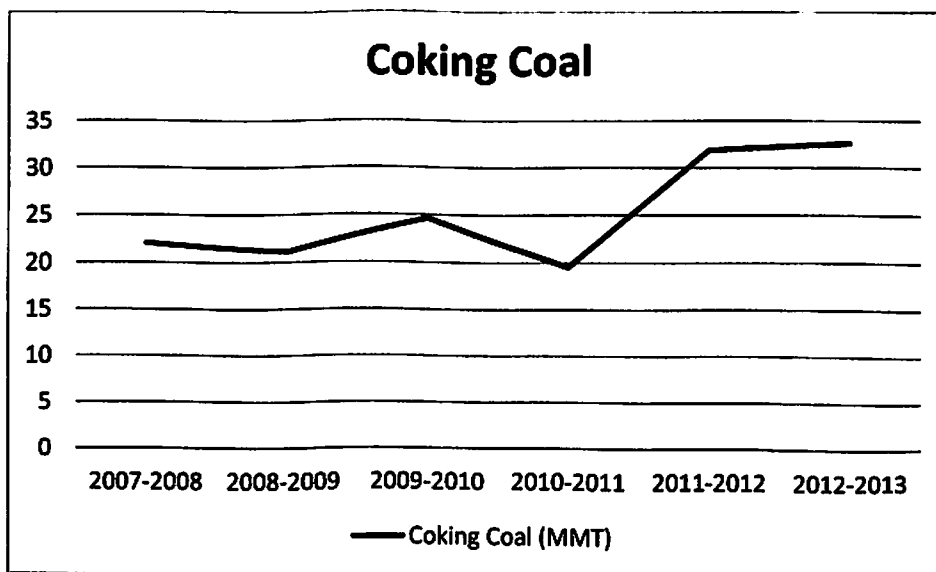
As can be seen, Indonesia continues to be the top exporter of Steam coal to India, with exports touching 80 MMT this year. In comparison, South African coal lags far behind with only about 10 MMT this year.

Indonesian exports to China have been increasing on a monthly basis, although these increases have slowed in recent month, while exports to India are surging. However, in light of China’s ruling to ban import of low-grade coal from Indonesia, increased demand from India could reassure Indonesian suppliers of alternate demand sources for at least some of its low-grade thermal coal.



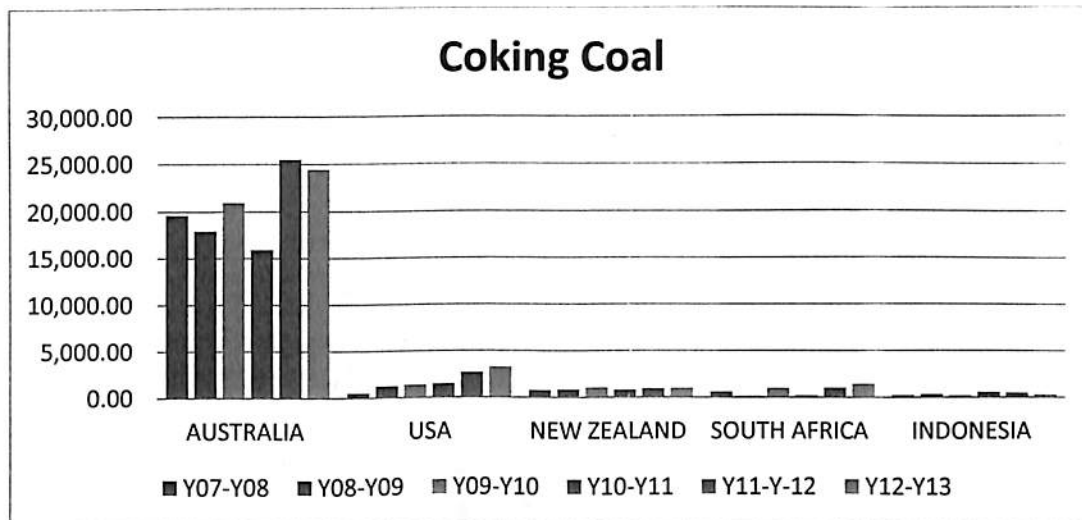
**Figure4.7 Steam Coal Imports (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)**

Figure4.8 below shows India's Coking Coal Imports, Figure4.9 showing Coking Coal Import sources over the last five years.



**Figure4.8 Coking Coal Imports (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)**

(‘000MT)



**Figure4.9 Coking Coal Imports by Source (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)**

As can be seen, Australia continues to be the top exporter of Coking coal to India, with exports touching 2.5 MMT this year. In comparison, coal from USA lags far behind with only about 0.5 MMT this year.

Data from (Reuters Dry Bulk Update, 2013) indicated that Coking coal imports fell 14 per cent in April as demand for the steelmaking ingredient slipped. However, imports of coking coal are expected to rise in 2013/14 overall, as additional steelmaking capacity boosts demand.

Figure4.10 below shows India’s Bituminous Coal Imports by source over the last five years. As mentioned previously, the government has imposed a highly prohibitive duty system (55% basic duty) on bituminous coal, and so the volumes are miniscule compared to steam coal and coking coal imports. The year 2012-2013 saw an import of 0.3 MMT of bituminous coal, mainly from RBCT, South Africa.

(‘000MT)

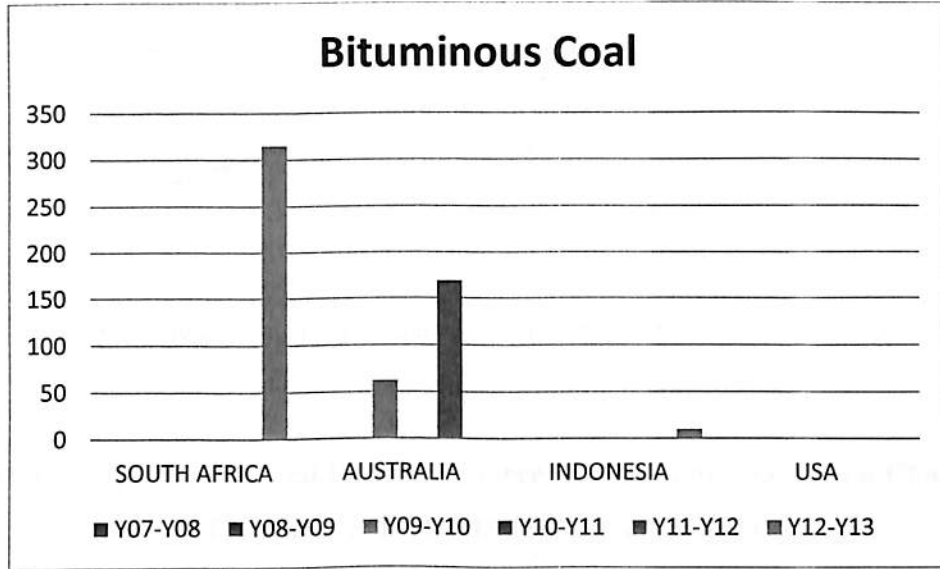


Figure4.10 Bituminous Coal Imports by Source (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

Figure4.10 below shows India's Anthracite Coal Imports, Figure4.11 showing Anthracite Coal Import sources over the last five years.

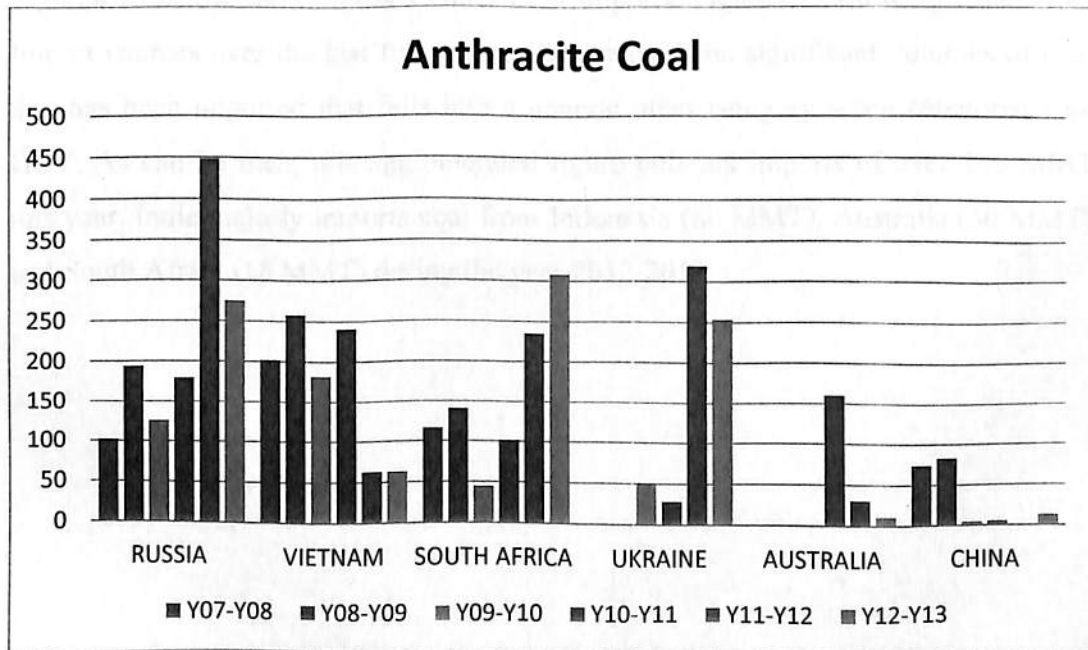
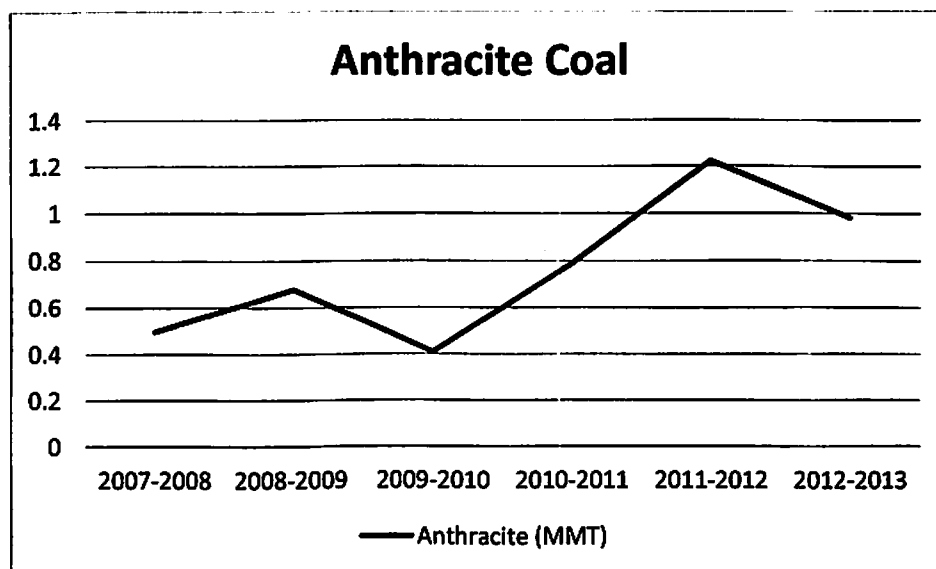


Figure4.11 Anthracite Coal Imports by Source (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)



**Figure4.12 Anthracite Coal Imports (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)**

As can be seen, there have been fair bit of anthracite imports from South Africa, Russia and Vietnam this year. As there is no clear definition, it is difficult to track the movements of anthracite coal into India. In the year 2012-2013, Indian imported 2.5 MMT of anthracite coal from Russia, and a little over 3 MMT from South Africa.

Figure4.13 below shows India's Other Coal Imports, Figure4.12 showing Other Coal Import sources over the last five years. There have been significant volumes of coal that has been imported that falls into a generic other category when categorised by GCV. As can be seen, this agglomerated figure puts net imports of over 140 MMT this year. India majorly imports coal from Indonesia (80 MMT), Australia (30 MMT) and South Africa (18 MMT) during the year 2012-2013

(‘000 MT)

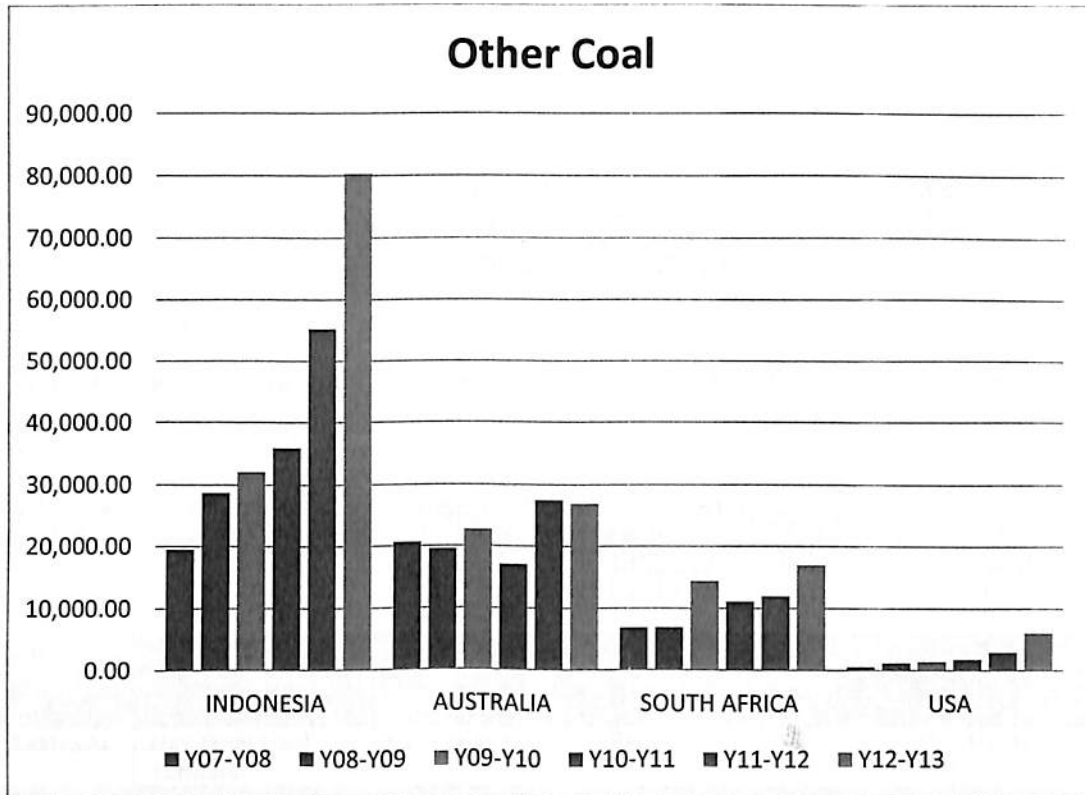


Figure4.13 Other Coal Imports by Source (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

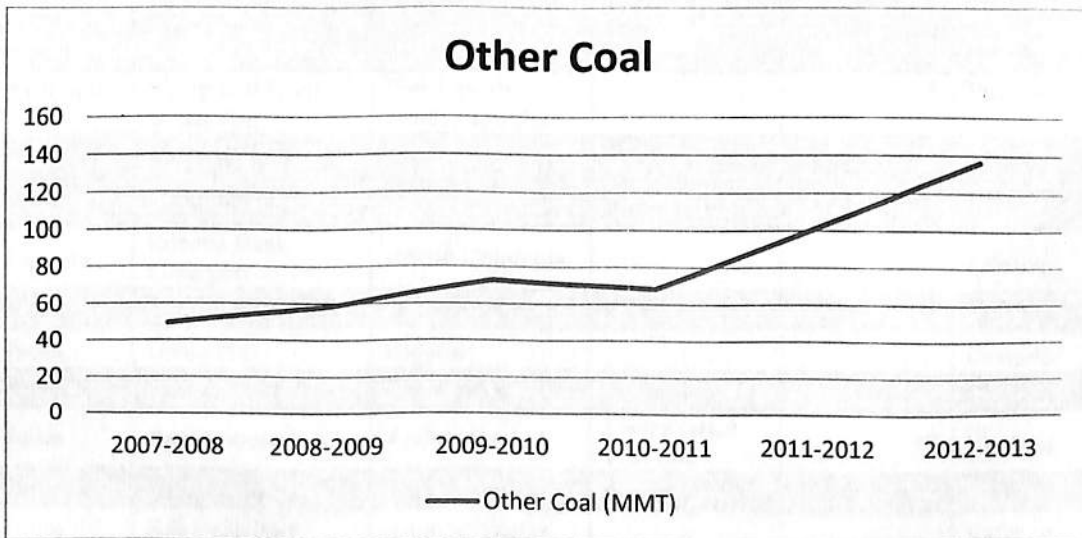


Figure4.14 Other Coal Imports (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

**4.6 Major Coal Handling Terminals**

Country	Terminal	State/Province	Operator	Annual Capacity (MMT)	Status
Australia	Abbot Point Coal Terminal	south of Townsville, Queensland	Adani Group	25	Expanding
Australia	Balaclava Island Coal Terminal	north of Gladstone, Queensland	Xstrata Coal	20	Proposed
Australia	Barney Point Coal Terminal	Gladstone, Queensland		8	Existing
Australia	Brisbane Coal Terminal	Brisbane, Queensland	New Hope Corporation	18	Existing
Australia	Carrington Coal Terminal	Newcastle, New South Wales	Port Waratah Coal Services	25	Existing
Australia	Derby Export Facility	Derby, Western Australia	Rey Resources	3	Proposed
Australia	Fitzroy Terminal Project	Adjacent to Port Alma, Queensland		22	Proposed
Australia	Hay Point Coal Terminal	Queensland	BHP Billiton	45	Existing
Australia	Kooragang Coal Terminal	New South Wales	Port Waratah Coal Services	88	Existing
Australia	Port Kembla Coal Terminal	New South Wales		15	Existing
Australia	RG Tanna Coal Terminal	Queensland	Queensland Ports Corporation	70	Existing
Australia	Sheep Hill Deep Water Port	Port Lincoln, South Australia		5	Proposed
Canada	Westshore Terminals	British Columbia	Westar Management Ltd.	29	Expanding
Canada	Roberts Bank Superport	British Columbia			Existing
India	Bedi Port	Gujarat			Existing
India	Dahej Port	Gujarat			Existing
India	Ennore Port	Tamil Nadu			Existing
India	Gangavaram Port	Andhra Pradesh	Gangavaram Port Ltd.	10	Existing
India	Haldia Port	West Bengal			Existing
India	Kakinada Port	Andhra Pradesh			Existing
India	Kandla port	Gujarat			Existing
India	Karaikal Port	Puducherry			Existing
India	Krishnapatnam Port	Andhra Pradesh			Existing
India	Magadalla Port	Gujarat			Existing
India	Mormugao Port	Goa		7	Existing
India	Muldwarka Port	Gujarat			Existing

India	Mundra Port	Gujarat	Adani Enterprises	40	Existing
India	New Mangalore	Karnataka			Existing
India	Okha Port	Gujarat			Existing
India	Paradip Port	Orissa		20	Existing
India	Pipavev Port	Gujarat	APM Terminals		Existing
India	Porbandar Port	Gujarat			Existing
India	Port of Chennai	Tamil Nadu		15	Existing
India	Sikka Port	Gujarat			Existing
India	Tuticorin Port	Tamil Nadu		10	Existing
India	Visakhapatnam Port	Andhra Pradesh			Existing
Indonesia	Tanjung Bara Coal Terminal	East Kalimantan		27	Existing
Indonesia	Separi barge loading facility	East Kalimantan		20	Existing
Indonesia	Bontang Coal Terminal	East Kalimantan		19	Existing
Indonesia	Balikpapan Coal Terminal	East Kalimantan	PT Bayan Resources	15	Existing
Indonesia	Tanjung Jati Coal Terminal	Central Java		14	Existing
Indonesia	North Pulau Laut Coal Terminal	South Kalimantan	Arutmin	13	Existing
Indonesia	Suralaya coal terminal	West Java		11	Existing
Indonesia	Tarahan Coal Port	Sumatra		10	Existing
Indonesia	Muara Pantai Coal Terminal	East Kalimantan		7	Existing
Indonesia	Banjarmasin anchorage	East Kalimantan		6	Existing
Indonesia	Jorong Port	South Kalimantan		6	Existing
Indonesia	Samarinda anchorage	East Kalimantan		6	Existing
Indonesia	Sebuku anchorage	South Kalimantan		6	Existing
Indonesia	Padang, Teluk Bayur	Sumatra		4	Existing
Indonesia	Adang Bay Port	East Kalimantan		3	Existing
Indonesia	Bengkulu Port	East Kalimantan		3	Existing
Indonesia	Cigading anchorage	West Java		3	Existing
Indonesia	Jambi, Muara Sabak coal terminal	Sumatra		3	Existing
Indonesia	Muara Banyu Asin anchorage, Palembang	Sumatra		3	Existing
Indonesia	Pulau Baai Coal Terminal	Sumatra		3	Existing
Indonesia	Satui anchorage	South Kalimantan		3	Existing
South Africa	Port of East London	East Cape Province		2	Proposed



South Africa	Richards Bay Coal Terminal	Natal Province	Richards Bay Coal Terminal	76	Expanding
United States	Millennium Bulk Logistics Longview Terminal	Washington	Millennium Bulk Terminals	80	Proposed
United States	McDuffie Coal Terminal	Alabama		68	Expanding
United States	Gateway Pacific Terminal	Washington	SSA Marine	54	Proposed
United States	Lamberts Point Terminal	Virginia		48	Existing
United States	Port of Duluth	Minnesota		20	Existing
United States	CNX Marine Terminal	Maryland	CONSOL Energy	12	Existing
United States	Port of Baltimore	Maryland		9	Existing
United States	Myrtle Grove Midstream Terminal	Louisiana	Kinder Morgan Energy Partners	6	Expanding
United States	Port of Houston	Texas	Kinder Morgan Energy Partners	2	Expanding

#### **4.7 Coal Imports in India: Pros and Cons of different countries**

##### **4.7.1 Mozambique**

- Quality issues – high ash content
- Infrastructure development and mine to port connectivity is a major challenge and capital intensive
- Current ports are shallow, new rail and deep water ports necessary for full commercialisation
- Law & Order as well as political stability is a concern in long run
- Has freight cost advantage for India due to proximity
- However going by the existing constraints, total exports from Mozambique not expected to be more than 15 MMT before 2015

##### **4.7.2 Mongolia**

- Not conducive for Indian market due to obvious logistic constraint
- Has emerged as the major exporter to China
- Exports to China is done primarily through roads - poor roads & lack of rail infrastructure brings with it uncertainty of coking coal transportation in Mongolia
- Effective capacity of coking coal transportation to China to be not more than 25MMTPA in near future

##### **4.7.3 Russia**

- New capacity is dependent on expansion of ports
- Logistics becomes a major constrain for exports to India

##### **4.7.4 USA**

- Was recently offering coking coal to India in spot market at much cheaper rates of around \$170 per tonne

- However recent rise in Atlantic freight has put the US miners in a disadvantage - now need to achieve USD 150 per tonne to USD 160 per tonne FOB to remain competitive
- Indian mills have already standardized their technical parameters to Australian specifications - moreover, Indian PSUs are inflexible on quality parameters

#### **4.7.5 Indonesia**

It is the largest thermal coal exporter to India. Future production of coal will come from East Kalimantan and Sumatra. Central Kalimantan has semi-coking and high calorific value thermal coal resource.

##### **Pros**

- Lowest freight charges to India
- Low cost of mining due to opencast reserve
- Availability of river network for transportation
- FDI allowed in coal mining

##### **Cons**

- Likely option of export of coal with low Calorific Value
- Meeting domestic market obligation (DMO)
- Future production from Sumatra and East Kalimantan will low CV high moisture coal
- Legal framework
- High logistic cost from Sumatra

#### **4.7.6 Australia**

It is the highest exporter of coking coal to India. Australia has superior grade coal reserve and offers suitable investment climate. Galilee, Surat and Gunnedah are emerging thermal coal regions but logistic is an issue.

##### **Pros**

- Superior quality of coal reserve
- Availability of state-of-art technology and human resources

Cons

- Constraints in ports and railway capacity
- Introduction of MRRT (Material Resource Rent Test) will squeeze import
- Landed cost of thermal coal from Australia to India is apparently high

#### 4.7.7 South Africa

South Africa comprises of 30% thermal coal exports to India. Production from known coalfields is depleting. Limpopo province is an emerging region.

Pros

- Availability of superior quality thermal coal
- Availability of technology and human resources

Cons

- RBCT capacity constraints

#### 4.7.8 Columbia and Venezuela

They have known source of coking and thermal coal reserve. This can be a new source for thermal and coking coal to India. Currently, these countries are primarily exporter of coal in Europe and USA.

Cons

- High maritime freight cost
- Investment in logistics required

# Iron Ore Trade and Shipping

## 5.0 Iron Ore Trade and Shipping

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Iron & steel is the driving force behind industrial development in a country. The vitality of the iron & steel industry largely influences its economic status. The mining of iron ore, an essential raw material for Iron & Steel Industry is arguably of prime importance among all mining activities undertaken by any country.

### 5.1 OVERVIEW

Demand for iron ore globally is linked primarily to the state of the global steel industry and, more specifically, to steel manufacturing in China. China is the largest steel producer and consumer in the world, accounting for more than two-thirds of global seaborne iron ore imports. In 2011, global steel production increased 6% to 1.5 billion tonnes, of which 683mt were produced in China, an increase of 7%. China's iron ore needs were also met by domestic iron ore production, which rose by approximately 7% to 305 MMT.

The world reserves of crude iron ore are estimated to be around 170 billion tonnes. The iron content in the iron ore reserves is estimated to be around 80 billion tonnes. The world reserves of crude iron ore and iron content by principal countries is given in Table 5.1

Country	Reserves	
	Crude ore	Iron content
<b>World : Total (rounded)</b>	<b>170000</b>	<b>80000</b>
Australia	35000	17000
Brazil	29000	16000
Canada	6300	2300
China	23000	7200
India*	7000	4500
Iran	2500	1400
Kazakhstan	3000	1000
Mauritania	1100	700
Mexico	700	400
Russia	25000	14000
South Africa	1000	650
Sweden	3500	2200
Ukraine	6000	2100
USA	6900	2100
Venezuela	4000	2400
Other countries	12000	6000

**Table5.1 World Iron Ore Reserves (Source: Indian Minerals Handbook, 2012)**

In 2010, the world production of iron ore was 2,611 million tonnes as against 2,277 million tonnes in the previous year. China, Australia, Brazil, India and Russia were the principal producers. China, Australia, Brazil, India and Russia were the principal producers. The world production of iron ore is given in Table5.2.

Country	2008	2009	2010
<b>World : Total</b>	<b>2213</b>	<b>2277</b>	<b>2611</b>
Australia	342	394	433
Brazil	351	331	372
Canada *	32	32	37
China	824	880	1071
India **	213	219	208
Iran	38 <sup>e</sup>	34	34 <sup>e</sup>
Kazakhstan	21	46	50
Russia	100	92	95
South Africa ©	49	55	59
Sweden	24	18	25
Ukraine	73	66	78
USA	54	27 <sup>e</sup>	49
Venezuela	19	14	14
Other countries	73	69	86

**Table5.2 World Production of Iron Ore (Source: Indian Minerals Handbook, 2012)**

## **5.2 INDIA'S IRON ORE RESOURCES**

India's total resources amount to over 28.52 billion tonnes of hematite (Fe<sub>2</sub>O<sub>3</sub>) and magnetite (Fe<sub>3</sub>O<sub>4</sub>).

About 59% hematite ore deposits are found in the Eastern Sector. About 92% magnetite ore deposits occur in Southern Sector, especially in Karnataka. Of these, hematite is considered to be superior because of its higher grade. As per UNFC system, the total resources of hematite as on 1.4.2010 are estimated at 17,882 million tonnes of which 8,093 million tonnes (45%) are under 'reserves' category and the balance 9,789 million tonnes (55%) are under 'remaining resources' category. By grades, lumps constitute about 56% followed by fines (21%), lumps with fines (13%) and the remaining 10% are black iron ore, not-known and other grades.



Major resources of hematite are located in Odisha - 5,930 million tonnes (33%), Jharkhand - 4,597 million tonnes (26%), Chhattisgarh - 3,292 million tonnes (18%), Karnataka - 2,159 million tonnes (12%) and Goa - 927 million tonnes (5%). The balance resources of hematite are spread in Andhra Pradesh, Assam, Bihar, Maharashtra, Madhya Pradesh, Meghalaya, Rajasthan and Uttar Pradesh.

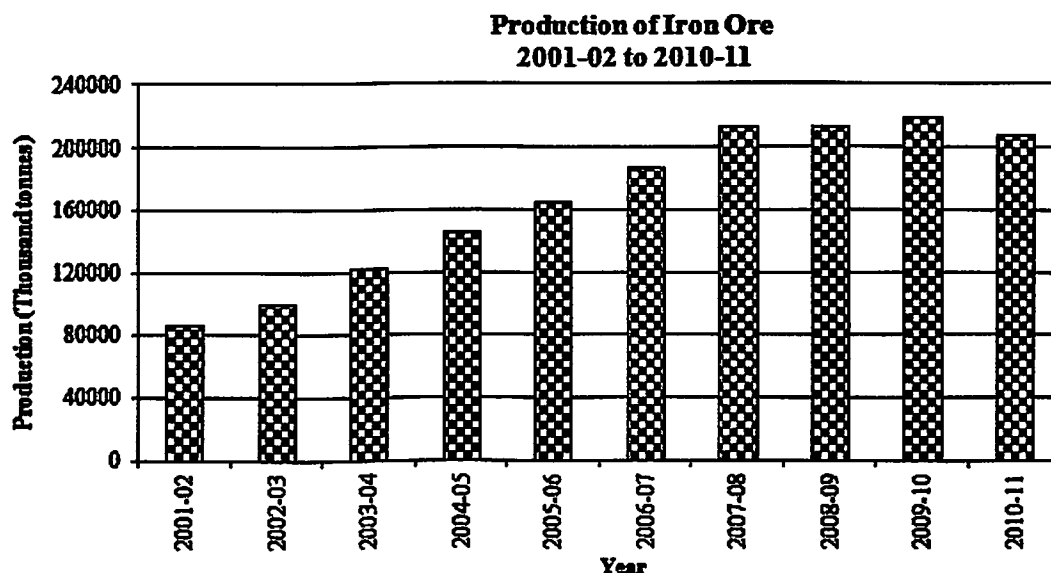
India's 97% magnetite resources are located in four states, namely, Karnataka - 7,802 million tonnes (73%) followed by Andhra Pradesh - 1,464 million tonnes (14%), Rajasthan - 527 million tonnes and Tamil Nadu - 507 million tonnes (5% each). Assam, Bihar, Goa, Jharkhand, Kerala, Maharashtra, Meghalaya and Nagaland together account for the remaining 3% resources.

### **5.3 PIG IRON PRODUCTION**

Pig iron is one of the basic raw materials required by the foundry & casting industry for manufacturing various types of castings. The main sources of pig iron have traditionally been majorly the integrated steel plants of SAIL, followed by plants of Tata Steel Ltd, Rashtriya Ispat Nigam Ltd. and Essar Steel. Domestic production of pig iron lags behind demand and so significant efforts are being made to increase pig iron manufacturing facilities in the secondary sector. As a result there was considerable interest from private players in setting up new pig iron units especially in the post-liberalised period. This has resulted in drastic change, in the contribution of private/secondary sector units from merely 8% in 1991-92 to about 89.6% by 2010-11. In 2010-11, about 5.54 MMT of pig iron was produced. The share of private/secondary producers in the years 2009-10 and 2010-11 was around 87.6% and 89.6%, respectively, despite the unprecedented increase in the price of imported coking coal.

The production of iron ore constituting lumps, fines and concentrates was at 208 million tonnes in the year 2010-11, showing a decline of about 5% as compared to the preceding year.

Figure 5.1 below shows the production of Iron Ore y-o-y, Table 5.3 below shows major Pig Iron Producers in India



**Figure 5.1 Production of Iron Ore in India (Source: Indian Minerals Handbook, 2012)**

Sl.No.	Unit	Location	Capacity
1.	Lanco Industries Ltd	Chittoor, Andhra Pradesh	1.65
2.	Sathavahana Ispat Ltd	Anantapur, Andhra Pradesh	1.20
3.	Jayaswal NECO Industries Ltd	Raipur, Chhattisgarh	7.50
4.	Sesa Goa Ltd	Bicholim, Goa	1.80
5.	Usha Martin Industries	Jamshedpur, Jharkhand	1.10
6.	JSW Steel Ltd	Bellary, Karnataka	7.20
7.	Kalyani Ferrous Industries Ltd	Koppal, Karnataka	1.20
8.	Kirloskar Ferrous Industries Ltd	Koppal, Karnataka	2.40
9.	KIOCL Ltd	Mangalore, Karnataka	2.27
10.	Usha Ispat Ltd	Redi, Maharashtra	3.00
11.	Ispat Metallics India Ltd	Dolvi, Raigad, Maharashtra	20.00
12.	Kalinga Iron Works	Barbil, Keonjhar, Odisha	1.70
13.	Kajaria Iron Castings Ltd	Durgapur, West Bengal	1.10
14.	Electrosteel Castings Ltd	Khardah, West Bengal	1.10
15.	Tata Metaliks Ltd	Kharuggpur, West Bengal	0.90

**Table 5.3 Location and Capacity of Principal Pig Iron Units (Source: Indian Minerals Handbook, 2012)**

#### **5.4 SPONGE IRON PRODUCTION**

India is the largest producer of sponge iron in the world. Sponge is produced from iron ore by using non-coking coal. Direct reduced iron (DRI), commonly referred to as sponge iron, is a metallic material formed by reduction of iron oxide at temperatures below the fusion point of iron. The installed capacity of sponge iron has also increased over the years from 1.52 million tonnes in 1990-91 to currently at 34.9 MMT which includes 3 gas-based units having 9.3 MMTPA.

#### **5.5 WORLD IRON ORE EXPORTS**

In December 2012, Australia's exports hit a record annualised rate of 592 million tonnes before dropping back to 494 million tonnes in February, as adverse weather and higher prices impacted exports.

Brazil's exports also hit a record level of an annualised 364 million tonnes per year in December before falling back to 275 million tonnes in February. That said, the majority of growth in seaborne iron ore shipments in recent years has come from Australia – exports from Brazil have been fairly stagnant while the country has struggled to bring new projects on stream and falling ore grades have affected iron content.

Interestingly, Brazil and Australia used to supply roughly the same tonnage of iron ore to the seaborne market in 2007 but Brazil's were 40 percent lower than Australia's basis December's record exports.

#### **5.6 WORLD IRON ORE DEMAND**

Demand for seaborne iron ore from countries other than China is expected to be around 420 MMT. Given that China is expected to require 1.140 billion tonnes of iron ore this year, it could need to source 375 MMT domestically, up from an estimated 300 MMT in 2012.

Following Figure 5.2 shows the seaborne Iron Ore Demand by location, Figure 5.3 shows major Iron Ore exporting nations from 2009 to 2012.

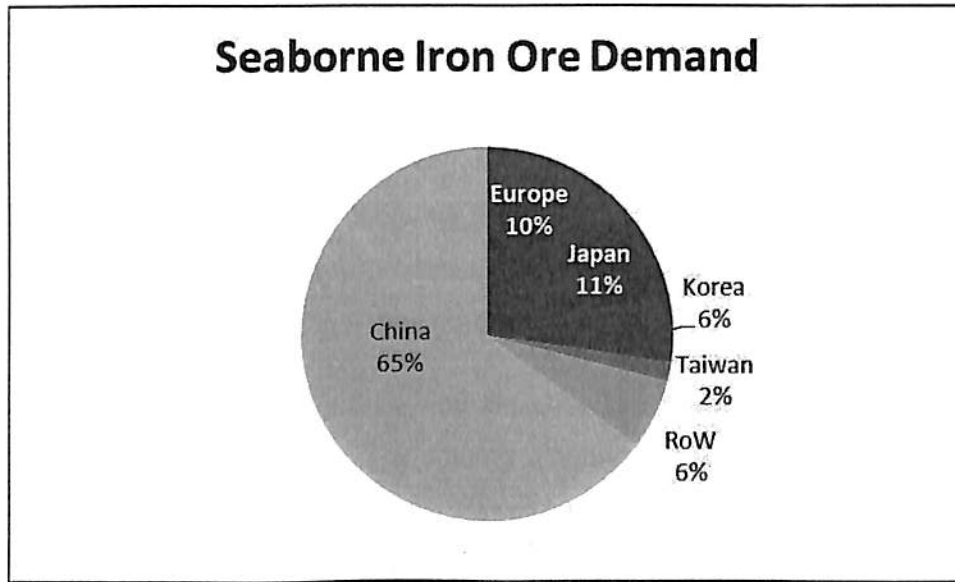


Figure5.2 Seaborne Iron Ore Demand (Source: Iron Ore Analysis and Forecast Q1 2013, Fastmarkets)

(\*000MT)

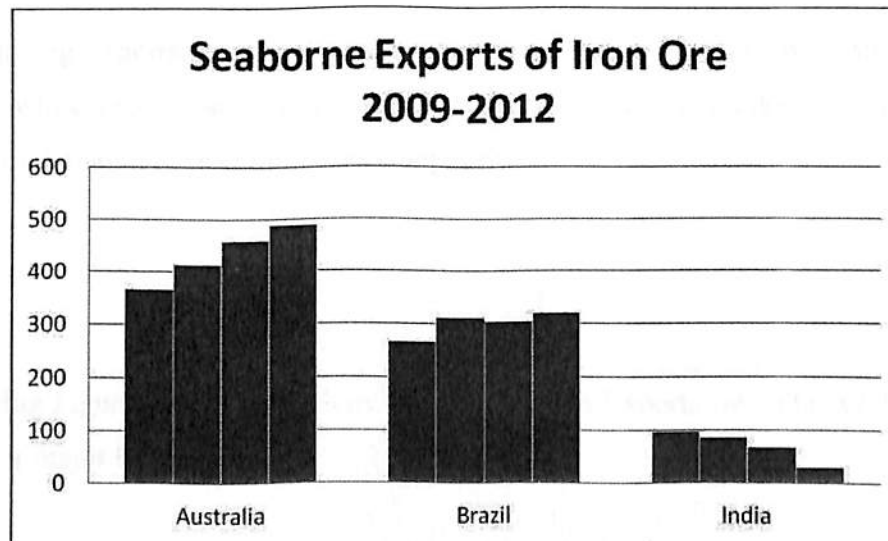


Figure5.3 Iron Ore Exports (Source: Iron Ore Analysis and Forecast Q1 2013, Fastmarkets)

**5.7 INDIA'S IRON ORE EXPORT**

India's exports of iron ore have been annihilated in recent years to an annualised rate of 8 million tonnes per year in the second half of last year, from 81 million tonnes in 2011 and a peak of 119 million tonnes in 2009. Government intervention has forced some miners to cut output if they are believed to be operating without legal permits

and the government also seems to be reacting to pressure groups that want to keep iron ore production for domestic steel mills.

India has historically produced enough iron ore to meet its domestic demand, but imports by Asia's third-largest economy tripled to 3 million tonnes in the year ended 31 March after output from top producing states Karnataka and Orissa fell due to a court-mandated clampdown on illegal mining.

Production has since picked up following steps to clean up the sector of practices such as mining outside allotted areas. The country's output of iron ore is estimated to have fallen to about 140 MMT tonnes in the year ended 31 March 2013, from 207 MMT in the previous year 2011, after a ban on mining in Karnataka and Goa. Output was 167.3 million tonnes for the year ended March 2012

Karnataka has opened some of its mines since late last year on the orders of the Supreme Court.

By reducing exports, more ore is available to domestic mills and possibly at lower prices, while at the same time supply to the international market is cut, thereby making international steel mills less competitive.

Following Figures 5.4 and 5.5, show India's Iron Ore Exports over the last five years and their major locations.

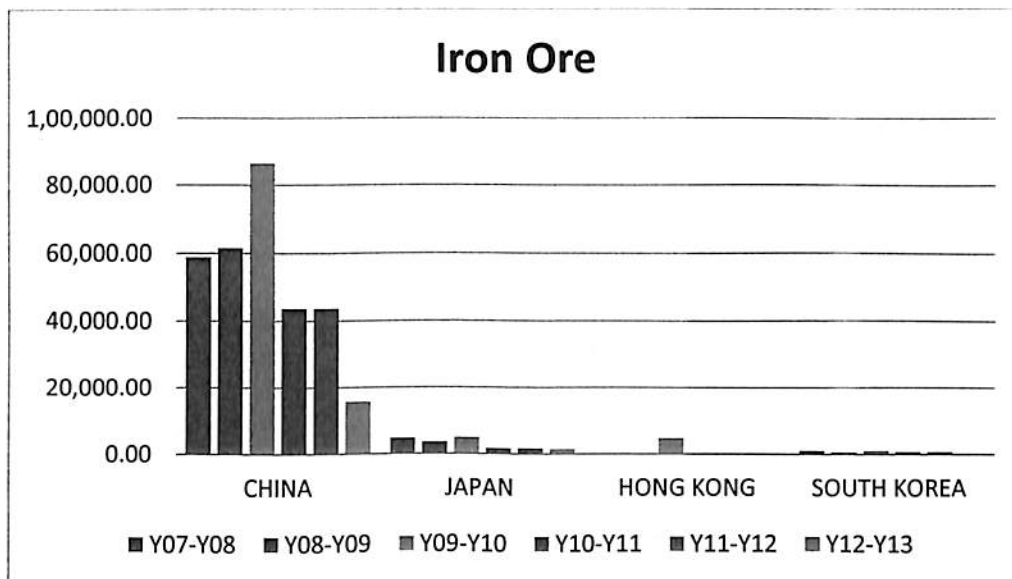


Figure 5.4 Iron Ore Export by Destination (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

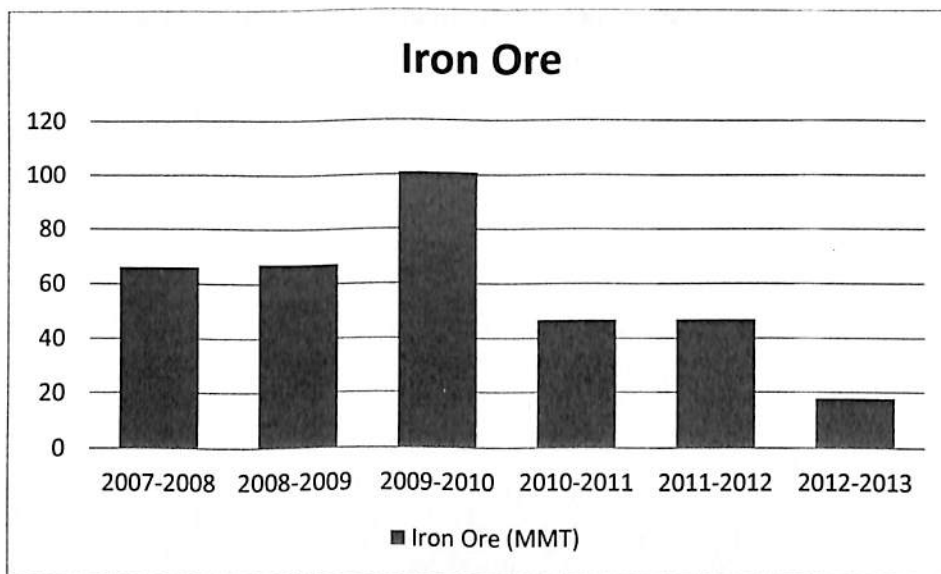


Figure 5.5 Iron Ore Exports (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

Exports of iron ore decreased to 46.88 MMT in 2010-11 from 101.53 million tonnes in the previous year. In terms of value too, the iron ore exports rose to ` 21,416 crore in 2010-11 from, ` 28,366 crore in 2009-10. The exports in 2010-11 in terms of volume comprised iron ore fines (92%), iron ore lumps (7%), and iron ore

concentrates & iron ore pellets (1%). Exports were mainly to China (91%) and Japan (3%).

## **5.8 FUTURE OUTLOOK**

The Working Group for 12th Plan, Planning Commission of India has estimated that the production of iron ore would be about 374 MMT by 2016-17 at 8% growth rate. The apparent consumption is estimated at 218 MMT by 2016-17 at 8% growth rate. It was pointed out that to promote the domestic steel industry assured iron ore linkages need to be promoted, to achieve the national goal to produce 200 MMTPA of steel by 2020. Acquisition of technology assets abroad pertaining to application of low grade iron ore and other technology for pig iron, sponge iron and palletisation would help bring in sustainable growth of this vibrant and dynamic sector.

# Food Grain Trade and Shipping



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## 6.0 Food Grain Trade and Shipping

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### 6.1 OVERVIEW

India, once known for its famines, has come a long way in achieving food self-sufficiency. Not only that, India has been a major food grain exporter since the last decade, and our presence in the world market is growing rapidly. India is blessed with large open acreage of very fertile land, diverse climatic conditions, allowing a variety of crops to be grown.

Agriculture is a critical sector of the Indian economy. Though its contribution to the overall Gross Domestic Product (GDP) of the country has fallen from about 30 per cent in 1990-91 to less than 15 per cent in 2011-12, a trend that is expected in the development process of any economy, agriculture yet forms the backbone of development. An average Indian still spends almost half of his/her total expenditure on food, while roughly half of India's work force is still engaged in agriculture for its livelihood. During 2010-11, food grains production was 244.78 MMT, comprising of 121.14 MMT during Kharif season and 123.64 MMT during the Rabi season. Of the total food grains production, production of cereals was 226.54 million tonnes and pulses 18.24 MMT. As per 2nd advance estimates for 2011-12, total food grains production is estimated at a record level of 250.42 million tonnes which is 5.64 million tonnes higher than that of the last year production. Total food grain production for 2012-13 will be 250 million tonnes, up from an average of 200 million tonnes in 2000-05. The government buys all production offered to it, which leads to the wheat and rice mountain. However, as there is storage for only 47 MMT, the rest sits outdoors, covered by tarpaulins.

The government wants to boost exports as a way to manage this surplus. Reuters reports that India hopes to export six million tonnes of wheat in 2013 and allow private exporters to ship another two million, moving it into the ranks of the top 10

global exporters. The government faces strong budget stress, but its farm support and food subsidization programs are popular and national elections slated for next year mean there is little likelihood of cuts. India's ability to continue expanding depends a lot on monsoon rains and groundwater irrigation, but at some point, water shortages will limit production.

## **6.2 WHEAT PROFILE**

Wheat is an important ingredient in many foods and hence is the largest consumed and traded edible commodity. Wheat production in India has had a fantastic year, and it is expected to have government-owned stores of 100 MMT of wheat and rice when harvest of the winter crops is complete this June.

To put that in perspective, Canada's total grains and oilseed production last summer was 70 million tonnes. After droughts in the first half of the 2000s and strong food price inflation, India has tried to boost food self-sufficiency by providing attractive base prices for crops and subsidizing fertilizer costs.

India's MY 2013/14 wheat production is forecast higher at a record 95.2 MMT on higher yields due to favourable March weather, which will propel government wheat procurement under the price support program to a record 44.1 MMT, about a 16-percent increase over last year's record procurement. MY 2012/13 government procurement of rice is also ahead of last year, estimated at 29.2 million tons through March 24, 2013, compared to 28.6 million tons last year during the corresponding period. Riding on back-to-back record procurement of both wheat and rice, the government-held food grain stocks on June 1, 2013, are forecast to balloon to a record 90 million metric tons.

With the total storage capacity available to the government estimated at around 71 million tons, the mammoth food grain stocks will pose an unprecedented storage crisis for the government, wherein a large quantity of wheat will be stored in the open, susceptible to damage and losses from monsoon rains, temperature changes, pests/rodents and pilferage. In an effort to lower the stocks to manageable level, the government has approved exports of an additional 5 MMT of government-held wheat from Punjab and Haryana by private traders. The government has already allowed

exports of 4.5 million tons of wheat by government parastatals. The government will have to lower the proposed floor prices for exports under the new scheme to be viable, further increasing the implied export subsidy on wheat exports from government stocks.

Given the outlook for another record crop, local wheat in the open market in Uttar Pradesh is expected to be available during the peak marketing period of April-July at around INR 12,500-13,000 (\$231-241) per ton. After accounting for transport/rail freight (INR 1,500-1,800 per ton) from Uttar Pradesh to Gujarat ports and unloading/FOBing charges (INR 800-900 per ton), the open market wheat will be available for export at around INR 14,800-15,700 (\$274-291) per ton FOB seaport. The open market MY 2013/14 wheat is likely to be better in quality than the year-old MY 2012/13 government wheat. In addition, the Food Corporation of India's requirement of 100-percent advance payment for the consignment even before it's lifted from the warehouse is likely to be another major disincentive for the private trade to source government wheat for exports. With the government floor price for old crop wheat simply too high to be attractive for private trade, the government has not been able to work out the modalities for exports under the new scheme more than three weeks after approval of the Group of Ministers.

### 6.2.1 Wheat Production

Wheat is the main cereal crop in India. The total area under the crop is about 29.8 million hectares in the country. State wise area coverage, production and yield are given at annex I and main varieties of wheat grown in India are given at annex II.

1.2 The production of wheat in the country has increased significantly from 75.81 million MT in 2006-07 to an all-time record high of 94.88 million MT in 2011-12. The productivity of wheat which was 2602 kg/hectare in 2004-05 has increased to 3140 kg/hectare in 2011-12. The major increase in the productivity of wheat has been observed in the states of Haryana, Punjab and Uttar Pradesh. Higher area coverage is reported from MP in recent years. Table 6.1 below shows World's wheat production and India's share.

Year	World Production in million MT	Indian Production in million MT	India's % share
2001-02	584	72.77	12.46
2002-03	569	65.76	11.56
2003-04	555	72.15	13.00
2004-05	627	68.64	10.95
2005-06	619	69.35	11.20
2006-07	596	75.81	12.72
2007-08	607	78.57	12.94
2008-09	685	80.68	11.78
2009-10	679	80.8	11.90
2010-11	653	86.87	13.30
2011-12	694	93.9	13.53
2012-13(proj.)	654	86	13.15

**Table6.1 World Wheat Production (Source: India Wheat Market Report, 2013)**

Major wheat exporters are USA, Russia, Australia, Canada, Argentina, Ukraine and Kazakhstan. India has just entered in global wheat market after six-seven years gap. However, increasing production has provided opportunity for India to be a regular exporter. The Table6.2 below shows the export performance, year wise, for major exporters, and projection for ongoing season.

T	United States	Russia	Canada	Australia	Ukraine	Argentina	Kazakhstan	Turkey	India
2000/01	28.90	0.70	17.32	15.93	0.08	11.33	3.97	1.60	1.57
2001/02	26.19	4.37	16.27	16.41	5.49	10.28	3.98	0.75	3.09
2002/03	23.14	12.62	9.43	9.15	6.57	6.80	6.24	0.79	4.85
2003/04	31.52	3.11	15.84	18.03	0.07	9.47	4.12	0.84	5.65
2004/05	29.01	7.95	14.87	14.72	4.40	11.90	3.08	2.02	2.12
2005/06	27.29	10.66	16.02	16.01	6.46	9.64	3.95	3.21	0.80
2006/07	24.73	10.79	19.43	8.73	3.37	10.72	8.16	2.38	0.09
2007/08	34.36	12.55	16.12	7.49	1.24	11.21	7.92	1.72	0.05
2008/09	27.64	18.39	18.88	14.75	13.04	6.79	6.15	2.24	0.02
2009/10	23.93	18.56	19.04	14.83	9.34	5.10	8.25	4.27	0.06
2010/11	35.08	3.98	16.58	18.66	4.30	9.49	4.86	3.02	0.07
2011/12	28.56	21.60	17.50	24.00	5.30	11.80	11.00	3.67	0.75
2012/13E	32.66	9.00	19.50	21.00	6.00	5.50	7.00	3.20	4.50

**Table6.2 World Wheat Export Performance (Source: India Wheat Market Report, 2013)**

Major wheat importers are Egypt, Indonesia, Algeria, Japan and South Korea. India has enormous opportunity in these markets except Egypt. As global wheat production is set to decrease due to rough weather, import requirements in these countries are bound to increase. The following table shows the balance sheet of major importing countries. With the continuation of export Indian exporters can attract foreign buyers and build up strong business network in global wheat market. Assured and timely supply with competitive price will establish India as a regular wheat supplier in the global market.

Table6.3 below shows state wise production of wheat over the last two years

State	2011-12			2010-11		
	Area	Production	Yield	Area	Production	Yield
Uttar Pradesh	9.73	30.29	3113	9.64	30	3112
Punjab	3.51	17.21	4898	3.51	16.47	4692
Haryana	252	12.68	5030	2.52	11.63	4615
Madhya Pradesh	4.89	10.58	2164	4.34	7.63	1758
Rajasthan	2.94	9.32	3175	2.48	7.21	2907
Bihar	2.17	4.79	2206	2.1	4.1	1952
Gujrat	1.35	4.1	3035	1.27	4.02	3165
Maharashtra	84	1.31	1558	1.31	2.3	1756
West Bengal	0.32	0.88	2800	0.32	0.87	2754
Uttarakhand	37	0.87	2369	0.38	0.88	2316
Himachal Pradesh	0.36	0.6	1671	0.36	0.55	1528
Jammu & Kashmir	0.29	0.41	1404	0.29	0.45	1558
Jharkhand	0.18	0.34	1876	0.1	0.16	1600
Karnataka	0.23	0.19	843	0.26	0.28	1077
Assam	5	0.06	1135	0.04	0.05	1250
Others	0.16	0.27	@	0.16	0.27	@
All India	29.9	93.9	3140	29.07	86.87	2988

Table 6.3 State-wise Wheat Production (Source: India Wheat Market Report, 2013)

### 6.2.2 India Wheat Exports

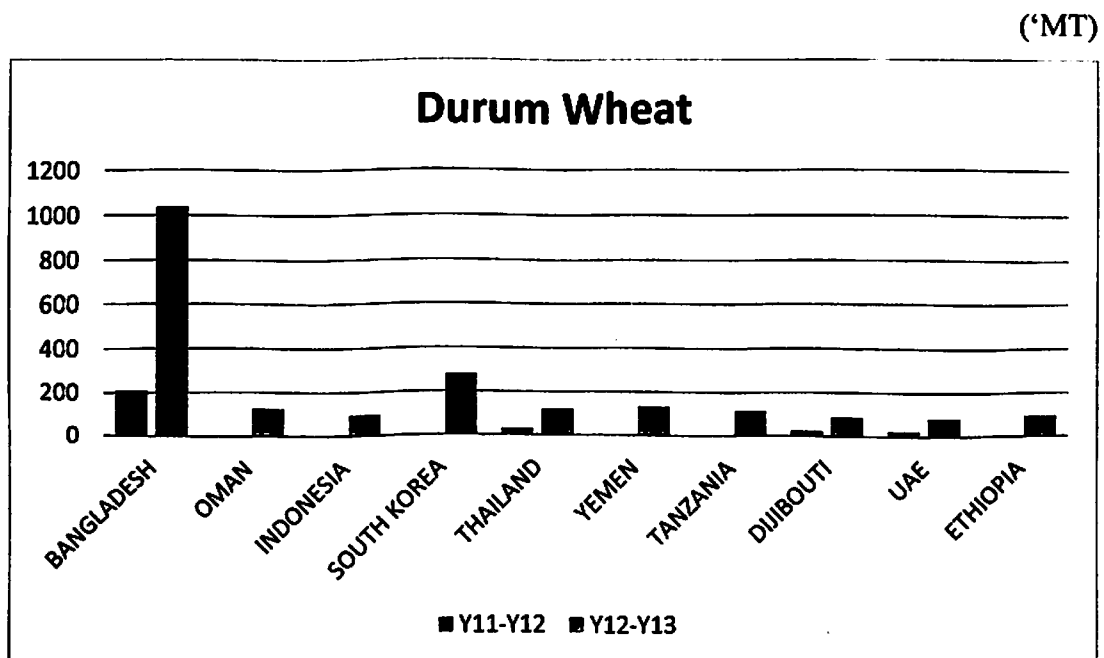


Figure 6.1 Durum Wheat Exports by destination (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

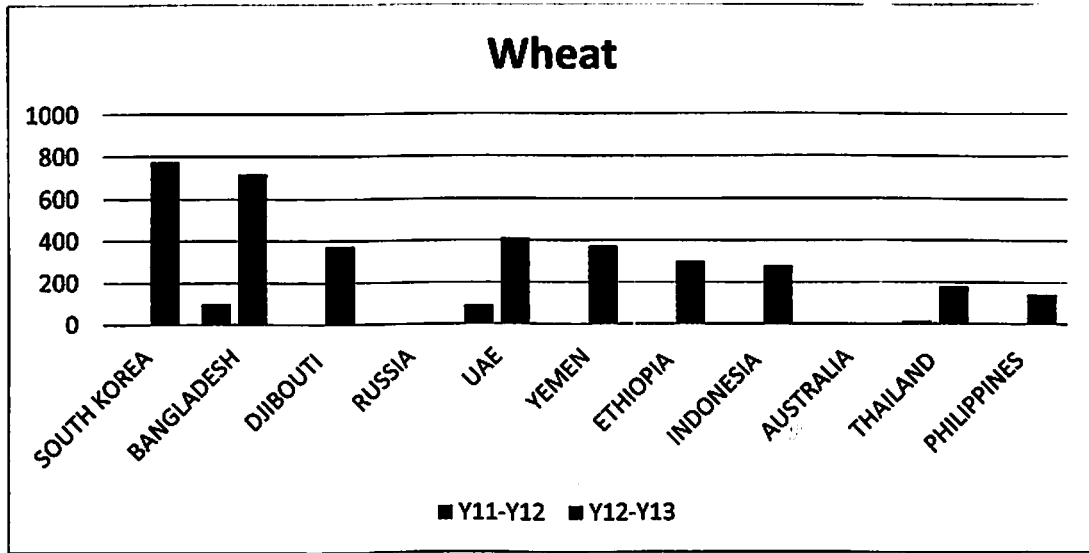


Figure6.2 Wheat Exports by destination (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

### 6.2.3 Major Wheat Export Terminals

Following are major bulk terminals from which wheat is exported.

- Kandla
- Mundra
- Kolkata
- Krishnapatnam
- Chennai
- Kakinada

Following are major container terminals from where wheat (break bulk) is exported

- Kandla
- JNPT
- Pipavav

**6.3 RICE PROFILE**

India is a major producer and exporter of rice, a staple commodity vital to the food security and welfare of over half the world's population. Since she consumes 95% of the rice she produces, rice prices are an integral part of national welfare to both consumers and producers. Protectionist trade policy actions in 2008 resulting from food shortage concerns potentially appeared to increase national welfare and limit the transmission of higher world prices to Indian consumers. However, India's greater use of export restrictions vs. export tariffs and its monopoly power in the production of rice could have limited the full effect of the price decrease.

India is the second largest producer of rice, after China, at a projected 97.5 million tons in 2008/2009. Although it consumes, on average, 95% of what it produces, India was still the third largest exporter of rice, after Thailand and Vietnam, with approximately 20% of total rice exports in 2006/2007. After export restrictions, India fell behind Pakistan and the US India's largest trading partners are the US and China (USDA, 2008). India is the second largest producer and consumer of rice in the world. Rice production in India crossed the mark of 100 million MT in 2011-12 accounting for 22.81% of global production in that year.

Following Figure6.3, shows major rice exporters over the years

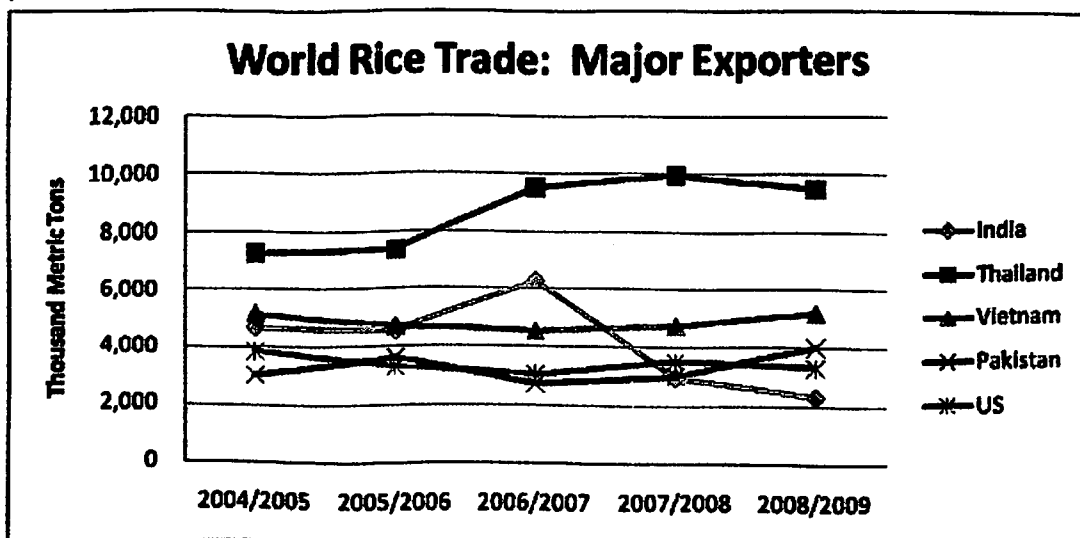


Figure6.3 Major Rice Exporters (Source: Kulkarni, Clarkson, 2008)



India is the largest producer of basmati rice in the world. Approximately 1% of its rice production is basmati, but unlike other rice varieties, more than 80% of the basmati rice grown is exported. The Gulf nations and Europe are its primary importers, which equates to 1.2 million tons annually (Oryza, 2008). India's climate is well suited for rice production, which is land and labour intensive. World rice demand experienced an increase by 2.4% in 2009. Consumers are expected to increase consumption of less-expensive staple foods due to the global financial crisis lowering household incomes. On a per capita basis, average rice consumption as food is estimated to rise from 56.9 kg to 57.3 kg (Food & Agriculture Organization, 2009). Global rice production is expected to rise nearly 2% above 2007/2008 production to a record 439.7 million tons. Global rice trade is projected at 29.5 million tons, 1% below 2008 and 8% below a 2007 record (Childs, 2009)

"Basmati" is long grain aromatic rice grown for many centuries in the specific geographical area, at the Himalayan foot hills of Indian sub-continent, blessed with characteristics extra- long slender grains that elongate at least twice of their original size with a characteristics soft and fluffy texture upon cooking, delicious taste, superior aroma and distinct flavour, Basmati rice is unique among other aromatic long grain rice varieties.

**Varieties:**

The main varieties of Basmati rice as notified under the seeds Act, 1966 are Basmati 386 , Basmati 217 , Ranbir Basmati , Karnal Local/ Taraori Basmati, Basmati 370, Type-3 (Dehradooni Basmati), Pusa Basmati-1, Pusa Basmati 1121, Punjab Basmati-1, Haryana Basmati- 1, Kasturi and Mahi Sugandha.

**Areas of Cultivation:**

The areas of Basmati Rice production in India are in the states of J & K, Himanchal Pradesh, Punjab, Haryana, Delhi, Uttarakhand and western Uttar Pradesh.

### 3.1 Exports

India is the leading exporter of the Basmati Rice to the global market. The country has exported 3456.41 thousand MT of Basmati Rice to the world for the worth of Rs. 19390.53 crores during the year 2012-13.

Indian share in global rice production has been hovering in the range of 19.50 to 24.52 %. Indian share dipped below 20 percent only in 2009, due to export restrictions. Table6.4 below shows the world rice production and percentage share of India in total production. Following Table6.5 shows rice production of various countries worldwide.

Year	World Production in million MT	Indian Production in million MT	India's share (In %)
2001-02	399	93.34	23.39
2002-03	380	71.82	18.90
2003-04	390	88.53	22.70
2004-05	405	83.13	20.53
2005-06	423	91.79	21.70
2006-07	427	93.35	21.86
2007-08	438	96.69	22.08
2008-09	459	99.18	21.61
2009-10	457	89.09	19.49
2010-11	449	95.98	21.38
2011-12	456	104.32	22.88
2012-13*(Proj.)	463	103	22.25

**Table6.4 India Rice Production (Source: Agricultural Co-operation of India Report, 2013)**

Countries	2008/09	2009/10	2010/11	2011/12	2012/13Jan	2012/13Feb
Bangladesh	31200	31000	31700	33700	33800	34000
Brazil	8570	7929	9300	7888	8160	8160
Burma	11200	11642	10528	10816	10750	10750
Cambodia	3992	4056	4233	4268	4225	4225
China	134330	136570	137000	140700	143000	143000
Egypt	4673	4564	3100	4250	4700	4700
India	99180	89090	95980	104320	99000	99000
Indonesia	38310	36370	35500	36500	36900	36900
Japan	8029	7711	7720	7646	7755	7756
Korea South	4843	4916	4295	4224	4006	4006
Nepal	2850	3013	2680	2970	2900	3000
Pakistan	6900	6800	5000	6500	6800	6800
Philippines	10755	9772	10539	10700	10990	10990
Thailand	19850	20260	20262	20460	20500	20500
Vietnam	24393	24993	26371	27075	27710	27710
Others	33080	35303	37290	37144	38001	37955
United States	6546	7133	7593	5866	6356	6356
<b>World Total</b>	<b>448701</b>	<b>441122</b>	<b>449091</b>	<b>465027</b>	<b>465553</b>	<b>465808</b>

**Table 6.5 World Rice Production Country-wise (Source: Agricultural Co-operation of India Report, 2013)**

Table 6.6 shows India's Major Rice exports over the years.

S.No.	Country	Values in US\$ Million	
		2010-2011	2011-2012
1	U ARAB EMTS	624.69	820.72
2	SAUDI ARAB	689.68	760.25
3	IRAN	446.2	600.31
4	NIGERIA	0.49	352.01
5	KUWAIT	239.9	295.47
6	IRAQ	36.36	167.3
7	U K	77.48	143.12
8	U S A	55.34	119.95
9	SENEGAL		116.88
10	YEMEN REPUBLC	65.35	116.83
11	COTE D' IVOIRE	0.75	109.84
12	INDONESIA	2.37	109.62
13	EGYPT A RP	2.72	94
14	SOUTH AFRICA	13.27	91.54
15	BENIN	0.77	90.59
16	BANGLADESH PR	2.63	54.45
17	JORDAN	25.05	51.69
18	SINGAPORE	8.06	44.66
19	OMAN	8.17	42.58
20	NEPAL	10.03	42.35

**Table 6.6 India's Major Rice Exports by Value (Source: Agricultural Co-operation of India Report, 2013)**

Production shortfall and rising internal prices forced the government to ban export of non-basmati varieties in 2007. Export of basmati, the long grain aromatic rice unique to the Indian sub-continent, continued albeit with some restrictions such as minimum export price. Despite staying out of the world non-basmati rice trade for four years, India seized the market opportunity as soon the export ban was lifted in September 2011. Thanks to a combination of expanded production, large public stocks, weak currency and liberal export policy, the country shipped out record 10.3 million tonnes rice in calendar year 2012.

6.3.2 Exports

Export shipments comprised seven MMT of non-basmati and 3 MT basmati rice. Following Figure6.4 shows India's Brown Rice exports to various countries

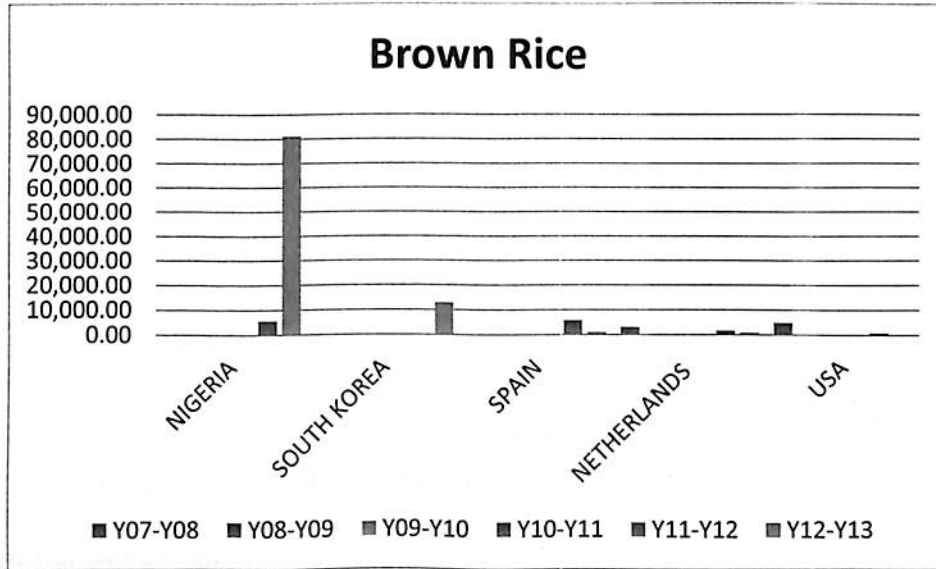


Figure6.4 Brown Rice Exports by destination (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

Figure6.5 below shows India's Rice Exports to various countries ('MT)

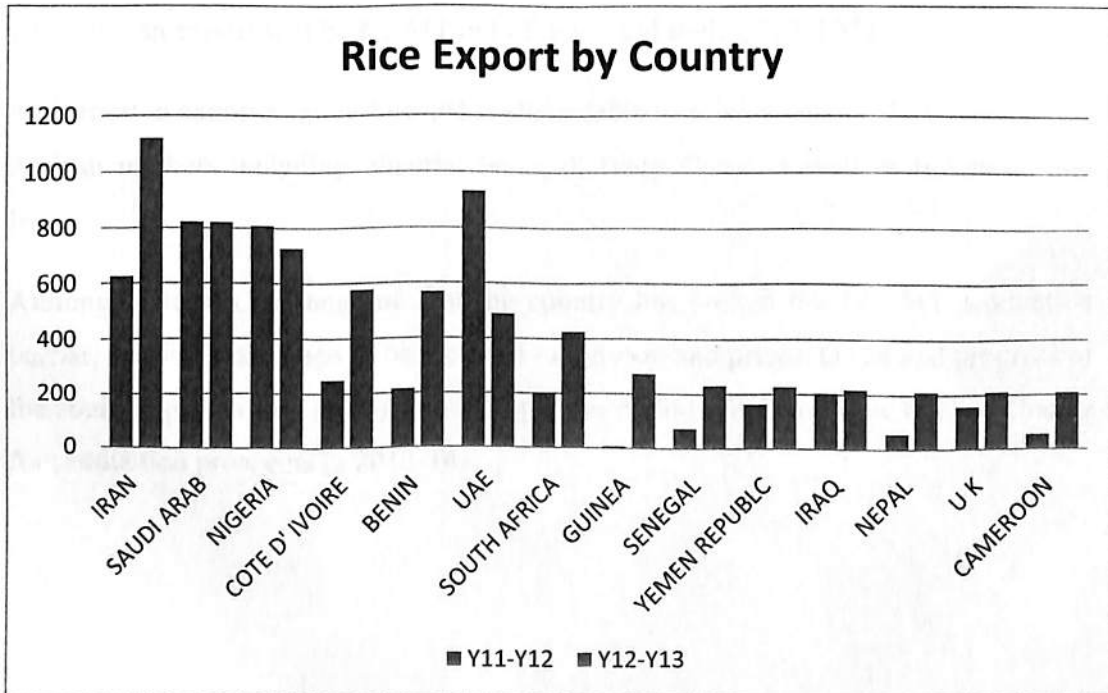


Figure6.5 Rice Exports by destination (Source: Own Graph, Data from Chamber of Commerce EXIM Data Bank 2013, GOI)

Export destinations were mostly African countries including Nigeria, Senegal, Ivory Coast and South Africa, in addition to Iran, Saudi Arabia and the UAE. African countries shifted to Indian non-basmati rice because of price competitiveness, particularly of parboiled rice. Shipment of 10.3 MT in 2012 represented a little over a quarter of world rice exports of 38.6 MT during the year, according to Food and Agriculture Organisation data.

Vietnam followed with 7.7 MT and Thailand 7.0 MT In 2011, Thailand was the top exporter - it usually is - with shipment of 10.7 MT followed by Vietnam with 7.1 MT and India ranked third with 4.8 MT

Interestingly, India's remarkable export performance coincides with the decisive break above the psychological barrier of 100 MT rice production in 2011-12.

**What's the outlook for 2013?**

On current reckoning, given the second highest level of production in 2012-13, large public stocks, liberal export policy and weak currency, there is a great opportunity for Indian to retain its top rank as rice exporter in 2013. The FAO has forecast that in 2013, Indian export will be 8.3 MT out of the world trade of 37.4 MT

Reduction in export volume forecast is attributable to subdued demand from some key African markets including Nigeria, Senegal, Ivory Coast as well as Indonesia and Iran.

Although one can be sanguine that the country has broken the 100 MT production barrier, two key risks need to be watched - monsoon and prices. Onset and progress of the southwest monsoon during June-September period will have to be tracked closely for production prospects in 2013-14.

# Estimation of Bunker Potential

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## 7.0 Estimation of Bunker Potential

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### 7.1 METHODOLOGY

The following methodology is used for estimating the bunker potential

- Primary data collection from tracking of vessels for import and export of Iron Ore, Coal and Food Grains. Data from Reuters Daily Port Movement and from Sea Web
- Collecting vessel details including Load Port, Discharge Port, Dead weight Tonnage, Owner, Operator, Previous and Next Port Calls and Trade Routes
- Analysis of information to determine potential routes and vessels based on port calls
- Forecasting demand for individual Major Bulks, and subsequently estimate forecasted bunker potential
- Collected specific lifting schedule information for various vessels. Near about 90 companies were contacted. Of this, over 50 questionnaires were sent, and as of date 17 completed questionnaires have been returned. The sample Questionnaire and all completed questionnaire can be found in Annexure A.3

### 7.2 DATA ANALYSIS AND INTERPRETATION

A total of 476 vessels were tracked that had called at various Indian ports carrying major bulk cargo, over the period Start of May '13 to Start of Jul '13.

Following Figure 7.1 shows port calls of these vessels



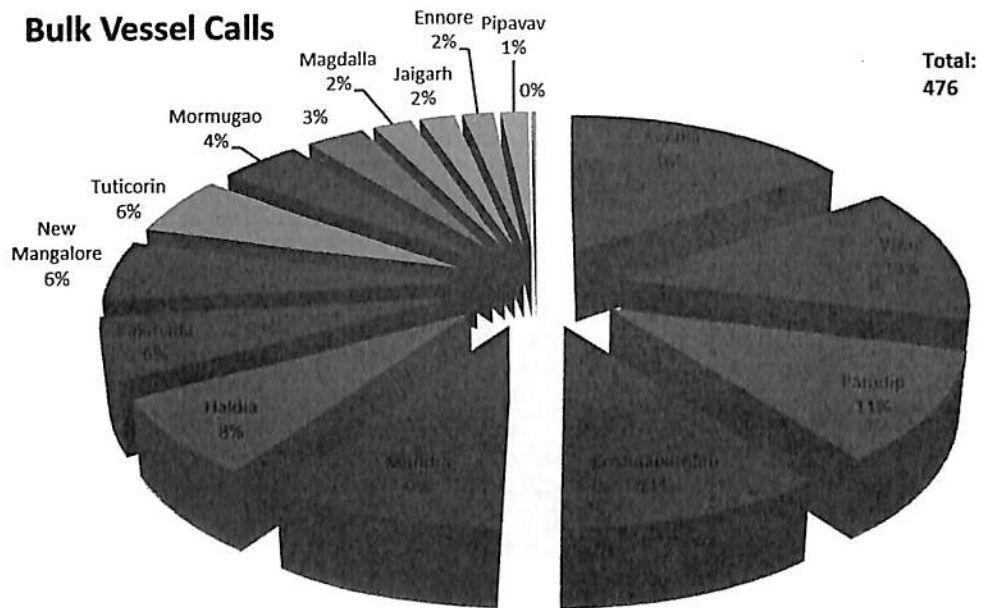


Figure7.1 Bulk Vessel Calls

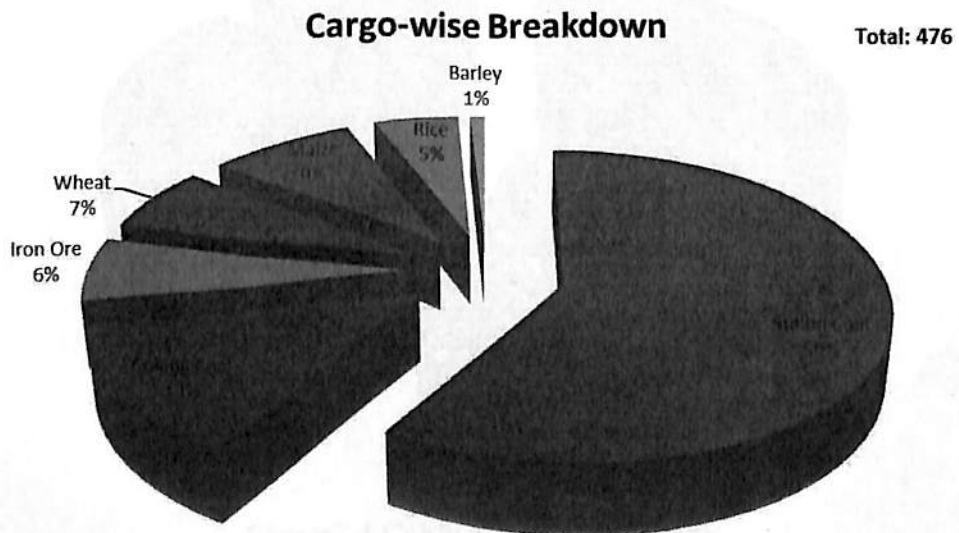
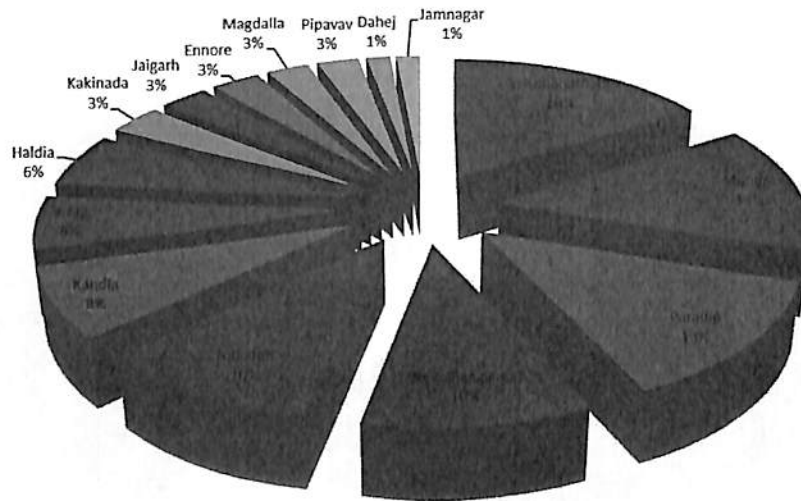


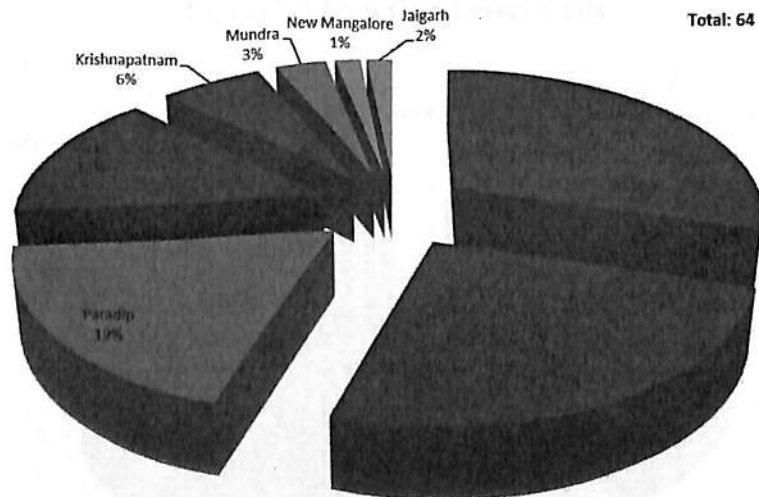
Figure7.2 Cargo-wise Breakdown

**Steam Coal**



**Figure7.3 Steam Coal Vessel Calls**

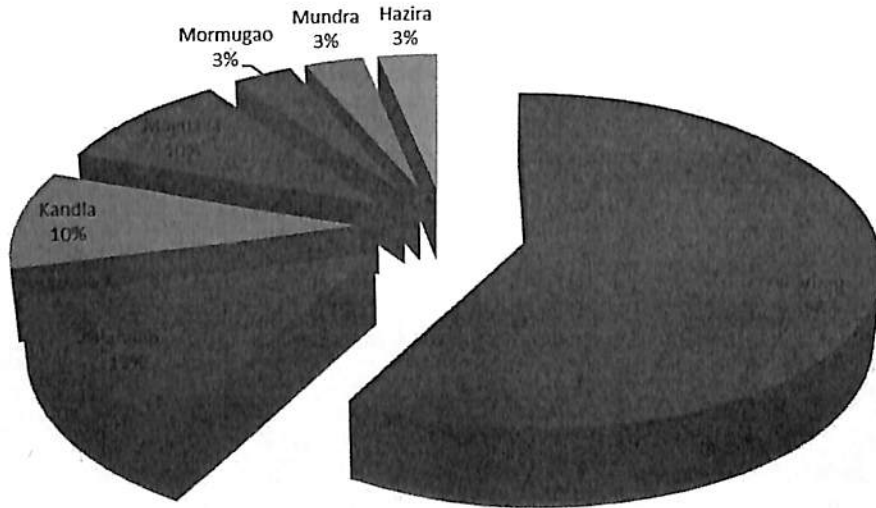
**Coking Coal**



**Figure7.4 Coking Coal Vessel Calls**

**Iron Ore**

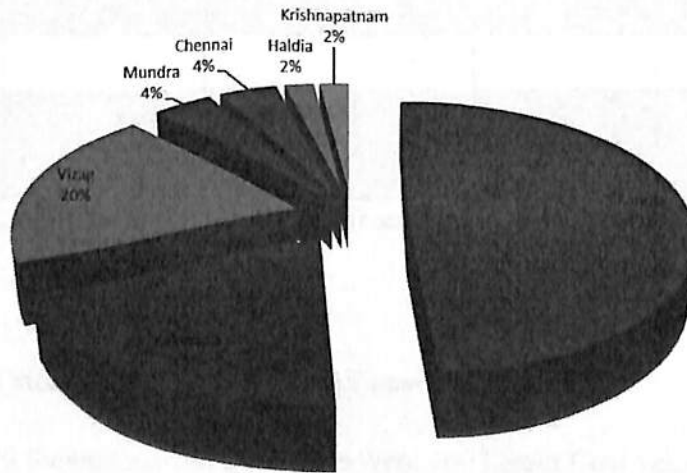
Total: 31



**Figure7.5 Iron Ore Vessel Calls**

**Food Grain**

Total: 102



**Figure7.6 Food Grain Vessel Calls**

### 7.3 CALCULATION OF BUNKER POTENTIAL

#### Potential from steam coal shipping West Coast Ports of India

Of a total of 279 Steam Coal Vessels, there were 129 Steam Coal vessels that called at Western Ports of India.

Load Port	Number of Vessels	Potential Vessels (A)	Stem Size (MT) (B)	Bunker Potential (A * B)
Indonesia	84	17 (20% assumed)	400	6800MT
Richards Bay	13	8 (No Singapore and Fujairah)	700	5600MT
Australia	6	2 (from N and SW AUS)	400	800MT
USA	1	1	700	700MT
<b>TOTAL</b>				<b>13900MT</b>
<b>Monthly Potential</b>				<b>6950MT</b>

**Table 7.1 Bunker Potential from Steam Coal WC India**

#### Potential from steam coal shipping East Coast Ports of India

Of a total of 279 Steam Coal Vessels, there were 160 Steam Coal vessels that called at Western Ports of India.

Load Port	Number of Vessels	Potential Vessels (A)	Stem Size (MT) (B)	Bunker Potential (A * B)
Indonesia	92	18 (20% assumed)	400	7200MT
Richards Bay	10	10	700	7000MT
Australia	2	2 (from N and SW AUS)	400	800MT
USA	3	3	700	2100MT
<b>TOTAL</b>				<b>24100MT</b>
<b>Monthly Potential</b>				<b>12050MT</b>

Table7.2 Bunker Potential from Steam Coal EC India

Net potential from Steam Coal Shipping = 19000MT p.m.

Potential from coking coal shipping West Coast Ports of India

Load Port	Number of Vessels	Potential Vessels (A)	Stem Size (MT) (B)	Bunker Potential (A * B)
USA	2	2	700	1400MT
Richards Bay	1	1	700	7000MT
Australia	15	7 (No Singapore, Fujairah)	400	2800MT
<b>TOTAL</b>				<b>11200MT</b>
<b>Monthly Potential</b>				<b>5600MT</b>

Table7.3 Bunker Potential from Coking Coal WC India

**Potential from coking coal shipping East Coast Ports of India**

Of a total of 64 Coking Coal vessels, 37 vessels called at Eastern Ports of India. Of these 2 vessels were on continuous coastal runs between Halida, Paradip and Gujarat Ports. Of the remaining 35 vessels, following calculations are made.

Load Port	Number of Vessels	Potential Vessels (A)	Stem Size (MT) (B)	Bunker Potential (A * B)
USA	5	4 (No Singapore)	700	2800MT
Richards Bay	1	1	700	7000MT
Australia	29	1 (No Singapore)	400	400MT
<b>TOTAL</b>				<b>3900MT</b>

**Table 7.4 Bunker Potential from Coking Coal EC India**

**Net potential from Coking Coal Shipping = 9500MT p.m.**

**Potential from Iron Ore shipping from India**

Of 28 vessels that called at various ports, 9 were on Coastal Runs, majorly loading at Vizag and discharging at Magdalla and Kandla.

Discharge Port	Number of Vessels	Potential Vessels (A)	Stem Size (MT) (B)	Bunker Potential (A * B)
Coastal Run	9	6 (No Singapore, Fujairah)	400	2400MT
China	13	4 (25%)	400	1600MT
Mina Saqr	1	1	400	400MT
<b>TOTAL</b>				<b>4400MT</b>
<b>Monthly Potential</b>				<b>2200MT</b>

**Table7.5 Bunker Potential from Iron Ore - all ports**

**Net Potential from Iron Ore Shipping = 2200 p.m.**

**Potential from Wheat exports of India**

A total of 36 vessels called at various ports for loading wheat.

Discharge Port	Number of Vessels	Potential Vessels (A)	Stem Size (MT) (B)	Bunker Potential (A * B)
USA	1	1	700	700MT
Africa	6	6	400	2400MT
Mina Saqr	1	1	400	400MT
Mongolia	1	1	400	400MT
<b>TOTAL</b>				<b>3900MT</b>
<b>Monthly Potential</b>				<b>1950MT</b>

**Table7.6 Bunker Potential from Wheat - all ports**

**Total Potential from Wheat Shipping = 1950MT p.m.**

**Potential from Rice exports of India**

A total of 32 vessels called at various ports of India for loading rice for export

<b>Discharge Port</b>	<b>Number of Vessels</b>	<b>Potential Vessels (A)</b>	<b>Stem Size (MT) (B)</b>	<b>Bunker Potential (A * B)</b>
Europe	2	2	700	1400MT
Africa	6	6	400	2400MT
ASEAN	12	8 (No Singapore)	400	3200MT
<b>TOTAL</b>				<b>7000MT</b>
<b>Monthly Potential</b>				<b>3500MT</b>

**Table7.7 Bunker Potential from Rice - all ports**

**Total Potential from Rice Shipping = 3500MT p.m.**

**Potential from Maize exports of India**

<b>Discharge Port</b>	<b>Number of Vessels</b>	<b>Potential Vessels (A)</b>	<b>Stem Size (MT) (B)</b>	<b>Bunker Potential (A * B)</b>
ASEAN	23	9 (No Singapore)	400	3600MT
Middle East	3	2 (No Singapore, Fujairah)	400	800MT
<b>TOTAL</b>				<b>4400MT</b>
<b>Monthly Potential</b>				<b>2200MT</b>

**Table7.8 Bunker Potential from Maize - all ports**



**Total Potential from Maize Shipping = 2200MT p.m.**

**Total Potential from Food Grain Shipping = 7650MT p.m.**

#### **7.4 FUTURE OUTLOOK**

From data available from (World Bank Indicators) over 70% of India's energy needs are met through coal, 13% from hydroelectric, 10% from NG, and the rest from Oil, Nuclear and Other Renewable.

Following is a list of major Coal-fired power plant projects that are either under construction or in an advanced stage of completion, due within the next 3 years, i.e. till 2015. For a complete list of upcoming power projects, refer to Annexure A.2. From the given list of power plants, only private entities have been considered as government power projects are usually allocated domestic coal. From the remaining number of plants, only 50% have been assumed to import coal.

By this calculation, we arrive at an aggregate figure of Installed Capacity in (MW) that would require imported coal within the next 3 years to be 1,00,052 MW. From industry sources, it was found that on an average, production of 1MW of electricity requires 15MT of coal per day. Hence, coal required per year =  $100052 \times 15 \times 350 / 1000000 = 525.27$  MMT. Hence an additional 525 MMT of steam coal will be required in about 3 years' time.

**Table 7.9 below shows major Coal-fired power projects due to be commissioned in the coming 5 years**

State	Plant	Company	MW	Type	Status	Year
Andhra Pradesh	Pynampuram Thermal Power Project Units 1 and 2	Thermal Powertech Corporation	1320	Supercritical	Advanced development	2014
Andhra Pradesh	Gunipudi power station (STEAPL proposal)	Suryachakra Group	1320	Ultra Supercritical	Advanced development	2014
Andhra Pradesh	Kineta Power Stage I (Krishnapatnam)	Kineta Power Limited	1320	Supercritical	Advanced development	2014
Andhra	Krishnapatnam	Navayuga	1320	Supercritical	Advanced	2014

Pradesh	Navayuga thermal station Phase I	Power			development	
Andhra Pradesh	Muthukur Mandal power station (Painampuram)	Nelcast Energy Corporation Ltd	1320	Supercritical	Early development	2014
Andhra Pradesh	Thamminapatnam power station (Simhapuri) Phase-III	Simhapuri Energy	1320	Supercritical	Advanced development	2013
Bihar	Bhagalpur Power Project	Ganga Power & Natural Resources	2640		Early development	2014
Bihar	Prabhawati Nagar power station	Arrissan Power Limited	1320		Early development	2014
Bihar	Sirdala power station	Global Powmin	2640		Early development	2014
Chhattisgarh	KSK Mahanadi Power Project Units 1-4	KSK Energy Ventures	2400		Construction	2013, 2014
Chhattisgarh	Tamnar II Project	Jindal Power	2400	Subcritical	Construction	2014-2015
Chhattisgarh	KSK Narmada Power Project	KSK Energy Ventures	1800		Early development	
Chhattisgarh	Uchpinda power station	RKM Powergen Private Limited	1440		Construction	2013-2014
Chhattisgarh	Chhattisgarh GMR power station Phase I	GMR Energy	1370		Advanced development	2014
Chhattisgarh	Raikheda power station	GMR Energy	1370	Supercritical	Construction	2014
Chhattisgarh	Amarkantak Thermal Power Project phase II (Pathadi) units 3 and 4	Lanco	1320	Supercritical	Construction	2013, 2014
Gujarat	Okha power station	SPR Infrastructure India	2640	Supercritical	Early development	2014
Gujarat	Tata Mundra Ultra Mega Power Project 3-5	Tata Power	2400	Supercritical	Construction	2013
Gujarat	Pipavav power station	Torrent Power and Gujarat Power Corporation	2000		Early development	2014
Gujarat	Bherai power station	VISA Power	1320		Early development	2014
Gujarat	Salaya II power plant	Essar Energy	1320	Supercritical	Construction	2014
Jharkhand	Tilaiya Ultra	Reliance	3300	Supercritical	Early	2015

	Mega Power Project 1-5	Power			development	
Jharkhand	<u>Visa Power Jharkhand project</u>	<u>VISA Power</u>	2640		Early development	
Jharkhand	<u>Tiruldih Power Project</u>	<u>Tata Power</u>	1980		Early development	
Jharkhand	<u>Welspun Energy Parbahal Thermal Power Plant</u>	<u>Welspun Energy</u>	1980		Early development	
Jharkhand	<u>Baranda power station</u>	<u>JSW Energy</u>	1620		Early development	2015
Jharkhand	<u>Maithon Right Bank Thermal Power Station Phase II</u>	Damodar Valley Corporation and Tata Power	1600	Subcritical	Early development	2014
Madhya Pradesh	<u>Welspun Mega Industrial &amp; Energy Park</u>	<u>Welspun Energy Park Pvt. Ltd.</u>	5280		Early development	2014
Madhya Pradesh	<u>Chitrangi Power Project</u>	<u>Reliance Power</u>	3960	Supercritical	Advanced development	2014
Madhya Pradesh	<u>Katni power station</u>	<u>Welspun Energy</u>	1980	Supercritical	Advanced development	2014
Madhya Pradesh	<u>Welspun Energy Anuppur Thermal Power Plant</u>	<u>Welspun Energy</u>	1980		Early development	2015
Madhya Pradesh	<u>Bansagar power station</u>	<u>MPTradco</u>	1600	Supercritical	Early development	2015
Madhya Pradesh	<u>Dada Dhuniwale Thermal Power Project</u>	<u>M.P. Power Generating Company</u>	1600		Early development	2015
Madhya Pradesh	<u>Welspun Mega Industrial &amp; Energy Park</u>	<u>Welspun Energy Park Pvt. Ltd.</u>	5280		Early development	2015
Maharashtra	<u>Tiroda Thermal Power Project Phases II and III</u>	<u>Adani Power</u>	1980		Construction	2013
Maharashtra	<u>Amravati Thermal Power Project Phase I</u>	<u>Indiabulls Power</u>	1350		Construction	2013-2014
Maharashtra	<u>Amravati Thermal Power Project Phase II</u>	<u>Indiabulls Power</u>	1350		Construction	2014-2015
Maharashtra	<u>Nasik Thermal Power Project Phase I (Indiabulls)</u>	<u>Indiabulls Power</u>	1350		Construction	2013-2015
Maharashtra	<u>Nasik Thermal Power Project Phase I (Indiabulls)</u>	<u>Indiabulls Power</u>	1350		Construction	2014-2015
Maharashtra	<u>Tiroda Thermal Power Project Phases II and III</u>	<u>Adani Power</u>	1980		Construction	2013
Maharashtra	<u>Amravati Thermal Power Project Phase I</u>	<u>Indiabulls Power</u>	1350		Construction	2013-2014

Maharashtra	<u>Amravati Thermal Power Project Phase II</u>	<u>Indiabulls Power</u>	1350		Construction	2014-2015
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#### 7.4.1 Estimating demand for steam coal

Current year imports of steam coal was in the ratio Indonesia (60%), Australia (20%) South Africa (15%), USA (5%). In the same ratio, we would have forecasted imports of 315 MMT from Indonesia, 105MMT from Australia, and about 80 MMT from South Africa.

Assuming an average 100000 DWT from vessel calling with Indonesian coal, an estimated additional 3150 vessels would call yearly from Indonesia, once this demand occurs. Similarly, an additional 1050 vessels would call yearly from Australia, and about 800 vessels from South Africa.

Applying 20% potential to all, this would generate additional bunker potential for 1000 vessels. With an assumed bunker stem of 400, this would generate potential of 33000MT monthly.

#### 7.4.2 Estimating demand for Met Coal

There is no maintained statistics regarding future steel production capacity additions. However, Industry sources report that demand for coking coal will continue increasing to 65 MMT by 2015 and to 80 MMT by 2017. Domestic production of coking coal is very dismal, and almost all demand is met by imports. As a result, there would be a forecasted demand of 20 MMT of Coking coal. By this year's figures, this demand of coal was met by imports from Australia (75%), followed by USA (10%), and South Africa(4%). Assuming an average 75000 DWT, an additional 2000 vessels would call yearly from Australia, followed by additional 267 vessels from USA and another 107 vessels from South Africa, yearly.

Applying 20% potential to all, this would generate additional bunker potential for 475 vessels. With an assumed bunker stem of 400, this would generate potential of 19000MT monthly.

**7.5 SWOT ANALYSIS OF MAJOR BULK COMMODITIES**

**COAL**

<p><b><u>Strength</u></b></p> <ul style="list-style-type: none"> <li>• Continued demand for imports</li> <li>• Huge Additional Power Capacity Planned</li> <li>• Increased Met Coal Demand forecasted</li> </ul>	<p><b><u>Weakness</u></b></p> <ul style="list-style-type: none"> <li>• Import Substitution</li> </ul>
<p><b><u>Opportunities</u></b></p> <ul style="list-style-type: none"> <li>• Imports from USA once legislation and logistics Issues clear up</li> <li>• Australia might overtake Indonesia as Top Coal Exporter to India within 3-5 years</li> <li>• More Principals investing in South Africa. Larger Share of Imports predicted</li> </ul>	<p><b><u>Threats</u></b></p> <ul style="list-style-type: none"> <li>• GOI rulings and import restrictions</li> <li>• Foreign Land's rules and Regulations</li> </ul>

**IRON ORE**

<p><b><u>Strength</u></b></p> <ul style="list-style-type: none"> <li>• Good Crude Ore Reserves. 5<sup>th</sup> Largest</li> <li>• Availability of labour at low wage rates</li> </ul>	<p><b><u>Weakness</u></b></p> <ul style="list-style-type: none"> <li>• High Cost of Capital</li> <li>• Low Labour Productivity</li> </ul>
<p><b><u>Opportunities</u></b></p> <ul style="list-style-type: none"> <li>• Proximity to demand centres. China demand forecasted to 1.140 billion MT this year</li> <li>• Other related sectors</li> </ul>	<p><b><u>Threats</u></b></p> <ul style="list-style-type: none"> <li>• GOI rulings and import restrictions</li> <li>• Foreign Land's rules and Regulations</li> </ul>

## 7.6 FINDINGS

Following are the major findings from the research

- Indonesia continues to be largest Steam Coal exporter to India.
- With a low reserve to production ratio, we may expect volumes to shift from Indonesia to Australia.
- Australia continues to be the largest Coking Coal exporter to India. This trend would continue due to logistics benefits due to proximity.
- Russia and USA stand to be big players in the Coal markets with large reserve to production ratio. If legislation and logistics of coal export may be worked out, USA and Russia may capture larger volumes in coming years.
- China is the largest Iron Ore demand centre. India with good Iron Ore reserves would stand to benefit, if properly tapped. Recent bans and talk of lifting the same in Iron Ore mines lead to an uncertain market.
- Food Grain is a highly seasonal market and is highly dependent on the monsoon. With very good harvest this year, India's grain exports have touched an all-time high. It is however difficult to predict future trends.
- The Indian Ports lack the facilities like, OPL supply during Monsoon in Cochin, high tax on Fuel oil Exports in Ports of Andhra Pradesh, Unavailability of 380 cST at Haldia and no physical supply facility at Pipavav & Chennai.
- If bunkering were to start at these ports, significant bunker volumes could be diverted from Singapore. The Ports of Chittagong & Maldives have unavailability of 380cst & High Prices respectively.
- By calculations, the existing bunker potential from Steam Coal is 19000MT. By current forecasts, an estimated 33000MT may be generated in 5 years' time.
- By calculation, the existing bunker potential from Coking coal is 7500MT. By forecasts, an estimated 19000MT may be generated. This however is under the condition that bunker facilities start at Chennai, at competitive prices.
- Current Bunker Potential from Food Grains amount to 7650MT.

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# Annexure



QUESTIONNAIRE

BUNKER POTENTIAL FROM DRY BULK CARGO SHIPPING IN INDIA

Sir/Madam

I am a student of MBA (Masters in Business Administration) Energy Trading from **University of Petroleum and Energy Studies, India** ([www.upes.ac.in](http://www.upes.ac.in)). I am currently undertaking a research project titled "**Bunker Potential from dry bulk cargo shipping in India**". As part of my primary research, I am tracking several bulk cargo vessels that have called at Indian port for Import Discharge or Export Loading in the past few weeks. I request you to kindly fill in the following questionnaire, assuring you that the data generated will be used strictly for academic purposes only. Thanking you for your time and interest.

Sincerely,

Kailash Srinivasan

+918758485441

University of Petroleum and Energy Studies

[kailash.s@stu.upes.ac.in](mailto:kailash.s@stu.upes.ac.in)

Name of Vessel:

Port of Call: KAKINADA, India

Date:

1. What grade of fuel is the vessel is equipped to burn?

IFO 380

IFO 380

2. What is the average fuel consumption of the vessel (in MT/day)?

3. What is the periodicity of bunkering (in Days)?

about 30 days

4. What is the average stem size of bunkers(in MT)?

5. What is your most preferred port for bunkering?

6. Previous two bunkers information

Date	28june'13	24may'13
Quantity and grade	ifo380cst	ifo380cst
Port of Bunkering	singapore	singapore
Trading Route	India - China	Indonesia-India

7. Has the vessel ever taken bunker at Indian ports?

If Yes, Pls Specify  No

(If vessel has taken bunker at Indian ports many times, specify most frequented port)

If you answered No to the question above, please skip to question 9, else please proceed to next question

8. Previous two bunkers at Indian Ports

Date		
Quantity and grade		
Port of Bunkering		
Trading Route		

9. On the following scale, rate the Quality Compliance of bunkers received at Indian Ports

Very Bad  Bad  Fair  Good  Very Good

10. On the following scale, rate the Quality of Service of the Bunker Suppliers at Indian Ports

Very Poor  Poor  Fair  Good  Very Good

Please enter any comments/thought/input on the matter (if any) in the space given below

Above comments given generally from what I have heard about quality at some ports and more hassles with documentation and bunker quality. (reasons to avoid as much as we can)

Name:

Date:

Designation:

E-Mail:

I convey my sincere gratitude for your valuable time and assistance in this matter. I shall be grateful if you could kindly mail back the questionnaire to kailash.s@stu.upes.ac.in

Thanking you.

Yours Sincerely,

Kailash



QUESTIONNAIRE

BUNKER POTENTIAL FROM DRY BULK CARGO SHIPPING IN INDIA

Sir/Madam

I am a student of MBA (Masters in Business Administration) Energy Trading from **University of Petroleum and Energy Studies, India** ([www.upes.ac.in](http://www.upes.ac.in)). I am currently undertaking a research project titled "*Bunker Potential from dry bulk cargo shipping in India*". As part of my primary research, I am tracking several bulk cargo vessels that have called at Indian port for Import Discharge or Export Loading in the past few weeks. I request you to kindly fill in the following questionnaire, assuring you that the data generated will be used strictly for academic purposes only. Thanking you for your time and interest.

Sincerely,

Kailash Srinivasan

+918758485441

University of Petroleum and Energy Studies

[kailash.s@stu.upes.ac.in](mailto:kailash.s@stu.upes.ac.in)

Name of Vessel:

Port of Call: TUTICORIN, India

Date:

1. What grade of fuel is the vessel is equipped to burn?

IFO 180

IFO 380

2. What is the average fuel consumption of the vessel (in MT/day)?

3. What is the periodicity of bunkering (in Days)?

<20 Days

4. What is the average stem size of bunkers(in MT)?

5. What is your most preferred port for bunkering?





QUESTIONNAIRE

BUNKER POTENTIAL FROM DRY BULK CARGO SHIPPING IN INDIA

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+918758485441

University of Petroleum and Energy Studies

[kailash.s@stu.upes.ac.in](mailto:kailash.s@stu.upes.ac.in)

Name of Vessel:

Port of Call: KANDLA, India

Date:

1. What grade of fuel is the vessel is equipped to burn?

IFO 380

IFO 380

2. What is the average fuel consumption of the vessel (in MT/day)?

3. What is the periodicity of bunkering (in Days)?

30-40 Days

4. What is the average stem size of bunkers(in MT)?

5. What is your most preferred port for bunkering?

6. Previous two bunkers information

Date	JULY 2013	JUNE 2013
Quantity and grade	IFO RMG 380	IFO RMG 380
Port of Bunkering	JUBAIL	MINA SAQR
Trading Route	MIDDLE EAST	MIDDLE EAST

7. Has the vessel ever taken bunker at Indian ports?

If Yes, Pls Specify  No

(If vessel has taken bunker at Indian ports many times, specify most frequented port)

If you answered No to the question above, please skip to question 9, else please proceed to next question

8. Previous two bunkers at Indian Ports

Date	NOVEMBER 2012	OCTOBER
Quantity and grade	IFO 380	IFO 380
Port of Bunkering	VISAK	NAVLAKHI
Trading Route		

9. On the following scale, rate the Quality Compliance of bunkers received at Indian Ports

Very Bad  Bad  Fair  Good  Very Good

10. On the following scale, rate the Quality of Service of the Bunker Suppliers at Indian Ports

Very Poor  Poor  Fair  Good  Very Good

Please enter any comments/thought/input on the matter (if any) in the space given below

Name:

Date:

Designation:

E-Mail:

I convey my sincere gratitude for your valuable time and assistance in this matter. I shall be grateful if you could kindly mail back the questionnaire to kailash.s@stu.upes.ac.in

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Yours Sincerely,

Kailash





QUESTIONNAIRE

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Kailash Srinivasan

+918758485441

University of Petroleum and Energy Studies

[kailash.s@stu.upes.ac.in](mailto:kailash.s@stu.upes.ac.in)

Name of Vessel:  Port of Call: HALDIA, India

Date:

1. What grade of fuel is the vessel is equipped to burn?

IFO 380

IFO 380

2. What is the average fuel consumption of the vessel (in MT/day)?

3. What is the periodicity of bunkering (in Days)?

<20 Days

4. What is the average stem size of bunkers(in MT)?

5. What is your most preferred port for bunkering?

6. Previous two bunkers information

Date	21/06/2013	27/05/2013
Quantity and grade	200-250/IFO 180	280MT/ IFO 180
Port of Bunkering	TUTICORIN	TUTICORIN
Trading Route	Coastal India	COASTAL

7. Has the vessel ever taken bunker at Indian ports?

TUTICORIN  No

(If vessel has taken bunker at Indian ports many times, specify most frequented port)

If you answered No to the question above, please skip to question 9, else please proceed to next question

8. Previous two bunkers at Indian Ports

Date	AS ABOVE	AS ABOVE
Quantity and grade		
Port of Bunkering		
Trading Route		

9. On the following scale, rate the Quality Compliance of bunkers received at Indian Ports

Very Bad  Bad  Fair  Good  Very Good

10. On the following scale, rate the Quality of Service of the Bunker Suppliers at Indian Ports

Very Poor  Poor  Fair  Good  Very Good

Please enter any comments/thought/input on the matter (if any) in the space given below

Vessel on time charter to Poompuhar. Charterer bunkers as per need.

Name: SAGAR MANDREKAR

Date: 16/07/2013

Designation: COMMERCIAL OPS.

E-Mail:

I convey my sincere gratitude for your valuable time and assistance in this matter. I shall be grateful if you could kindly mail back the questionnaire to kailash.s@stu.upes.ac.in.

Thanking you.

Yours Sincerely,

Kailash



QUESTIONNAIRE

BUNKER POTENTIAL FROM DRY BULK CARGO SHIPPING IN INDIA

Sir/Madam

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Sincerely,

Kailash Srinivasan

+918758485441

University of Petroleum and Energy Studies

[kailash.s@stu.upes.ac.in](mailto:kailash.s@stu.upes.ac.in)

Name of Vessel:

Port of Call: PARADIP, India

Date:

1. What grade of fuel is the vessel is equipped to burn?

IFO 180

IFO 380

2. What is the average fuel consumption of the vessel (in MT/day)?

3. What is the periodicity of bunkering (in Days)?

<20 Days

4. What is the average stem size of bunkers(in MT)?

5. What is your most preferred port for bunkering?

6. Previous two bunkers information

Date	28/06/2013	15/06/2013
Quantity and grade	200MT/ IFO 180	150MT/ IFO 380
Port of Bunkering	TUTICORIN	ENNORE
Trading Route	COASTAL	COASTAL

7. Has the vessel ever taken bunker at Indian ports?

TUTICORIN  No

(If vessel has taken bunker at Indian ports many times, specify most frequented port)

If you answered No to the question above, please skip to question 9, else please proceed to next question

8. Previous two bunkers at Indian Ports

Date	AS ABOVE	AS ABOVE
Quantity and grade		
Port of Bunkering		
Trading Route		

9. On the following scale, rate the Quality Compliance of bunkers received at Indian Ports

Very Bad  Bad  Fair  Good  Very Good

10. On the following scale, rate the Quality of Service of the Bunker Suppliers at Indian Ports

Very Poor  Poor  Fair  Good  Very Good

Please enter any comments/thought/input on the matter (if any) in the space given below

Name:

Date:

Designation:

E-Mail:

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Thanking you.

Yours Sincerely,

Kailash

SL. NO.	As at Date	Port	Vessel Name	IMO	Cargo	Qty	EXIM	Load Port	Discharge Port	DWT	Juniler Capacity (MT)	Speed (Kts)	Fuel Consumption (MT/day)	Geared	Current Route	Previous Foreign	Previous Port	Next Port	Next Foreign	Agent	ETA	ETD	Time in Port	Previous India Port Calls	Remarks	Source	
1	21-06-2013	Mundra	THOMAS	955151	Steam Coal		I	Indonesia	Mundra	57,000	2400	14	34.0	G	Gulf-Red Sea/India	Singapore	Singapore	Fujairah	Fujairah	IOS				Mundra(1-1), Magdala(2-1), Fortbada(1-1), Kandla(1-1), New More(1-2), Haifa(1-2)	Sailed to Mina Saqr via Fujairah. Previously called at Singapore, China, Magdala, Mina Saqr, Kandla, Magdala, Indonesia, China, Singapore Bunker, Singapore Bunker, Fortbada	EXIM Sea-web	
2	23-06-2013	Mundra	COLONGES	905251	Steam Coal	133783	I	Indonesia	Mundra	1,49,391	2892	13.25	44.0	L	Gulf-Red Sea/India	Singapore	Singapore	Richards Bay	Richards Bay	Taurus Shipping	24-Jun	27-Jun	69	Mundra(1-1), Ganguwaram(1-1), Mormugao(1-1)	Sailed from Mundra. Previously called at Singapore Bunker, Indonesia, China, Newcastle(AUS), China, Ganguwaram, Singapore Bunker, Hay Point(AUS)	EXIM Sea-web	
3	21-06-2013	Mundra		927500	Steam Coal		I		Mundra	1,69,229	4814	14.5	59.0	L	Gulf-Red Sea/India					J.M. Bai		23-Jun			Update needed	EXIM Sea-web	
4	21-06-2013	Mundra	SI-OH	914896	Steam Coal	154926	I	Indonesia	Mundra	1,71,081	4622	14.5	84.0	L	Gulf-Red Sea/India	Singapore	Singapore	Bras	Bras	Taurus Shipping	27-Jun	28-Jun	28	Mundra(2-1)	At Mundra. Previously called at Singapore, Indonesia(1), Japan, Singapore Bunker, Bras, Mundra, Singapore Bunker, China	EXIM Sea-web	
5	21-06-2013	Mundra	HANIN NEWCASTLE	961861	Steam Coal	162000	I	Indonesia	Mundra	1,79,905	5530	15	0	L	Gulf-Red Sea/India	Singapore	Singapore	Richards Bay	Richards Bay	Taurus Shipping	26-Jun	29-Jun	77	Mundra(1-1)	Currently at Mundra. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Canada, Newport News(USA), OSUK, Amsterdan, Colonges(GER)	EXIM Sea-web	
6	21-06-2013	Mundra	DELFINA	922813	Steam Coal	50403	I	Chennai	Mundra	52,180	1658	14	29.0	G	Gulf-Red Sea/India	Fujairah	Chennai	Sharjah	Sharjah	Taurus Shipping	27-Jun	02-Jul		Mundra(2-1), Paradi(1-1), Mumbai(1-1), Haifa(2-1)	Currently at Mundra. Previously called at Dharmu, Fujairah, Mina Saqr, Sharjah, Mundra, Paradi, Ennore, Paradi, Haifa, Paradi, Salalah, Mumbai, Magdala, Paradi, Fujairah. Previously Discharged Thermal Coal 25,000	EXIM Sea-web	
7	21-06-2013	Mundra	PENGU 1	901073	Steam Coal	139903	I	Indonesia	Mundra	1,49,533	2893	13.5	45.0	L	Gulf-Red Sea/India	Singapore	Singapore	Korea	Korea	Taurus Shipping	29-Jun	01-Jul		63 Mundra(1-1), Sakhal(1-2)	Currently at Mundra. Previously called at Singapore Bunker, China, Singapore Bunker, China, Singapore Bunker, Taiwan, Singapore Bunker, Bras, China, Singapore Bunker, Sika	EXIM Sea-web	
8	20-06-2013	Magdala	AMUN	948159	Coal		I	Stations(AUS)	Magdala	1,06,415	2781	14.5	0	L	Gulf-Red Sea/India	Port Klang	Mumbai	Port Rashid(UAE)	Port Rashid(UAE)	GLL	18-Jun	21-Jun		Magdala(1-1), 2-1, 2-2, Mumbai(1-1), Viti(2-2)	At Port Rashid. Previously called at Port Klang, Singapore, Malaysia, Singapore, Stations(AUS), Malaysia, Fujairah, Qatar, Fujairah, Qatar	EXIM Sea-web	
9	20-06-2013	Jagadh	KIRAN AMERICA	949126	Steam Coal		I	Indonesia	Jagadh	56,666	2403	14	34.0	G	Gulf-Red Sea/India	Singapore	NewMangalore	Bandar Abbas	Bandar Abbas	Hivalal & CO	17-Jun	17-Jun			Sailed to Singapore 29/06. Previously called at Indonesia, Singapore Bunker, Jagadh, Indonesia, Singapore Bunker, Jagadh, Singapore Bunker, Indonesia, Echomay, Indonesia	EXIM Sea-web	
10	20-06-2013	Jagadh	SI-SHA	910849	Steam Coal		I	Indonesia	Jagadh	87,036		14	36.0	L	Gulf-Red Sea/India	Indonesia	Indonesia	Singapore	Singapore	J.M. Bai	28-Jun	28-Jun		42(1), Mormugao(1-1), Kriknop(1-1)	Sailed from Indonesia 29/06. Previously called at Indonesia, Singapore Bunker, Indonesia, Tuticorin(1-1), Fortbada(1-1)	EXIM Sea-web	
11	19-06-2013	Tuticorin	YENUS	892900	Steam Coal		I	Indonesia	Tuticorin	79,208		14	39.0	G	South East Asia	Indonesia	Indonesia	Indonesia	Indonesia	SL	08-Jun	18-Jun		244	Magdala(1-1), Mumbai(1-1), 1-1, 1-2, Tuticorin(1-1), Fortbada(1-1), Fortbada, Magdala, Mumbai, Indonesia, China, Singapore Bunker, Mumbai, Kandla(1-2)	EXIM Sea-web	
12	19-06-2013	Tuticorin	NAVOS VEGA	940310	Steam Coal		I	Indonesia	Tuticorin	58,792	2512	14	32.0	G	Gulf-Red Sea/India	Singapore	Singapore	Kandla	Karachi	DWL	17-Jun	20-Jun		Kandla(1-1), Tuticorin(1-1), Paradi(1-1), Viti(1-1), Haifa(1-1)	Sailed to Karachi 27/06. Previously called at Singapore Bunker, Indonesia, China, South Korea, Mexico, Taiwan, Laos, Panama, New Orleans(USA)	EXIM Sea-web	
13	19-06-2013	Tuticorin	HELAN SONG	966807	Thermal Coal		I	Indonesia	Tuticorin	56,851		14	34.0	G	Gulf-Red Sea/India	Indonesia	Indonesia	Bandar Abbas	Bandar Abbas	PSL	15-Jun	20-Jun		131(2)	Currently at Bandar Abbas 01/07. Previously called at Indonesia(1), Singapore Bunker, Indonesia, LAU(USA), CAN, China, Singapore Bunker, Bandar Imam, Kuwait	EXIM Sea-web	
14	19-06-2013	Tuticorin	HONY WORLD	963835	Steam Coal		I	Indonesia	Tuticorin	56,716		14	34.0	G	Gulf-Red Sea/India	Singapore	Singapore	Singapore	Singapore	YSP	26-Jun	28-Jun		44 Tuticorin(1-1)	Sailed for Singapore 20/06. Previously called at China, Indonesia(1), Singapore, Thailand, HK, China	EXIM Sea-web	
15	19-06-2013	Chennai	SAT BELLATRIX	955031	Wheat		E	Chennai	Indonesia	28,467	1200	14	23.0	G	South East Asia	Durban	Paradi	Singapore	Singapore	GAC	19-Jun	25-Jun		141 Chennai(1-1), Paradi(1-1)	At Singapore Anchorage 02/07. Previously called at Paradi, Durban, Colombia, Venezuela, Panama, Canada, South Korea, Singapore(USA)	EXIM Sea-web	
16	19-06-2013	Kakinada	GEORGIANA	946879	Coal	51803	I	Indonesia	Kakinada	53,583	2000	14	32.5	G	South East Asia	Singapore	Singapore	Singapore	Singapore	OTI Maritime	15-Jun	18-Jun		Kakinada(1-1), Paradi(1-1), 2-1, 2-1, 1-1, 1-1, Haifa(1-1)	Sailed to Singapore 01/07. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, RB, Thailand, Singapore Bunker, Paradi/Singapore Bunker, Haifa, Paradi, Indonesia	EXIM Sea-web	
17	19-06-2013	Kakinada	ALAM MUTIARA	961516	Coal	57400	I	Indonesia	Kakinada	61,488	2560	14	30.0	G	Gulf-Red Sea/India	Singapore	Singapore	Kakinada	not known	Gloryfath	19-Jun	24-Jun		131 Kakinada(1-1)	Currently at Kakinada. Previously called at Singapore, Indonesia, Singapore, China	EXIM Sea-web	
18	19-06-2013	Kakinada	JAG RAHUL	975464	Coal	50600	I	Paradi	Kakinada	52,364		14	30.0	G	Gulf-Red Sea/India	Fujairah	Paradi	Paradi	Mina Saqr	Gloryfath	17-Jun	22-Jun		108	Frequent Ganguwaram, Ennore, Paradi, Kakinada, Paradi, Haifa, Fujairah, Mina Saqr, Fujairah, Sika, Red, Mumbai, Vitiag	EXIM Sea-web	
19	19-06-2013	Kakinada	NINCAN JOSEPH B	933771	Rice		E	Kakinada		18,922	1010	13	0	G	Gulf-Red Sea/India	Singapore	Singapore	not known	not known	Chowgule S					Update needed. Currently at Vitiag	EXIM Sea-web	
20	19-06-2013	Kakinada	EXILORS	911856	Rice		E	Kakinada	Colombo	29,926	1220	14	24.0	G	Gulf-Red Sea/India	Chittagong	Chittagong	Colombo	Colombo	Loha	08-Jun	25-Jun		Kakinada(1-1), Vitiag(1-1), Haifa(1-1)	Update needed. Previously called at Chittagong, Suez, Port Said, Malta, Morocco, Spain, Gibraltar, Algeria, France, Latvia	EXIM Sea-web	
21	19-06-2013	Kakinada	ABAR TRADER	890635	Rice		E	Kakinada	Jenica	48,320	1900	14.5	38.0	G	Gulf-Red Sea/India	Chittagong	Chittagong	not known	not known	Chowgule S					Update Needed. Currently at Kakinada	EXIM Sea-web	
22	19-06-2013	Kakinada	CORLEADER OIL	997676	Oil		E	Kakinada		37,116	1485	14.5	29.0	G	Gulf-Red Sea/India	Singapore	Ganguwaram	Kakinada	not known	Sri Sriwisa	15-Jun	01-Jul		397	Kakinada(1-1), Ganguwaram(1-1), Vitiag(1-1), Mundra(1-2), Kandla(1-1)	Currently at Kakinada. Previously called at Ganguwaram, Vitiag, Singapore, Fremantle(AUS), Indonesia, Brisbane(AUS), New Zealand, Panama, Tampa(USA), Mexico, Jamaica, Mumbai	EXIM Sea-web
23	19-06-2013	Vitiag	JAG RANI	945835	Iron Ore		E	Vitiag	Oman	56,819	2100	14	34.0	G	Gulf-Red Sea/India	Talajah	Haifa	Mumbai	Oman	Tree Elni				44	Vitiag, Haifa, Ennore, Paradi, Chennai, Fujairah, Mina Saqr, Mumbai, Vitiag, Kakinada, Paradi, Ganguwaram, occasionally Jagadh, and Kandla	EXIM Sea-web	
24	17-06-2013	Mundra	MARLINE SING	953019	Wheat	30691	E	Mundra	Sudan	93,324		14	0	L	Gulf-Red Sea/India	Fujairah	Fujairah	Sudan	Sudan	IOS				Paradi(1-1)	Update needed. Underway Mundra. Previously called at Fujairah, Limn Chair(RAQ), Port Said, Italy, Malta, Tunisia, Egypt, Kuwait	EXIM Sea-web	
25	17-06-2013	Mundra	BEACON SW	934837	Wheat	31200	E	Mundra	Sharjah	92,327	1593	14	28.0	G	Gulf-Red Sea/India	Karachi	Karachi	Hammiyah(UAE)	Hammiyah(UAE)	Darabshaw B	20-Jun	22-Jun		70	Mundra(1-1), 1-1, 1-2, Kandla(1-1), New More(1-09), Tuticorin(1-09)	Sailed for Sharjah 01/07. Previously called at Karachi, Singapore Bunker, China, Thailand, South Korea, Kandla, Mumbai, Singapore	EXIM Sea-web
26	17-06-2013	Mundra	PPMC & FOREVER	944253	Steam Coal	161520	I	Indonesia	Mundra	1,80,000		14	52.0	L	East - South Africa / India	Singapore	Singapore	Richards Bay	Richards Bay	Taurus Shipping	12-Jun	13-Jun		9	Mundra(1-1)	Sailed to RB. Previously called at Singapore Bunker, Indonesia, Taiwan, RB, China, Taiwan, Indonesia, Singapore Bunker, Taiwan, AUS	EXIM Sea-web
27	17-06-2013	Mundra		948734	Steam Coal	139112	I		Mundra	1,78,006	4787	14	52.0	L	Gulf-Red Sea/India	Singapore	Singapore	Durban	Durban	Taurus Shipping	13-Jun	21-Jun		199	Mundra(1-1)	At Mundra. 21/06. Previously called at Singapore Bunker, China, Singapore Bunker, RB, Canary Islands, Singapore Bunker, Indonesia	EXIM Sea-web
28	17-06-2013	Mundra	POLLUX	897948	Iron Ore	29670	I	Paradi	Mundra	32,057	1399	14	24.0	G	Far East	Singapore	Chennai	China	China	Act Innaport	16-Jun	16-Jun			Sailed to Nantong(CHN). Previously called at Dharmu, Haifa, Fukuta, Singapore, South Korea, Paradi(USA), South Korea, China, Indonesia	EXIM Sea-web	
29	17-06-2013	Mundra	CAPE HARMONY	951421	Steam Coal	164907	I	Indonesia	Mundra	1,78,375	5920	14	52.0	L	Gulf-Red Sea/India	Singapore	Singapore	Saldanha bay	Saldanha bay	Taurus Shipping	20-Jun	29-Jun		55	Mundra(1-1), 1-1, 1-2, Vitiag(1-2)	Sailed to Saldanha bay(BRA) 23/06. Previously called at Singapore Bunker, Indonesia, Brazil, OSUK, Netherlands, OSUK, Canary Islands, Hay Point(AUS)	EXIM Sea-web
30	17-06-2013	Kandla		910529	Wheat	18000	E	Kandla		69,120	2569	14	30.0	L	South East Asia	Singapore	Singapore	Mumbai	not known	OSC & Sons	18-Jun	21-Jun			Sailed from Singapore to Dhag 25/06. Update needed	EXIM Sea-web	
31	17-06-2013	Kandla		45000	Wheat		E		Oman											Adva Shipping					Update needed	EXIM Sea-web	
32	17-06-2013	Kandla	MYTHEAS	802672	Rice	25000	E	Kandla	Vias	54,718	1908	13	28.0	G	Gulf-Red Sea/India	Fujairah	Fujairah	Kandla	not known	MNE & Co					Underway Kandla. Sailed 12/06. Previously called at Fujairah, Bandar Imam, Kandla, Fujairah, Bandar Imam, Fujairah, Egypt, Turkey, Russia, Ukraine	EXIM Sea-web	
33	17-06-2013	Kandla	SALTA	941942	Rice	15000	E	Kandla	France	52,998		15	0	G	Gulf-Red Sea/India	Fujairah	Fujairah	Suez	Suez	Shreeee Log	20-Jun	26-Jun		147(1)	Previously called at Fujairah, port Rashid, Helix AI, Limn Qasr, Kuwait, Suez, Port Said, Malta, OSUK, Netherlands, Amers	EXIM Sea-web	
34	17-06-2013	Kandla	SUN F	908874	Iron Ore	25000	I	New Mangalore	Kandla	26,412										Adva Marine					loading for coaltar run. Import for NEM Mundra	EXIM Sea-web	
35	17-06-2013	Kandla	KESARI PREM	913063	Coal	67202	I	Hay Point(AUS)	Kandla	69,186	2397	14	33.0	G	Gulf-Red Sea/India	Singapore	Singapore	Singapore	Singapore	Chowgule S	28-Jun	28-Jun			Sailed Singapore Bunker. Previously called at Singapore Bunker, Abad Point, Hay Point(AUS), China, Singapore Bunker, Dharmu, Haifa, Ennore, Singapore Bunker	EXIM Sea-web	
36	17-06-2013	Jamnagar	SOVI	91312	Coal		I	Jamnagar												Adva					Update needed. Previously called at Singapore Bunker, Indonesia(1), China, Port Hedland(AUS), South Korea, Hay Point(AUS), China, Singapore Bunker, Saldanha(South Africa)	EXIM Sea-web	
37	17-06-2013	Jamnagar	BOSTON	944366	Coal	154993	I	Indonesia	Jamnagar	1,77,827		14	52.0	L	South East Asia	Singapore	Singapore	Bedi Bunder	not known	Admiral					Yet to call India	EXIM Sea-web	

34	15-06-2013	Jagher	INDUS PROSPERITY	952976	Steam Coal	80047	Indonesia	Jagher	92,988	2560	14	42	OL	Gulf-Red Sea/India	Indonesia	Indonesia	Richards Bay	South Africa	Vivaldi & CO	19-Jun	21-Jun	63	Jagher(1-11), Mormugao(1-11), New Morne(1-11, 1-12, 1-11), Doha(2-12), Kandla(1-12)	Update needed. Previously called at Indonesia, Singapore Bunker, Malaysia, B3, Mormugao, B3, Kandla, B3, Doha, B3, Singapore Bunker	EXIM Sea-web
35	15-06-2013	Mundra		947950	Steam Coal			Mundra	1,76,816		14	52	OL	Mediterranean	Suez	Suez	Israel	Israel	Cross Trade Shipping	19-Jun	19-Jun		Mundra(1-13, 1-11)	Sailed to Israel. Previously called at Suez, Port Said, Malta, Baltimore(USA), Ireland, Lix, Colombia, Denmark	EXIM Sea-web
40	15-06-2013	Mundra	WELHERO	957441	Steam Coal		Indonesia	Mundra	93,538	3400	14	42	OL	Gulf-Red Sea/India	Malaysia	Malaysia	Maputo Bay, Mozambique	Mozambique	Taurus Shipping	24-Jun			Mundra(1-13, 1-12, 1-10), Bedi(1-13), Ershapam(1-12, 1-11), Mormugao(1-12)	Reported Sailed 22/06. Previously called at Indonesia, China, Hay Point (AUS), China, Singapore, B3, Bedi, Singapore Bunker, Indonesia	EXIM Sea-web
41	13-06-2013	Viag	WHITE HALD	959335	Iron Ore		China	Viag	55,832	2430	14	30	G	Far East	China	Haitai	Singapore	Singapore	BSS	13-Jun	14-Jun	14	Viag(1-13), Haidai(1-13)	Sailed to China via Singapore Bunker. Previously called at Haidai, China, Wyndham(AUS), China, Wyndham(AUS), Japan, Newcastle(AUS), Taiwan, Japan	EXIM Sea-web
42	12-06-2013	Haidai	TRITACTIS	947321	Coking Coal		Hay Point(AUS)	Haidai	75,939		14	35	OL	Gulf-Red Sea/India	Singapore	Viag	Durban	Durban	Infinity	04-Jun	04-Jun	24	Haidai(1-13, 1-10), Viag(1-13, 1-11), Paradip(1-10, 1-11)	Underway Durban Via Colombo. Previously called at Viag, Singapore B3, Ais, China, Brazil, SA, Singapore, Aus, Singapore, Brazil	EXIM Sea-web
43	12-06-2013	Kandla		9391610	Barley	33000		Kandla	56,548	2620	14	30	G	Mediterranean	Singapore	Singapore	Bandar Imam (IRAN)	Bandar Imam (IRAN)	Anebu Shipping	09-Jun	16-Jun	174	Kandla(2-13, 1-12), Viag(1-12)	Previously called at Singapore Bunker, Indonesia, HI, China, Singapore, Fujairah, Iran, Fujairah, Suez	EXIM Sea-web
44	12-06-2013	Kandla	AFI THORPY	9491408	Wheat	46200		Kandla	56,594		14	34	G	Far East					Allied Shipping						EXIM Sea-web
45	12-06-2013	Kandla		9347906	Rice	80000		Kandla	53,348		14.5	35	G	Gulf-Red Sea/India	Singapore	Haidai	Fujairah	Singapore	Chowgule Shipping				Haidai(1-13), Paradip(1-13, 1-12, 1-11, 1-11), Haidai(1-13, 1-11)	At Kandla Anchorage. Previously held iron ore CHINA discharged at Haidai 28/05 5105 MT ELL. Previously called at Mumbai, Paradip, Singapore Bunker, Indonesia, Singapore Bunker, Ershapam, Haidai, Singapore, AUS	EXIM Sea-web
46	12-06-2013	Kandla	SILPETH POCINA	9074470	Coal	30700	Indonesia	Kandla	69,286	2387	14	33	G	Gulf-Red Sea/India	Indonesia	Indonesia	Mumbai	Singapore	Scorpio Shipping				Encore(2-13, 1-12), Mumbai(1-12, 3-10)	At Kandla Anchorage. Previously called at Indonesia, Ershapam, Singapore, Encore	EXIM Sea-web
47	12-06-2013	Kakinada	INDULF	9441374	Coal	55000	Indonesia	Kakinada	97,809		14	32	G	Gulf-Red Sea/India	Singapore	Singapore	Singapore	Singapore	Charmsad				Encore(1-12), Tulicorn(1-12)	At Kandla Anchorage. Previously called at Indonesia, Ershapam, Singapore, Encore	EXIM Sea-web
48	11-06-2013	Porbandar	AMAZING	945831	Coal	20000	Indonesia	Porbandar	57,000		14	34	G	Gulf-Red Sea/India	Singapore	Kandla	Bandar Abbas	Bandar Abbas	Waj P & Sons	14-Jun	14-Jun	18	Kandla(1-13, 1-12), Mundra(1-13), Bander-Abbas	At Bander-Abbas. Previously held coal INDOCSA discharged at Kandla 30/05 35000MT Scorpio. Previously called at Kandla, Singapore Bunker, Indonesia, HI, China, HI, Singapore, Israel, Saudi, Yemen, Kandla. Sailed in Ballast to Bander-Abbas	EXIM Sea-web
49	11-06-2013	Mundra	DEMY STEINER	9464663	Steam Coal	109650		Mundra	1,14,840		14.5	47	OL	Gulf-Red Sea/India	Singapore	Singapore	Richards Bay	South Africa	Taurus Shipping	12-Jun	16-Jun	77	Mundra(1-13)	Previously called at Singapore Bunker, China, South Korea, Canada, China, AUS, China, South Korea, Canada	EXIM Sea-web
50	10-06-2013	Viag	OCEAN MELODY	9472701	Maize	25000		Viag	29,372	1670	14	23	G	Gulf-Red Sea/India	Singapore	Singapore	Vietnam	Vietnam	IOS	10-Jun	25-Jun	262	Viag(1-13), Krishnapatnam(1-12), Chennai(1-09)	Underway Vietnam. 12 Days Journey. Previously called at Singapore, China, Shanghai, coos bay(US), South Korea. Due at Viag for Maize Export Loading as at 19/06	EXIM Sea-web
51	10-06-2013	Viag	ANNA-ELISABETH	9407471	Steam Coal		Indonesia	Viag	55,709	1340	13.5	31	G	Gulf-Red Sea/India	Singapore	Singapore	Indonesia	Indonesia	BSS	09-Jun	17-Jun	187	Viag(1-13), Paradip(2-13, 2-11), Haidai(1-13), Mundra(1-12, 1-11)	Underway Indonesia. Previously called at Singapore Bunker, Indonesia, China, Netherlands, Singapore Bunker, Paradip, Haidai, Oman, Netherlands	EXIM Sea-web
52	10-06-2013	Viag	NABUCCO INFINITY	9584217	Maize	30800		Viag	32,414		14	26	G	Gulf-Red Sea/India	Bunbury(AUS)	Bunbury(AUS)	Viag	Singapore	IOS	21-Jun	04-Jul		Viag(1-13), Navakh(2-12), Doha(1-12)	At Viag Anchorage. Previously called at Aus, Indonesia, Thailand, Vietnam, China, New Zealand, Indonesia, Singapore, China	EXIM Sea-web
53	10-06-2013	Viag	PANAMA	9465017	Maize	17500		Viag	28,264	1931	14	23	G	Gulf-Red Sea/India	Chittagong	Chittagong	Viag	Singapore	Pennular Marine				Viag(1-13), Haidai(1-13), Viag(1-12), Lakshadweep(1-12)	At Viag Anchorage. Previously called at Singapore, Aus, Singapore, Thailand, Singapore, Haidai, Bangladesh, South Korea	EXIM Sea-web
54	10-06-2013	Viag	DENSA LION	9432864	Steam Coal	53900	Indonesia	Viag	53,092	1890	14	30	G	Gulf-Red Sea/India	Singapore	Singapore	Singapore	Singapore	BSS	12-Jun	20-Jun	138	Viag(1-13), Paradip(1-13, 1-12), Doha(1-13), Chennai(1-12)	Sailed to Singapore in Ballast. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Doha, USA, AUS, Singapore Bunker	EXIM Sea-web
55	10-06-2013	Tulicorn	AFI ADHL	8116667	Thermal Coal			Paradip	42,262		14	3	G	Gulf-Red Sea/India	n/a	Ennore	Haidai	n/a	PSL	06-Jun	09-Jun	84	Services South Indian Ports Occasional Viag, Tulicorn, Viag, Tulicorn	At Viag Anchorage. Previously called at Viag, Tulicorn, Paradip, Tulicorn, Viag, Tulicorn	EXIM Sea-web
56	10-06-2013	Tulicorn	MONTECRISTO	9491379	Thermal Coal		Indonesia	Tulicorn	55,875		14	32	G	East-South Africa/India	Singapore	Singapore	Richards Bay	Richards Bay	Taskay	06-Jun	10-Jun	102	Tulicorn(1-13), Magellan(1-12), Jagher(1-12), Haidai(1-12)	AUS. Previously called at Singapore Bunker, Indonesia, China, Panama, USA (EAST), Malta, Suez	EXIM Sea-web
57	10-06-2013	Tulicorn	COFFIN SHYAM	9243459	Thermal Coal		Haidai, Paradip	Tulicorn	52,489	2110	14	30	G	Gulf-Red Sea/India	Vietnam	Haidai	Paradip	not known	OSK	11-Jun	14-Jun	68	Paradip, Haidai	Underway Tulicorn (7 Coal discharge 28/06). Previously called at Haidai, Tulicorn, Paradip, Vietnam. Active, Indian Peninsular service. Previously held Thermal Coal loaded at Viag. Bunkered Singapore 2012	EXIM Sea-web
58	10-06-2013	Chennai	HELLENIC WIND	9132973	Wheat			Chennai	73,981	2200	14.5	32	OL	Gulf-Red Sea/India	Singapore	Singapore	Gangavaram	Ershapam	Infinity	20-Jun	22-Jun	51	Krishnapatnam(1-13, 1-12), Gangavaram(1-13), Chennai(1-13)	Currently at Krishnapatnam Loading Wharf 44000 18/06. Previously called at Singapore Bunker, Indonesia, China, Canada, China, Panama, New Orleans(USA), Rotterdam	EXIM Sea-web
59	10-06-2013	Kakinada	SONAL	9077151	Rice			Kakinada	43,980	1627	14	28.5	G	Gulf-Red Sea/India	Chittagong	Chittagong	Cotonou	Cotonou	Imperial				Kakinada(1-13, 1-12), Ennore(1-12), Viag(1-11)	Underway Kakinada. Previously called at Singapore Bunker, HI, China, HI, China, Kakinada, Ennore, China, Russia	EXIM Sea-web
60	10-06-2013	Kakinada	YUO ZHOU	9429564	Maize	25250		Kakinada	34,361		14	34	G	Gulf-Red Sea/India	Chittagong	Chittagong	Singapore	Singapore	IOS	24-May	19-Jun		Kakinada(1-13)	Underway Singapore. Previously called at Singapore, South Korea, Russia, China, Vietnam, HI, China	EXIM Sea-web
61	10-06-2013	Paradip	TRIMB NITHA	9064411	Coking Coal		Hay Point(AUS)	Paradip	76,000		14	34	OL	Gulf-Red Sea/India	Singapore	Singapore	Haidai	Brazil	NPTL	06-Jun	06-Jun	24	Haidai(1-13), Paradip(1-13)	Underway. Previously called at Singapore Bunker, Hay Point(AUS), China, Hay Point(AUS), China. Discharging C Coal at Haidai	EXIM Sea-web
62	10-06-2013	Paradip	TONDITIS	9563419	Steam Coal		Indonesia	Paradip	56,731	2165	14	34	G	Gulf-Red Sea/India	Indonesia	Indonesia	Haidai	Singapore	GAC	11-Jun	12-Jun	36	Haidai(2-13), Paradip(2-13, 1-10)	Underway Singapore. Previously called at Indonesia, Singapore Bunker, Paradip, Haidai, Fujairah, Mina Sey, Kandla, Singapore, Indonesia	EXIM Sea-web
63	10-06-2013	Paradip	TEN KU MARU	9520000	Steam Coal		Indonesia	Paradip	58,117		14	32	G	Far East	Singapore	Singapore	Taiwan	Taiwan	BSS	07-Jun	07-Jun		Paradip(1-13, 1-12), Haidai(1-12), 24/Krishnapatnam(1-12)	To return Paradip. Previously called at Singapore Bunker, Indonesia, China, Indonesia, Australia, Indonesia, Thailand	EXIM Sea-web
64	10-06-2013	Paradip	SEAFACE	9486225	Steam Coal	35000	Indonesia	Paradip	56,894	2200	14	34.5	G	Gulf-Red Sea/India	Singapore	Singapore	Haidai	Singapore	BSS	12-Jun	16-Jun		Haidai(1-13), Paradip(1-13), Kandla(1-13), Bangladesh, Singapore Bunker, Vancouver(CAN), South Korea, China	At Haidai Anchorage. Previously called at Singapore Bunker, Indonesia, Bangladesh, Singapore Bunker, Vancouver(CAN), South Korea, China	EXIM Sea-web
65	10-06-2013	Paradip	MIRA R	9074705	Steam Coal			Paradip	26,435	1120	14	23	G	Gulf-Red Sea/India	Suez	Suez	Haidai	Myanmar	ACEC	13-Jun	13-Jun	6	Haidai(1-13), Paradip(1-13)	Underway. Previously called at Suez, Port Said, Turkey, Ukraine, Russia, Turkey, Canary Islands	EXIM Sea-web
66	10-06-2013	Paradip	SA VINDA	9562233	Coking Coal			Paradip	5,838		14	01	OL	Gulf-Red Sea/India	Yangon	Yangon	Haidai	Yangon, Myanmar	OSL	13-Jun	14-Jun	30	Viag, Tulicorn	Active service between Haidai, Paradip, Viag, Tulicorn, Yangon, Viag, Chittagong	EXIM Sea-web
67	10-06-2013	Paradip	YUKA JETUSU	9487914	Thermal Coal			Paradip	57,133	1854	14	31	G	Gulf-Red Sea/India	Singapore	Tulicorn	Ennore	not known	J.M. Bael	09-Jun	09-Jun	24	Viag(1-13, 1-12), Haidai(1-13), Ennore(1-13), Paradip(1-13), Tulicorn(2-13, 1-12), Bunkai, Oba	Currently at Viag. Discharging Thermal coal at Tulicorn O&O. Loading T Coal at Paradip 24/06. Previously called at Tulicorn, Paradip, Viag, New Moore, Mumbai, Kandla, Singapore Bunker, Indonesia, Taiwan, China, Singapore Bunker, Oba	EXIM Sea-web
68	10-06-2013	Paradip	ELUMA	9594561	Steam Coal			Paradip	56,751	2400	14	34.5	G	Gulf-Red Sea/India	Singapore	Singapore	Dharma	Singapore	GAC	15-Jun	19-Jun	83	Chennai(1-13), Paradip(1-13), Ershapam(1-13), Chennai(1-13)	Underway Paradip. Previously called at Singapore Bunker, China, Singapore Bunker, Krishnapatnam, Chennai, Fujairah, Mina Sey, Kandla, Singapore, Indonesia	EXIM Sea-web
69	10-06-2013	Paradip	CROWN EMERALDA	9423647	Steam Coal		Indonesia	Paradip	58,000	2370	14	32	G	Gulf-Red Sea/India	Singapore	Singapore	Haidai	Singapore	DBL NTS	15-Jun	19-Jun	91	Haidai(1-13), Paradip(1-13), Mumbai(1-13), Neraldi(1-13)	Currently at Haidai. Discharging Coal 19/06. Previously called at Singapore Bunker, Indonesia, Japan, Singapore Bunker, Suez, Turkey, Russia, Ukraine, Turkey	EXIM Sea-web
70	10-06-2013	Paradip	AMY FORTUNE	9583639	Thermal Coal		Indonesia	Paradip	56,874		14	34.5	G	South East Asia	Singapore	Haidai	Krishnapatnam	Indonesia	BSS	08-Jun	10-Jun	32	Krishnapatnam(1-13, 1-11), Haidai(1-13, 1-12), Viag(1-13, 1-12)	Sailed Krishnapatnam (Coal discharge 54830 14/06) Currently at Indonesia. Previously discharged Steam Coal at Viag 27/05. Previously called at Haidai, Viag, Singapore Bunker, China, Singapore Bunker, Malaysia, Singapore, China	EXIM Sea-web
71	10-06-2013	Paradip	FINENOS	9484067	Steam Coal		Indonesia	Paradip	56,820	2231	14	34.5	G	Gulf-Red Sea/India	Singapore	Singapore	Durban	Durban	OSPL	14-Jun	14-Jun	24	Paradip(1-13)	Currently at Paradip. Previously called at Singapore Bunker, Indonesia, Thailand, Singapore Bunker, Suez, Turkey, Egypt, Brazil	EXIM Sea-web
72	28-06-2013	Krishnapatnam	MANDORNA IS	9376228	Coal	22000	Indonesia	Krishnapatnam	53,395	2000	14	32.5	G	Gulf-Red Sea/India	Singapore	Singapore	Viag	not known					Paradip(2-13, 3-12), Tulicorn(1-13), Haidai(1-12), Krishnapatnam(1-12)	Currently at Krishnapatnam. Previously called at Singapore Bunker, Indonesia, Taiwan, China, Singapore Bunker, Paradip, B3, Singapore, Tulicorn	EXIM Sea-web



113	05-06-2013	Ennore	GENCO SUCCESS	912170	Coal	45000	Indonesia	Ennore	47,188	14	28	G	Gulf-Red Sea/India	Singapore	Singapore	Durban	Durban	Eslay	04-Jun	05-Jun	20	Viag(1-08), Tutcorin(1-07)	Underway	EXM Sea-web			
114	05-06-2013	Ennore	BULK MONACO	944293	Coal	70000	Indonesia	Ennore	76,596	2970	14	34	GL	Gulf-Red Sea/India	Singapore	Singapore	Santos (Brazil)	Santos (Brazil)	Fuslay	06-Jun	08-Jun	47	Paradip(1-13)	Underway to Santos, near Cape of Good Hope 27/05. Previously called at Singapore, Indonesia, China, Singapore Bunker, Brail, May Point, AUS.	EXM Sea-web		
115	05-06-2013	Kalnada	IS SANDOL	948077	Coal	55000	Paradip	Kalnada	57,970	14	32	G	East-South Africa/India	South Africa	SA-Paradip	Richards Bay	Richards Bay	ISS	30-May	05-Jun	146	Paradip(1-13), Mormugao(1-11), Doha(1-12), Dhamsa(1-13)	Discharged Coal at Paradip and Kalnada, Loaded Grains. Loaded thermal coal at Paradip 27/05	EXM Sea-web			
116	05-06-2013	Kalnada	CROWNED EAGLE	941872	Coal	55000	Indonesia	Kalnada	55,947	2360	14	30	G	Gulf-Red Sea/India	Singapore	Singapore	Paradip	Paradip	150 Maritime	03-Jun	08-Jun	127	Paradip(2-13, 1-12), Krishnap(1-07), Haifa	On India, Singapore, Indonesia run	EXM Sea-web		
117	05-06-2013	Kalnada			Rice		Kalnada																	No data	EXM Sea-web		
118	05-06-2013	Kalnada	HE ACE	840528	Rice		Kalnada	Durban	23,507	1118	14	19	G	Gulf-Red Sea/India	Chittagong	Chittagong	Durban	Durban	Chingyue 5					Viag(1-08, 1-12), Haifa	Underway, waiting at Anchorage. Singapore, Indonesia, Russia, Bangladesh, India Run	EXM Sea-web	
119	05-06-2013	Kalnada	KIVELI	820473	Rice		Kalnada	Colombo	38,191	14	14	G	Gulf-Red Sea/India	Port Said, Egypt	Port Said, Egypt	Colombo	Colombo	Seabara	23-May	23-May	24	Paradip(1-13), Viag(1-13)	Discharged at Colombo. Previously called at Doha (Strait), 15/Paradip(1-13), Valenciennes(1-13), Turkey, Ukraine, Greece	EXM Sea-web			
120	05-06-2013	Kalnada	HANCO DREAMS	908290	Rice		Kalnada		46,617	1778	14	27	G	South East Asia	Singapore	Singapore	unknown	not known	Seaways					Kalnada(1-12), Viag(1-12, 1-11)	Underway to Kalnada. Previously called at Singapore, Thailand, China, UAE, Saudi, Iran	EXM Sea-web	
121	05-06-2013	Kalnada	BRILLIANT	949324	Rice		Kalnada	Colombo	28,202	14	14	23	G	Gulf-Red Sea/India	Bunbury(AUS)	Bunbury(AUS)	Colombo	Colombo	Chingyue 5	23-May	11-Jun	455	Kalnada(1-13)	Sailed to Colombo. Previously called at Kalnada, Bunbury(AUS), Vietnam, Singapore, Kalnada, Chittagong, HK, Chittagong, Singapore, China	EXM Sea-web		
122	05-06-2013	Ennore	IRIS	880210	Coal		Indonesia	Ennore	69,714	2556	13	28	GL	Gulf-Red Sea/India	Singapore	Singapore	Singapore	Singapore	Malaysia	05-Jun	08-Jun	85	Ennore(1-13), Paradip(1-10)	Sailed to Malaysia. Previously called at Singapore, Indonesia, China, Singapore Bunker, Canary Islands, DSOX	EXM Sea-web		
123	05-06-2013	Viag	DIANG PILING	955740	Maize	27000	Viag	Indonesia	32,484	14	23	G	South East Asia	Triconalee	Triconalee	Singapore	Singapore	OS	05-Jun	05-Jun	24	Viag(1-13, 1-12), Haifa(1-12, 1-11)	Previously called at ST, UAE, Saudi, Kuwait, Singapore, Indonesia, Japan	EXM Sea-web			
124	05-06-2013	Viag	SANMAR PHOENIX	832623	Thermal Coal		Viag	Tutcorin	54,747	1638	13	30	G	Gulf-Red Sea/India			Tutcorin, via Haifa	Tutcorin	Seaport	05-Jun	05-Jun	24	Indian run since 2012	More details on loading@viag underway Singapore. Discharged thermal coal at Tutcorin 28/05	EXM Sea-web		
125	05-06-2013	Viag	JAG RISHI	946840	Iron Ore		Viag	Ennore	96,719	2131	14	20	G	Gulf-Red Sea/India	Fujairah	Dhamsa	Mumbai		Free Binny	08-Jun	06-Jun	34	Paradip(4-13), Viag(3-13), NewMingpo(2-13)	Previously called at Dhamsa, Fujairah, Mina Saq, Chennai, Fujairah, Viag, Paradip	EXM Sea-web		
126	05-06-2013	Viag	ALPHA	850739	Coking Coal		Viag	Viag	26,587	1254	13	19	G	Gulf-Red Sea/India	Fujairah	Kandla	Buqehr(IAN)	Buqehr(IAN)	Integral					Tutcorin(1-13), Kandla(1-13)	Underway to Viag. Details needed. Previously called at Fujairah, Mina Saq, Fujairah, Yemen, Bahrain, Kuwait, Qatar	EXM Sea-web	
127	05-06-2013	Viag			Maize		Viag													10-Jun				No data. Loaded 21000 Maize, 10/05, Viag	EXM Sea-web		
128	05-06-2013	Viag	YONGA FALCON	964908	Maize	28000	Viag	Indonesia	36,712	14	26	G	Gulf-Red Sea/India	Australia	Australia	Singapore	Singapore	OS	17-May	27-May	250	Viag(1-13) few calls. Young vessel	Still loading at Viag Bunbury(AUS), Singapore	EXM Sea-web			
129	05-06-2013	Viag	SMR, Lakshmi	8221430	Thermal Coal	44000	Viag	China	39,997	1521	13	G	Gulf-Red Sea/India	China	Paradip	Tonore	not known	Seaport						Indian run	Currently at Ennore. Ussara needed. Previously called at Paradip, Ennore, Haifa, Ennore, Viag, Ennore, Paradip, China. Discharged thermal coal at Paradip	EXM Sea-web	
130	05-06-2013	Haifa	VISHVA BANDHAN	946478	Thermal Coal		Haifa, Paradip	Tutcorin	57,194	33	30	G	Gulf-Red Sea/India	Singapore	Tutcorin	Tutcorin	Singapore	J.M. Basf	03-Jun	05-Jun	13		Sailed to Tutcorin. Anchored since 09/06. Services, Tutcorin, Paradip and Haifa. Discharged thermal coal at Tutcorin 28/05. Due at Tutcorin for 1 Coal discharge Active Service at southern Indian ports, Singapore, Vietnam, Israel, Saudi	EXM Sea-web			
131	05-06-2013	Paradip	HEMISLU	936124	Steam Coal		Vancouver(CAN)	Paradip	52,491	2147	14	30	G	Gulf-Red Sea/India	Singapore	Singapore	Ennore	Singapore	OPR	03-Jun	09-Jun	131	Haifa(1-12, 1-09), Paradip(2-10), Chennai(1-11, 1-09)	Previously called at Singapore, Vancouver(CAN), China, South Korea, Peru, El Salvador	EXM Sea-web		
132	05-06-2013	Paradip	SUMHOU	959731	Coking Coal		Gladstone (AUS)	Paradip	74,942	2748	14	34	GL	Gulf-Red Sea/India	Singapore	Singapore	Maputo Bay, Mozambique	Maputo Bay, Mozambique	OSL	03-Jun	06-Jun	72	Paradip(1-13, 1-12), Haifa(1-13)	Underway. Previously called at Singapore, Australia, Japan, China, Australia, South Korea, Singapore, Paradip	EXM Sea-web		
133	05-06-2013	Paradip	TRITON SEAGULL	9324150	Steam Coal		Indonesia	Paradip	56,054	2380	14	30	G	South East Asia	Singapore	Singapore	Singapore	Singapore	ISS	08-Jun	12-Jun	190	Paradip(1-13, 1-11, 1-09), Chennai(2-11)	Previously called at Singapore, Indonesia, Malaysia, Singapore, Argentina, Uruguay, Turkey	EXM Sea-web		
134	05-06-2013	Paradip	WELLSUCCESS	957491	Iron Ore		Paradip	Brail	83,328	3325	14	42	GL	Gulf-Red Sea/India	Singapore	Krishnapatnam	Brail	Brail	ADM	30-May	30-May	24	Paradip(1-13), Krishnapatnam(1-13), Doha(1-12), Jagan(1-12)	Underway. Previously called at Krishnapatnam(Discharge C Coal 71673 13/05), Singapore Bunker, Australia, China, Singapore, South Africa, India, Singapore	EXM Sea-web		
135	05-06-2013	Paradip	NEMTAS 4	9311529	Steam Coal		Indonesia	Paradip	56,023	2185	14	30	G	Gulf-Red Sea/India	Singapore	Singapore	Haifa	Singapore	PMA	05-Jun	07-Jun	48	Paradip(2-13, 2-12, 1-10), Haifa(1-13, 1-12, 1-11)	Returned Paradip 16/06. Previously called at Singapore, China, HK, China, Indonesia, China, Indonesia, Singapore. Discharging Coal at Haifa 14/06	EXM Sea-web		
136	05-06-2013	Paradip	SINAR LUTJA	9484149	Steam Coal		Indonesia	Paradip	57,334	334	13	30	G	Gulf-Red Sea/India	Singapore	Singapore	Haifa	not known	SCC	06-May	08-Jun	87	Paradip(1-13), Viag(1-12)	At Haifa Anchorage. Discharging Coal. Previously called at Singapore, Indonesia, Singapore, Thailand, China, Indonesia, Philippines, USA	EXM Sea-web		
137	05-06-2013	Paradip	3MB CHARDONMAX	9631147	Steam Coal		Indonesia	Paradip	91,707	3900	14	42	GL	Gulf-Red Sea/India	Singapore	Singapore	Richards Bay	South Africa	ESPL	07-Jun	15-Jun	191	Paradip(1-13)	Underway. Previously called at Singapore, Australia, Taiwan, Australia, China, North Korea, Australia	EXM Sea-web		
138	05-06-2013	Paradip	MGS DUTELANE	9222601	Thermal Coal		Paradip	Tutcorin	52,281	14	29	G	South East Asia	Singapore	Ennore	Ennore	not known	ISS					Paradip(4-13, 2-12), Dhamsa(1-13), Kandla(1-12), Viag(1-12)	Underway. Previously called at Ennore, Paradip, Dhamsa, Haifa, Singapore, Paradip, Saudi, Kandla, Singapore, Indonesia	EXM Sea-web		
139	05-06-2013	Paradip	30TAROGO	9351274	Steam Coal		Indonesia	Paradip	76,623	2970	14	34	GL	South East Asia	Singapore	Singapore	Paradip		DEBLINES					Yet to call at India	Underway. Previously called at Singapore, China, Australia, China, AUS, Malaysia, Singapore, China, USA	EXM Sea-web	
140	05-06-2013	Paradip	PACIFIC ACE	9605170	Steam Coal		Indonesia	Paradip	59,847	14	14	G	Gulf-Red Sea/India	Singapore	Singapore	Haifa	Singapore	Thail	07-Jun	11-Jun	111	Haifa(1-13), Paradip(1-13)	At Haifa Anchorage. Discharging Coal. Previously called at Singapore, Indonesia, China, Singapore, Bedi, Pakistan, South Africa, Kenya, UAE, South Africa	EXM Sea-web			
141	05-06-2013	Paradip	17BC 27AA	9386031	Steam Coal		Indonesia	Paradip	61,907	14	14	G	Gulf-Red Sea/India	Singapore	Singapore	Colombo	Colombo	Thail	09-Jun	17-Jun	187	Paradip(1-13), Viag(1-12)	Underway. Previously called at Singapore Bunker, Indonesia, South Korea, Singapore Bunker, Brail, India, Singapore Bunker, AUS, China	EXM Sea-web			
142	10-06-2013	Krishnapatnam	ALPHA ACTION	9074494	Coal	49989		Krishnapatnam	1,50,790	14	46	GL	South East Asia	Israel	Israel	Singapore	Singapore	Seaways	04-Jun	20-Jun	381	Krishnap(1-13)	Currently at Singapore Bunker. Previously called at Torred, Chile, Singapore Bunker, Doha (Strait), Netherlands, DSOX, Colombia	EXM Sea-web			
143	10-06-2013	Krishnapatnam	GRACE HUYBRE	9311541	Steam Coal	71500	Indonesia	Krishnapatnam	75,375	2690	14	GL	Gulf-Red Sea/India	Indonesia	Indonesia	not known	not known	Merchant Shipping					Yet to call at India	At Krishnapatnam Anchorage. Previously called at Taiwan, Indonesia, HK, China, Singapore Bunker, DSOX, Denmark, Lithuania, Poland	EXM Sea-web		
144	10-06-2013	Krishnapatnam	SUE ARGENTINA	9420265	Steam Coal	53770		Krishnapatnam	55,477	1840	14	31	G	Gulf-Red Sea/India	Indonesia	Indonesia	Singapore	Singapore	Infrate/Seaport					At Krishnapatnam Anchorage. Previously called at Singapore Bunker, HK, China, HK, China, Singapore Bunker	EXM Sea-web		
145	10-06-2013	Krishnapatnam	3200 HARALDOU	9452658	Coking Coal	30000	Gladstone (AUS)	Krishnapatnam	57,001	2293	14	34	G	Gulf-Red Sea/India	Singapore	Singapore	Haifa	not known	Merchant Shipping	13-Jun	21-Jun			Paradip(1-13, 1-12), Haifa(1-13), Krishnap(1-13), Pijawal(1-12)	Sailed to Haifa, Paradip. Previously called at Singapore Bunker, Gladstone(AUS), Port Kembla(AUS), Fujairah, Qatar, Sharj, Denmark, At Haifa for Coal Discharge 21/06	EXM Sea-web	
146	08-06-2013	Krishnapatnam	TEAM PROGRESS	9123568	Coal	39344		Krishnapatnam	43,773	1307	14	29	G	East-South Africa/India	Singapore	Singapore	Durban	Durban	Glory Faith	08-Jun	15-Jun	139	Krishnap(1-13), Paradip(1-13), Haifa(1-12), Kandla(1-09)	Sailed to Durban. Currently at Maputo(MOZ). Previously called at Singapore, China, Singapore Bunker, Paradip, Chittagong, Fujairah, Saudi	EXM Sea-web		
147	09-06-2013	Krishnapatnam	SPOT	9487228	Coal	52231	Indonesia	Krishnapatnam	53,102	15	G	South East Asia	Singapore	Singapore	Singapore	Singapore	Seaport Shipping							12-Jun	12-Jun	Sailed to Singapore Bunker. Previously called at Singapore Bunker, Indonesia, China, Fujairah, Iran, Fujairah, Brail	EXM Sea-web





185	11-05-2013	Jarrah	SANGAM	961519	Steam Coal	82920		Richards Bay	Jarrah	55,671	4000	14	42	GL	East - South Africa / India	Richards Bay	Richards Bay	Richards Bay	J.M. Bani	30-May	01-Jun	Jarrah(2-13, 1-12), Krishnap(2-13, 2-4)	Sailed RB 18/06 Underway Krishnap. Previously called at RB, Krishnap, RB, Singapore Bunker, RB, Jarrah, RB, Singapore, RB	EXIM Sea-web	
186	10-05-2013	Kanda	MAGIC ORIENT	911509	Wheat	28290		Kanda	Dubai	28,399		14	21	G	Gulf- Red Sea/ India	Jebel Ali	Jebel Ali	Oman	Oman	OBC & Sons	28-May	02-Jun	Kanda(1-13), Mumba(1-13), Vtag(1-11)	Sailed to Jebel Ali via Fujairah. Currently at Denmark. Previously called at Abu Dhabi, Jebel Ali, Kanda, Mumbai, Chittagong, Singapore, Japan, China, Singapore	EXIM Sea-web
187	10-05-2013	Kanda		911415	Wheat	41880		Kanda	Dubai	43,227		14	27	G	Gulf- Red Sea/ India	Indonesia	Cochin	Selalih (Oman)	Selalih (Oman)	OBC & Sons	28-May	04-Jun	Kanda(1-13), Coch(1-13), Vtag(1-12), 1-11, Paradi(1-12), Vtag(1-11)	Sailed to Fujairah via JMW AL. Previously called at Indonesia, Oman, Bangladesh, Singapore, Indonesia (Coal), Singapore, Indonesia, Vtag	EXIM Sea-web
188	10-05-2013	Kanda		904229	Wheat	11000		Kanda	Breace	12,860		14	35	G	Mediterranean	Iran	Iran	Suez	Suez	Seacrest Marine	29-May	30-May	Kanda(1-13), Mormuga(1-13), Vtag(1-20)	Sailed to cresta via Suez. Previously called at Iran, Hormuz, Bandar Abbas, Fujairah, Somalia, China, Jeddah, Port Said, Turkey, Ukraine	EXIM Sea-web
189	10-05-2013	Kanda	SILKA II	860520	Wheat	11400		Kanda	Sharjah	19,079	695	15	22	G	Gulf- Red Sea/ India	Hammiyah(UAE)	Hammiyah(UAE)	Hammiyah(UAE)	Hammiyah(UAE)	Apex Marine	01-Jun	04-Jun	Kanda(2-13, 1-12), Mundra(1-13, 2-12), Newash(2-12)	Sailed to Bahrain. Previously called at Hammiyah(UAE), Kanda, Fujairah, Mundra, Hammiyah, Denmark, Jebel Ali	EXIM Sea-web
190	10-05-2013	Kanda	SUN ENERGY	927458	Coal	21000		Indonesia	Kanda	55,389	1746	14	30	G	Gulf- Red Sea/ India	Indonesia	UAE	UAE	UAE	Scorpion Shipping				Port Mumath. Called Mumbai	EXIM Sea-web
191	29-05-2013	Magdalah		944112	Coal	30000		Indonesia	Magdalah	57,800		14	32	G	Gulf- Red Sea/ India	Indonesia	Indonesia	Fujairah	Fujairah	OMAPL	27-May	04-Jun	Magdalah(2-13), Paradi(2-13), Erishnap(1-13), Kaland(1-13)	Sailed to Fujairah, Mina Sagr, Saudi. Currently at Saudi. Previously called at Indonesia, Erishnap, Paradi, Kaland, Paradi, Chittagong, Singapore Bunker	EXIM Sea-web
192	29-05-2013	Magdalah	RAM PRASAD	802988	Iron Ore	96899		Vitag	Magdalah	1,37,000	3383	14	57	GL	Gulf- Red Sea/ India	Indonesia	Vitag	Vitag	Vitag	ELL	24-May	29-May	Regularly goes between Magdalah and Vitag. Sailing time of 6 to 10 days. Since 2011	Sailed to Vitag and Magdalah. Currently at Vitag. Previously called at Vitag, Magdalah, Gangearam, Vitag, Magdalah. Active run from Magdalah to Vitag 2010 calls at China, Singapore, Venezuela Singapore Cape Town	EXIM Sea-web
193	29-05-2013	Magdalah	HAG ARYA	949128	Coal	67920		Indonesia	Magdalah	80,482		14	35	GL	West Africa/ India	Singapore	Singapore	Rotterdam	Rotterdam	Taurus Shipping	25-May	30-May	Magdalah(1-13), Mormuga(2-12), Coch(1-13), Mumba(1-12)	Currently at Rotterdam. Previously called at Singapore Bunker, China, Singapore Bunker, USA	EXIM Sea-web
194	29-05-2013	Mundra	SILVER ROAD	924657	Steam Coal	146151		Indonesia	Mundra	1,85,820	4600	14	32	GL	South East Asia	Singapore	Singapore	Sohar(Oman)	Sohar(Oman)	J.M. Bani	31-May	03-Jun	Mundra(1-13), Mormuga(1-13)	At Singapore Anchorage. Previously called at Singapore Bunker, Indonesia(Coal), China, Peru, Japan, Brazil, Singapore Bunker, Japan	EXIM Sea-web
195	29-05-2013	Portbandar	SHRID CHANUJ	934581	Coal	25000		Indonesia	Portbandar	53,617	2020	14	35	G	Far East	Singapore	Dahaj	Bed Bunder	Chittagong	Veip & Sons	26-May	30-May	Kanda(1-13), Bed(1-13), Portbandar(1-13), Dahaj(1-13), Ennon(1-13), 80 Paradi(1-13, 1-12), Vtag(1-12)	Tailed to Chittagong via Kanda. Previously called at Dahaj, Singapore Bunker, Indonesia, China, Indonesia, China, Indonesia	EXIM Sea-web
196	29-05-2013	Kanda	SHI MEI MARTINA	891443	Rice	19500		Kanda	Iran	16,229	1312	14	6	G	Gulf- Red Sea/ India	Yancong	Yancong	Fujairah	Fujairah	Ashvihad Shipping			Kanda(1-13), Mumba(1-13), Kanda(1-12), New Mangalore(1-12), Kaland(1-12)	Still Loading at Kanda. Previously called at Yangon, Mumbai, Chittagong, Kanda, New Mangalore, Chittagong, Kaland	EXIM Sea-web
197	24-05-2013	Kanda		851037	Barley	51500		Kanda	Dubai	58,113	2180	14	33	G	Gulf- Red Sea/ India	Singapore	New Mangalore	Jordan	Jordan	Cross Trade Shipping	20-May	24-May	Kanda(1-13), NewMora(1-13), Magdalah(1-13), Mumba(1-12)	Sailed to Jordan. Previously called at New Mora, Singapore Bunker, Indonesia(Coal), China, Singapore Bunker, Fujairah, Iran, Kuwait	EXIM Sea-web
198	29-05-2013	Kanda	SUN ENERGY	938362	Coal	55100		Kanda		55,418	2020	14	34	G	South East Asia	Singapore	Mumbai	Portbandar	Singapore	OTA Kanda	31-May	31-May	Daha(1-13), Portbandar(1-13, 1-12), Kanda(1-12), Doha(1-13), Magdalah(1-13)	Called at Portbandar and China. Sailed to Singapore Bunker. Previously called at Mumbai, Singapore Bunker, China, Singapore Bunker, RB, Durban	EXIM Sea-web
199	29-05-2013	Kanda	ALPHA CEMMOS	922100	Iron Ore	47820		Ukraine	Kanda	1,30,434	145	14	58	GL	Far East					Apex Marine			Mundra(1-13, 1-11)	Port Mumath	EXIM Sea-web
200	28-05-2013	Jarrah	TAINEST SKY	963304	Steam Coal	82920		Bribhanet(AUS)	Jarrah	97,735	4000	14	42	GL	East - South Africa / India	Singapore	Singapore	Richards Bay	Richards Bay	Horal & CO	28-May	28-May	Jarrah(1-13)	Currently at RB. Previously called at Singapore Bunker, China, Erishnap(AUS), Japan, Newash(AUS), China, Indonesia, HE	EXIM Sea-web
201	17-05-2013	Dahaj	CORVIGUA	917674	Coal	71420		Longview(USA)	Dahaj	73,030	1872	14	30	GL	East Coast - South America	Singapore	Singapore	Brazil	Brazil	Taurus Shipping	25-May	28-May	Daha(1-13), Paradi(1-12), Mundra(1-12), Mormuga(1-13)	Sailed to Brazil. Previously called at Singapore Bunker, China, Longview USA, Japan, Singapore, Brazil, Singapore Bunker, Peru, China	EXIM Sea-web
202	27-05-2013	Tutocorin	SHI JIAT	946789	Steam Coal			Indonesia	Tutocorin	57,000	2200	14	34	G	East - South Africa / India	Indonesia	Indonesia	Fujairah	Fujairah	IPS	21-May	25-May	Mumba(1-13, 2-12), Magdalah(1-13, 1-12)	Sailed to Sohar, Fujairah, Jebel Ali, Fujairah, Oman, Tanzania. Previously called at Indonesia, Vitag, Mundra, Suez, Malia, Netherlands, Antwerp, DSD(NL), Ireland	EXIM Sea-web
203	27-05-2013	Tutocorin	BISA SHAN	963227	Steam Coal			Indonesia	Tutocorin	56,620		14	34	G	Gulf- Red Sea/ India	Singapore	Singapore	Karakal	Singapore	SEI	23-May	27-May	Tutocorin(1-13), Karakal(1-13, 1-12), Vtag(1-12)	Tutocorin(1-13), Karakal(1-13, 1-12), Vtag(1-12)	EXIM Sea-web
204	27-05-2013	Tutocorin			Indo Coal				Tutocorin											AEI				Data Unavailable	EXIM Sea-web
205	27-05-2013	Tutocorin	GOOD TRADE	935367	Thermal Coal			Paradi, Haldia	Tutocorin	53,732		14	32	G	Gulf- Red Sea/ India	Paradi	Haldia	Haldia	Haldia	PSL	26-May	29-May	Tutocorin, Paradi, Haldia, Tutocorin, Haldia, Tutocorin	Sailed to Tutocorin via Haldia, Paradi 21/06. Regularly transits Paradi, Ennon, Haldia, Tutocorin. Previously called Fujairah(1-13), Oman, Fujairah, Qatar, UAE, Qatar	EXIM Sea-web
206	27-05-2013	Tutocorin	MARLYSA V	927285	Steam Coal			Indonesia	Tutocorin	52,420		14	30	G	Far East	Singapore	Singapore	Singapore	Singapore	Sealine Agency	26-May	30-May	Tutocorin(1-13), Pigeax(1-12), Mormuga(1-13), Chemal(1-10, 1-09)	Sailed to China via Singapore Bunker and Indonesia. Previously called at Singapore Bunker, Indonesia(Coal), Singapore, Malaysia, Brazil, Senegal, Ennon, Sierra Leone, Pakistan, Pigeax	EXIM Sea-web
207	27-05-2013	Tutocorin	ACS DIAMOND	928790	Steam Coal			Indonesia	Tutocorin	53,290	2000	14	32	G	East - South Africa / India	Singapore	Singapore	Maputo Bay, Mozambique	Maputo Bay, Mozambique	MTA	27-May	31-May	Tutocorin(1-13), Mumba(1-11, 1-09), Vtag(1-09), Mumba(1-09, 1-07)	Sailed to RB 30/06. Previously called at Indonesia(Coal), Singapore, Thailand, DSD(NL), Denmark, Lithuania, Latvia, Norway, DSD(NL), Canary Islands, Fort Elizabeth(SA)	EXIM Sea-web
208	27-05-2013	Tutocorin	SHI JIAT	942944	Thermal Coal			Indonesia	Tutocorin	58,094	2389	14	32	G	South East Asia	Singapore	Singapore	Singapore	Singapore	Eskey	27-May	31-May	Kaland(1-13), Tutocorin(2-13), Mumba(1-13, 1-12)	Sailed to Singapore via Singapore Bunker, Indonesia(Coal), Singapore Bunker. Sailed for New Mangalore 25/06. Previously called at Singapore Bunker, Indonesia(Coal), Kaland, Singapore Bunker, Indonesia(Coal), China, Germany, Panama, SouthEastUSA - Called 02/07, Coal Discharge	EXIM Sea-web
209	27-05-2013	Kaland	BMGO	938553	Rice			Kaland	Malaysia	8,733	665	14	12	G	South East Asia	Port Klang, Malaysia	Port Klang, Malaysia	Singapore	Singapore	Lotus	11-May	25-May	Kaland(1-13), Tutocorin(1-13), Mumba(1-13, 1-12)	Sailed to Malaysia via Indonesia. Reported Sailed for Mumbai 24/06. Previously called at Port Klang, Tutocorin, Singapore, Malaysia, China	EXIM Sea-web
210	27-05-2013	Kaland	THAI LONG	993690	Coal			Kaland	Malaysia	4,379		11	6	G	South East Asia	UAE	UAE	Singapore	Singapore	ACT Marine	22-May	27-May	Kaland(1-13), Mumba(1-12), Kaland(1-13), Vtag(1-12)	Sailed to Singapore via Malaysia. Previously called at Port Rashid(UAE), Denmark(Saudi), Bahrain, Jebel Ali, Qatar, Bahrain, Kuwait, Jebel Ali, Pakistan	EXIM Sea-web
211	27-05-2013	Vitag	CHRISTOP THEO		Coal	55000														PS				Data Unavailable	EXIM Sea-web
212	27-05-2013	Vitag		930810	Iron Ore			Vitag	China	53,262	1729	14	32	G	Far East	Singapore	Haldia	Singapore	Singapore	Infinity	21-May	25-May	Vitag(1-13), Haldia(1-13), Kanda(1-13), Paradi(1-11)	Sailed to China via Singapore Bunker. Previously called at Haldia, Kanda, RB, Santos, Singapore, China. Previously discharged RB coal at Haldia via Kanda. Previously loaded into Ore 17/05/09 via Vitag	EXIM Sea-web
213	27-05-2013	Vitag	HAI JIN	961787	Iron Ore			Vitag	China	58,000		14	32	G	Far East	Singapore	Haldia	Singapore	Singapore	BSS	25-May	25-May	Vitag(2-13), Haldia(1-13)	Sailed to China via Singapore Bunker. Previously called at Haldia, Vitag, Singapore Bunker, New Zealand, China	EXIM Sea-web
214	27-05-2013	Vitag	LIYON 4		Maize			Vitag												Lotus				Data Unavailable	EXIM Sea-web
215	27-05-2013	Vitag	TOI PRADHU	919528	Rice			Vitag	Yancong	3,490	170	12	6	G	Gulf- Red Sea/ India		Chennai	Chennai	Yancong, Myanmar	GPSP	25-May	27-May	Vitag, Chennai, Port Blair, Kolkata	Sailed to Vitag via Chennai. Sailed Chennai 28/06. Regular calls Vitag, Chennai, Port Blair, Yangon	EXIM Sea-web
216	27-05-2013	Vitag		929288	Steam Coal			Richards Bay	Vitag	53,543	1927	14	32	G	Gulf- Red Sea/ India	Richards Bay	Richards Bay	Haldia	Haldia	BSS	26-May	30-May	Mumba(1-13, 1-12), Dhama(1-13), Haldia(1-13, 1-12, 1-11), Kanda(1-12), Paradi(1-12, 1-11)	Sailed to Haldia, Dhama, Mumbai. Currently at Mumbai. 23/06. Previously called at RB, Tutocorin, Singapore Bunker, Indonesia, Bangladesh, Singapore Bunker, Mumba, Pigeax, Singapore Bunker	EXIM Sea-web
217	27-05-2013	Vitag	HAKUTA	946121	Iron Ore			Vitag	Japan	82,160	3180	14	35	GL	Far East	Singapore	Haldia	Singapore	Singapore	J.M. Bani	29-May	30-May	Vitag(1-13), Haldia(1-13), Dhama(1-13)	Sailed to Japan via Singapore Bunker. Previously called at Haldia(Coal discharge), Dhama, Singapore Bunker, Hay Point(AUS), Japan, Turkey, Long Beach(CA), Indonesia	EXIM Sea-web
218	27-05-2013	Paradi	AKMI	923127	Thermal Coal			Indonesia	Paradi	53,804		14	32	G	South East Asia	China	Haldia	Krishnapam	Indonesia	BSS	24-May	24-May	Krishnap(1-13), Paradi(1-13, 1-10), Haldia(1-13), Portbandar(1-13), Tutocorin(1-13), Newash(2-13)	Sailed to Singapore Bunker via Indonesia, Krishnap(Coal discharge) 5/26/12/09. Previously called at Haldia, China, Singapore Bunker, Fujairah, Iran, Portbandar, Tutocorin, Singapore Bunker, China	EXIM Sea-web
219	27-05-2013	Paradi	GRAIN HARVESTER	928490	Coal			Gilgerton (AU)	Paradi	76,417		14	35	GL	Gulf- Red Sea/ India	Singapore	Singapore	Tubara(BRA)	Tubara(BRA)	GPR	22-May	24-May	Paradi(1-13), Dahaj(1-12), Vtag(1-13), Haldia(1-13), Paradi(1-13), Sika(1-13), Mumba(1-13), Portbandar(1-12)	Sailed to Singapore Bunker via Vitag. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Sika, Mumbai, Singapore, Singapore Bunker	EXIM Sea-web
220	27-05-2013	Paradi	RAMLE OFAL	908314	Steam Coal			Indonesia	Paradi	57,000	2400	14	34	G	South East Asia	Singapore	Singapore	Haldia	Singapore	DEBLNES	25-May	25-May			EXIM Sea-web





ID	Date	Vessel Name	Type	Capacity	Origin	Destination	Company	Port of Origin	Port of Destination	ETA	Actual	Status	Remarks										
295	17-05-2013	Mormugao	TUTAJ AMBITIONS	9326140	Coking Coal	73801	Hay Point(AUS)	Mormugao	77,283	2125	14	35 GL	East Coast South America	Singapore	Singapore	Argentina	Argentina	Hivalal & CO	21-May	21-May	Mormugao(1-13, 1-11), Mundra(1-09)	Sailed to Argentina, Uruguay. Previously called at Singapore Bunker, Hay Point(AUS), China, Garatcho(AUS), Singapore, China, HK, Tacoma(USA)	
296	14-05-2013	Mormugao	ARLIAN HERITAGE	9483742	Coking Coal	63000		Mormugao	80,682		14	30 GL	East Coast South America	Paquetaim(USA)	Paquetaim(USA)	Brazil	Brazil	Hivalal & CO	19-May	21-May	Mormugao(1-13), Mundra(1-12), 60	Sailed to Brazil. Previously called at Paquetaim(USA), Morocco, Italy, Suez, Singapore Bunker, China, Singapore Bunker, Colombo(IND)	
297	14-05-2013	Mormugao	SENA	7403237	Pig Iron	45062	Mormugao	Dammam	65,287	2319	14.5	59 GL	Gulf- Red Sea/ India	Singapore	Singapore	Dammam	Dammam	Sesa	17-May	25-May	182	Mormugao(1-13, 1-12, 2-11)	Sailed to Dammam, Fujairah, returned Mormugao. Previously called at Singapore, China, Mormugao, China, Mormugao, China. Frequent Mormugao, China Runs
298	10-05-2013	Mormugao	GGF ALICE GRANT	8520924	Coking Coal	136740		Mormugao	58,115	2388	14	31 G	East- South Africa / India					Hivalal & CO				Port Mumatch	
299	01-05-2013	Vilag		8354739	Iron ore	30000	Vilag		30,199	1900	13.5	26 G	Far East					ISS				Port Mumatch	
300	09-05-2013	Mormugao		9461154	Coking Coal	77617	Abbot Point(AUS)	Mormugao	82,166	3184	14	35.5 GL	South East Asia	Abbot Point(AUS)	Abbot Point(AUS)	Richards Bay	Richards Bay	Hivalal & CO	13-May	13-May	Mormugao(2-13, 2-12), Krishnap(1-43)	Sailed to RB, Singapore Bunker. Previously called at Abbot Point(AUS), Singapore Bunker, Erithapam, RB, Mormugao, Singapore, Gladstone(AUS), Hay Point(AUS)	
301	05-05-2013	Mormugao	FORTUNE ISLAND	9338907	Coking Coal	68000	Kembla(AUS)	Mormugao	81,900	2055	14	34 GL	East Coast South America	Port Kembla(AUS)	Port Kembla(AUS)	Cochin	Argentina	Hivalal & CO	07-May	08-May	Mormugao(1-13), Cochin(1-13), 24	Sailed to Cochin, Karachi, Argentina, Uruguay, Brazil. Previously called at RB, Kembla(AUS), Japan, Indonesia, China, Indonesia, China, Singapore Bunker	
302	05-05-2013	Mormugao	NET	9564874	Coking Coal	89220	Richards Bay	Mormugao	93,203		14	42.5 GL	East Coast South America	Richards Bay	Richards Bay	Argentina	Argentina	Hivalal & CO	08-May	13-May	106	Mormugao(1-13), Be(1-13), Jagadh(1-13), Krishnap(1-12)	Sailed to Argentina, Uruguay, Argentina, Uruguay. Previously called at RB, Be, Jagadh, Singapore Bunker, Port Kembla(AUS), South Korea, China
303	04-05-2013	Mormugao	BLUE MONT BLANC	9156589	Coking Coal	35000	Weipa(AUS)	Mormugao	74,043	2218	13.5	31 GL	Australia	Russia	Karakal	Richards Bay	Richards Bay	Merchant Shipping	03-May	05-May	33	Mormugao(1-13), Karakal(1-13)	Sailed to RB, Singapore, Malaysia, Singapore Bunker, Weipa(AUS). Previously called at Karakal, Russia, Japan, Indonesia, China, South Korea
304	03-05-2013	Mormugao	EMERALD	9289025	Steam Coal	39850		Mormugao	53,565	1927	14	32.5 G	Gulf- Red Sea/ India			Diboud	Diboud	GAC				Urgate needed. Previously loaded wheat IOS. Sailed 03/05	
305	03-05-2013	Mormugao	INDONESIA PIG IRON	9610286	Coking Coal	53350		Mormugao	81,541		14.5	GL	East Coast South America	Mozambique	Mozambique	Argentina	Argentina	Hivalal & CO	02-May	03-May	27	Mormugao(2-13)	Sailed to Argentina, Uruguay, Argentina, Uruguay. Previously called at RB, Be, Jagadh, Singapore Bunker, Port Kembla(AUS)
306	02-05-2013	Mormugao	PACIFIC PRIDE	9605786	Coking Coal	42500	Kembla(AUS)	Mormugao	59,944	2130	14.5	G	East Coast South America	Port Kembla(AUS)	Port Kembla(AUS)	Fujairah	Fujairah	Hivalal & CO	03-May	08-May	120	Mormugao(1-13), Magtala(1-12)	Sailed to Fujairah, Bahrain, Fujairah, Santos. Previously called at Port Kembla(AUS), Newcastle(AUS), Mexico, Longbeach(USA), South Korea
307	04-06-2013	Haifa	SAU	9597030	Coking Coal	29521	Hay Point(AUS)	Haifa	81,313		14.5	38 GL	East- South Africa / India	Hay Point(AUS)	Vilag	Durban	Durban	Infinity	08-Jun	10-Jun	59	Sailed to Durban. Previously called at Vilag, HayPoint(AUS), South Korea, Brazil, Fujairah, Dammam, Fujairah, Singapore Bunker, Vancouver(CAN)	
308	13-06-2013	Haifa	HAWK I	9224661	Coking Coal			Haifa	50,294	1750	14	31 G	East- South Africa / India	Singapore	Vilag	Port Louk	Port Louk	IOS	15-Jun	15-Jun		Sailed to Durban via Port Louk. Previously called at Vilag, Singapore Bunker, New Zealand, Japan, South Korea, China, Fremantle(AUS), Singapore, Thailand, Indonesia	
309	09-06-2013	Haifa	OCEAN WIND	9302786	Coking Coal		Gladstone (AUS)	Haifa	76,619	2970	14	30 GL	Far East	Singapore	Dharna	Vilag	Singapore	Trill	08-Jun	15-Jun	147	Vilag(1-13), Haifa(1-13), Dharna(1-13)	Sailed to Singapore Bunker, Japan. Previously called at Dharna, Singapore Bunker, Gladstone(AUS), Japan, Newcastle(AUS), Japan, Newcastle(AUS), Japan
310	19-06-2013	Haifa	LID	9594638	Coking Coal	25407	Gladstone (AUS)	Haifa	57,004		14	34 G	Gulf- Red Sea/ India	Singapore	Paradip	Vilag	not known	IOS	25-Jun	02-Jul	159	Haifa(1-13), Paradip(1-13)	Currently at Haifa. Previously called at Paradip, Singapore Bunker, Gladstone(AUS), China
311	19-06-2013	Haifa	DEBILNES		Coking Coal			Haifa										DEBILNES					
312	19-06-2013	Haifa	CHESHIRE	9593448	Coking Coal		Hay Point(AUS)	Haifa	56,598		14	34 G	Gulf- Red Sea/ India	Singapore	Paradip	Port Elizabeth(SA)	South Africa	Trill	17-Jun	18-Jun		Haifa(1-13), Paradip(1-13), Krishnap(1-13), Gangavaram(1-12), Kandla(1-12)	Currently at Haifa. Previously called at Paradip, Singapore Bunker, HayPoint(AUS), Port Elizabeth(SA), Krishnap, Singapore Bunker, South Korea, Weipa(AUS), China
313	22-06-2013	Haifa	KANG SHUN	9285079	Coal	23000	Indonesia	Haifa	55,568		14	30 G	Gulf- Red Sea/ India	Singapore	Paradip	Vilag	not known	Peninsular Marine	23-Jun	25-Jun	65	Haifa(1-13), Paradip(1-13), Tutcori(1-13), 1-105, Mormugao(1-13)	Currently at Haifa. Previously called at Paradip, Tutcori, Singapore Bunker, Indonesia, China, New Zealand, Panama, Morocco, Spain
314	23-06-2013	Haifa	HELIAN BRIGHT	9587938	Coal	21860	Indonesia	Haifa	58,882		14	34 G	Gulf- Red Sea/ India	Singapore	Paradip	not known	not known	DEBILNES	24-Jun	24-Jun		Haifa(1-13), Paradip(1-13), Kandla(1-13), Mumbai(1-11)	Currently at Haifa. Previously called at Paradip, Indonesia, China, South Korea, China, Kandla, Fujairah, Bahrain, Jebel Ali, Suez, Malta, OSUK, Netherlands
315	25-06-2013	Haifa	SPAR HYDRA	9490006	Coal	28000	Indonesia	Haifa	58,000		14	32 G	Gulf- Red Sea/ India	Singapore	Paradip	Haifa	not known	M. Shipping	30-Jun	04-Jul	79	Haifa(1-13), Paradip(1-13), Tutcori(1-13), Krishnap(1-13), Ennore(1-12)	Currently at Haifa. Previously called at Paradip, Singapore Bunker, Indonesia, China, Singapore, Malaysia, Singapore
316	22-06-2013	Haifa	ISS BULKER	9441324	Iron ore		Haifa	Chittagong	57,375		14	32 G	Gulf- Red Sea/ India	Chittagong	Chittagong	Kolkata	not known	Canopus	19-Jun	19-Jun		Kolkata(1-13), Haifa(1-13), 1-123, Vilag(1-12), Kakinada(1-12)	Currently at Kolkata. Previously called at Chittagong, Vancouver(CAN), Singapore Bunker, Istanbul(AUS), China
317	24-06-2013	Haifa	GLOBAL HOPE	9445620	Coal		Indonesia	Haifa	57,285		14	31 G	Gulf- Red Sea/ India	Singapore	Paradip	Singapore	Singapore	Alfiah	29-Jun	06-Jul	160	Haifa(1-13), Paradip(1-13), Kakinada(1-12), Vilag(1-13), Kandla(1-12)	Currently at Haifa. Previously called at Paradip, Singapore Bunker, Indonesia, China, Singapore Bunker, Port Louk, Durban(SA)
318	24-06-2013	Haifa	ARUNA ECE	9635406	Coal		Indonesia	Haifa	55,500		14	32 G	Far East	Singapore	Paradip	Vilag	South Korea	M. Shipping	26-Jun	30-Jun	136	Vilag(1-13), Haifa(1-13), Paradip(1-13), China, Longbeach(USA), Kandla(1-13)	Currently at Vilag. Previously called at Paradip (Coal discharge 24/06), Singapore Bunker, Hay Point(AUS), China, Brazil, Singapore Bunker, China, HK, Vietnam
319	27-06-2013	Haifa	WADI ALYARMOL	9460772	Coking Coal	29226	Hay Point(AUS)	Haifa	80,384		14	36 GL	Gulf- Red Sea/ India	Singapore	Paradip	Vilag	not known	Everett	30-Jun	02-Jul	46	Haifa(1-13, 2-12), Paradip(1-13), Vilag(1-13), Dharna(1-12)	Sailed to Vilag 28/06. Previously called at Vilag, Singapore Bunker, Port Kembla(AUS), China, Singapore Bunker, Revden(IND), Paquetaim(USA), New Orleans(USA), Malta, Suez
320	25-06-2013	Haifa	SHY HUA	9592068	Coking Coal		Kembla(AUS)	Haifa	82,269	2529	14	35 GL	Gulf- Red Sea/ India	Singapore	Vilag	Vilag	not known	GAC	23-Jun	27-Jun		Haifa(1-13), Vilag(1-13), Revden(1-13)	Sailed to Colombo 07/07. Previously called at Vilag, Melbourne(USA), Bremen, Netherlands, OSUK, Paquetaim(USA), Japan, Lipo(USA), Paquetaim(USA)
321	27-06-2013	Haifa	FAIR LADY	9142877	Coking Coal		Baltimore(USA)	Haifa	76,608	2917	14	35 GL	Gulf- Red Sea/ India	Baltimore	Vilag	Colombo	Colombo	J.M. Bat	27-Jun	30-Jun	79	Haifa(1-13, 1-11), Vilag(1-13, 1-11), Suez, Turkey, Ukraine	Currently at Haifa. Previously called at Paradip (5 Coal discharge 24/06), Singapore Bunker, Indonesia, South Korea, Singapore Bunker, Argentina, Singapore Bunker, Brazil, Singapore Bunker
322	01-07-2013	Haifa	INTUITION	9431276	Coal	26250	Indonesia	Haifa	80,686		14	36 GL	Gulf- Red Sea/ India	Singapore	Paradip	Haifa	not known	Trill				Paradip(1-13), Haifa(1-13)	Currently at Haifa. Previously called at Paradip (5 Coal discharge 24/06), Singapore Bunker, Indonesia, South Korea, Singapore Bunker, Argentina, Singapore Bunker, Brazil, Singapore Bunker
323	02-07-2013	Haifa	ATHINA CARRAS	9592719	Coking Coal	26377	Gladstone (AUS)	Haifa	82,057		13.5	35 GL	Gulf- Red Sea/ India	Singapore	Vilag	Haifa	not known	IOS	03-Jul	05-Jul	62	Haifa(1-13, 1-12), Vilag(1-13), Paradip(1-12)	Currently at Haifa. Previously called at Vilag, Singapore Bunker, Brazil, Argentina, Haifa, Paradip, Gangavaram
324	28-06-2013	Haifa	SPAR LYRA	9289019	Coal			Haifa	63,585	2000	14	32.5 G	Gulf- Red Sea/ India	Singapore	Singapore	Mumbai	not known	Seaburn	29-Jun	08-Jul	220	Haifa(1-13), Chennai(1-13), Doha(1-13), Vilag(1-13), MGdalla(1-12)	Currently at Haifa. Previously called at Singapore, Chennai, Fujairah, Mina Saqr, Kuwait, Pakistan, Doha, Singapore
325	01-07-2013	Haifa	INDONESIA PIG IRON		Coal			Haifa										IOS					
326	04-07-2013	Haifa	NUVA ESPERANZA	9228393	Coal	22971	Indonesia	Haifa	50,915		14	33 G	Gulf- Red Sea/ India	Singapore	Paradip	not known	not known	DEBILNES				Haifa(1-13), Paradip(1-13, 1-12), NewMore(1-12), Pipawa(1-12), Navah(1-12)	Currently at Haifa. Previously called at Paradip (5 Coal discharge), Singapore Bunker, Indonesia, Singapore, China, Panama, Brazil, Zog, Singapore Bunker
327	05-07-2013	Haifa	ANEMOS	9495777	Coal	27460	Richards Bay	Haifa	58,338		14	33 G	Gulf- Red Sea/ India	Singapore	Paradip	Paradip	not known	M. Shipping	06-Jul	08-Jul	67	Haifa(1-13, 1-11), Paradip(1-13), Tutcori(1-12), Vilag(1-12)	Currently at Haifa. Previously called at Paradip (5 Coal Discharge 24/06), Singapore, China, Singapore Bunker, RB, Henry Coast, OSUK, Germany
328	14-05-2013	Haifa	YUJONG NAM 82	9599918	Wheat		Haifa	Mongolia	5,299	240	12	G	Gulf- Red Sea/ India	Chittagong	Chittagong	Kolkata	Mongolia	S. Oceanic	21-Jun	27-Jun	141	Haifa(1-13), Kolkata(2-13, 1-12, 1-11), Myanmar, Kolkata, Haifa, Malaysia, Singapore, Indonesia, Malaysia, Kakinada	Currently at Kolkata. Previously called at Chittagong, Haifa, Kolkata, Vilag, Myanmar, Kolkata, Haifa, Malaysia, Singapore, Indonesia, Malaysia, Kakinada
329	21-05-2013	Haifa	DENSA JAGUAR	9594837	Coal		Indonesia	Haifa	57,380	2080	13.5	30.5 G	Gulf- Red Sea/ India	Singapore	Paradip	Malaysia	Malaysia	Seaburn	23-May	27-May	93	Tutcori(1-13), Haifa(1-13), Paradip(1-13), Vilag(1-13), Mormugao(1-12)	Sailed to Malaysia, Singapore Bunker, Tutcori, Suez. Previously called at Paradip, Singapore Bunker, Indonesia, OSUK, Sweden, Lithuania, Netherlands, France, Gibraltar, Malta
330	22-05-2013	Haifa	MEDIAN VISION	9483554	Coking Coal		Hampton Roads(USA)	Haifa	80,600		14	38 GL	East Coast South America	Hampton Roads(USA)	Paradip	Brazil	Brazil	GAC	22-May	24-May	61	Haifa(1-13), Paradip(1-13)	Sailed to Brazil. Previously called at Paradip, Hampton Roads(USA), OSUK, Netherlands, Belgium, Netherlands, Belgium, OSUK, Spain, Turkey, Romania, Turkey, Egypt
331	22-05-2013	Haifa	POS AMETHYST	9513330	Coal		Indonesia	Haifa	58,889		14	34 G	South East Asia	Singapore	Paradip	Singapore	Singapore	GAC	21-May	27-May	135	Haifa(1-13), Paradip(1-13)	Currently at Singapore. Previously called at Paradip, Singapore Bunker, Indonesia, Philippines, Longview(USA), South Korea, Singapore Bunker, Cape Town, Netherlands, Liberia
332	23-05-2013	Haifa	ORIENT ORCHID	9478860	Coal		Indonesia	Haifa	55,588	2280	14	30 G	East- South Africa / India	Singapore	Paradip	Ennore	Ennore	IOS	16-May	20-May	102	Paradip(2-13), Vilag(1-12)	Sailed to Mozambique, RB. Previously called at Paradip, Singapore Bunker, Indonesia, Thailand, Vietnam, Singapore, Haifa, Paradip, Singapore Bunker, China



370	08-05-2013	Krishnapatnam	BIANCO DAN	928488	Coal	25437	Indonesia	Krishnapatnam	55,628	1820	14	34 G	Far East	Singapore	Singapore	Port Louis	Port Louis	Sri Srivasa	07-May	12-May	112	Krishnapatnam (1-13), Paradip (1-10), Ennore (1-09)	Sailed to Port Louis, Mozambique, Singapore Bunker, China. Previously called at Singapore, Indonesia, Thailand, Indonesia, Philippines, China	EXIM Sea-web	
371	09-05-2013	Krishnapatnam	VINASHIP DIAMOND	9142099	Coal	20023	Russia	Krishnapatnam	24,094	982	16	20.5 G	South East Asia	Singapore	Singapore	Saudi	Saudi	Unicorn	09-May	11-May	52	Vilag (1-13), Paradip (1-13), Ennore (1-13), Kakinada (1-13), Vilag (1-12), Tuticorin (1-09)	Sailed to Saudi, Bahrain, Fujairah. Previously called at Russia, China, Singapore, Kakinada, Qatar	EXIM Sea-web	
372	10-05-2013	Krishnapatnam	28 AUGUSTOS	9218478	Coal	51100	Longbeach (USA)	Krishnapatnam	52,455	2140	14	30 G	South East Asia	Singapore	Singapore	Durban	Durban	855	14-May	17-May	81	Krishnapatnam (1-13), Portland (1-12)	Sailed to Durban, Singapore Bunker. Previously called at Singapore Bunker, HK, China, HK, Longbeach (USA), South Korea, China, Singapore Bunker, Mumbai	EXIM Sea-web	
373	12-05-2013	Krishnapatnam	STRIGILA	9465710	Coal	71500	Indonesia	Krishnapatnam	75,174		14	34 GL	South East Asia	Singapore	Singapore	Maputo Bay, Mozambique	Maputo Bay, Mozambique	Marine Agency	12-May	26-May	275	Krishnapatnam (1-13), Damp (1-12), Paradip (1-11), Mundra (1-11), Chennai (1-09)	Sailed to Mozambique, Singapore Bunker. Previously called at Singapore, Indonesia, China, Indonesia, Westport (USA), China, South Korea, Australia (USA), Brazil, Karachi	EXIM Sea-web	
374	13-05-2013	Krishnapatnam	ROYAL FAIRNESS	9457879	Coal	53910	Indonesia	Krishnapatnam	55,654	2282	14	30 G	Durban, South Africa	Singapore	Singapore	Durban	Durban	Glory Faith	12-May	12-May		Krishnapatnam (1-13)	Sailed to Durban. Previously called at Singapore Bunker, Indonesia, Egypt, Turkey, Russia, Turkey, Egypt, Jordan, Egypt, Turkey	EXIM Sea-web	
375	13-05-2013	Krishnapatnam	MARITIME LONGEVITY	9650034	Steam Coal	59600	Indonesia	Krishnapatnam	61,435	2560	14.5	30 G	Far East	Singapore	Singapore	Singapore	Singapore	855	20-May	20-May		Krishnapatnam (1-13)	Sailed to Singapore, China. Previously called at Singapore Bunker, Indonesia, Japan	EXIM Sea-web	
376	13-05-2013	Krishnapatnam	BO MARIANUS	9536135	Steam Coal	16490	Richards Bay	Krishnapatnam	1,79,023		14.5	67 GL	East Coast South America	Richards Bay	Richards Bay	Brazil	Brazil	SAC	13-May	21-May	181	Krishnapatnam (1-13), Mundra (1-13, 1-12)	Currently at Mundra. Discharged Steam Coal at Krishnapatnam 17/05. Previously called at Dharmu, Ganganam, Krishnapatnam, RB, Mundra, Indonesia, Singapore Bunker, RB, Saudi, Fujairah	EXIM Sea-web	
377	19-05-2013	Mundra	BAH	9451787	Steam Coal	95000	Richards Bay	Krishnapatnam	1,75,264		15.3	G	West Africa	Richards Bay	Chama	Chama	Essex	19-Jun	20-Jun	16	Mundra (2-13), Dharmu (1-13), Ganganam (1-13), Krishnapatnam (1-13)	Sailed to Singapore, China. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Canary Islands, UK, Saitama (USA), Mundra, Singapore Bunker, China	EXIM Sea-web		
378	14-05-2013	Krishnapatnam	BITHEN	9441263	Coal	54050		Krishnapatnam	57,809		14	32 G	Far East									Krishnapatnam (1-13), Tuticorin (2-11)	Port Misamal	EXIM Sea-web	
379	15-05-2013	Krishnapatnam	WARRIUM	9447118	Coal	148050	Stablestone (AUS)	Krishnapatnam	1,73,555	5370	14	53 GL	Gulf-Red Sea/India	Singapore	Singapore	Richards Bay	Richards Bay	Unicorn	16-May	29-May	311	Krishnapatnam (2-13), Mundra (1-13)	Sailed to RB, returned Krishnapatnam. Previously called at Singapore, Gladstone (AUS), China, Singapore Bunker, Brazil, Mundra, Singapore, China, Egypt, Ukraine	EXIM Sea-web	
380	19-05-2013	Krishnapatnam	SLIGHT FUSION	9447118	Coal	148050		Krishnapatnam																EXIM Sea-web	
381	15-05-2013	Krishnapatnam	MARATHA PRESTIGE	9561331	Male	26200	Krishnapatnam	UAE	32,080	1245	14	24 G	Far East	Colombo	Colombo	Port Rashid (UAE)	Port Rashid (UAE)	J.M. Red	18-May	18-May		Krishnapatnam (1-13), Haldia (1-11), Tuticorin (2-11)	Sailed to UAE, Singapore, Indonesia, Australia, China. Previously called at Colombo, Singapore, Taiwan, Indonesia, Singapore, Japan, China, Honduras, USA, Canada	EXIM Sea-web	
382	19-05-2013	Krishnapatnam	DMART	9137990	Coal	120000	Richards Bay	Krishnapatnam	1,51,270	3840	15	50 GL	South East Asia	Richards Bay	Richards Bay	Richards Bay	Richards Bay	Sri Srivasa	22-May	22-May		Krishnapatnam (1-13)	Sailed to RB. Previously called at RB, Singapore Bunker, New Castle (AUS), Taiwan, Newcastle (AUS), China, South Korea, Hay Point (AUS), Taiwan, Haldia (AUS), Japan	EXIM Sea-web	
383	22-05-2013	Krishnapatnam	DMB RAJING	9405101	Steam Coal	39351		Krishnapatnam	55,080	2045	14	29.5 G	Far East	Singapore	Tuticorin	Singapore	Singapore	Singapore		27-May	27-May		Krishnapatnam (1-13), Tuticorin (1-13), Jagadhri (1-13), Mumbai (1-12)	Sailed to Singapore Bunker, China. Previously called at Tuticorin, Singapore Bunker, China, Japan, China, Jagadhri, China, Pakistan, Singapore Bunker, Japan, China, Singapore Bunker, Mumbai, Singapore Bunker	EXIM Sea-web
384	11-06-2013	Krishnapatnam	BAMANIE NAREE	9611422	Coal	34380	Indonesia	Krishnapatnam	56,441	2330	14	34 G	South East Asia	Singapore	Kakinada	Singapore	Singapore	855	12-Jun	25-Jun	317	Krishnapatnam (1-13), Kakinada (1-13), Paradip (1-13)	Sailed to Singapore Bunker. Previously called at Singapore, China, Singapore Bunker, Philippines, China, Singapore Bunker, RB, Mozambique	EXIM Sea-web	
385	13-06-2013	Krishnapatnam	KEN STAR	9619990	Coal	300000	Indonesia	Krishnapatnam	61,423	2560	14.5	30 G	South East Asia	Singapore	Ennore	Singapore	Singapore	Seaways	17-Jun	30-Jun	300	Krishnapatnam (1-13), Ennore (1-13)	Sailed to Singapore Bunker. Previously called at Ennore, Singapore Bunker, Indonesia, China, Mexico, Canada, Japan	EXIM Sea-web	
386	15-06-2013	Krishnapatnam	HEROIC	9599400	Coal	55000		Krishnapatnam	57,723		14	34 G	Gulf-Red Sea/India	Malaysia	Malaysia	Singapore	Singapore	Turbeam Log	15-Jun	25-Jun	240	Krishnapatnam (1-13)	Sailed to Singapore. Previously called at Malaysia, Singapore, Taiwan, Indonesia, Malaysia, Singapore, China, Indonesia, Taiwan, China	EXIM Sea-web	
387	15-06-2013	Krishnapatnam	AR	9441130	Coal	93915		Krishnapatnam	97,809		14	32 G	Gulf-Red Sea/India	Singapore	Singapore	Colombo	Colombo	Searam	16-Jun	26-Jun	226	Krishnapatnam (1-13), Paradip (1-12)	Sailed to Colombo. Previously called at Singapore, China, Singapore Bunker, Thailand, HK, China, Japan, Indonesia, Singapore Bunker, Indonesia, Singapore, Paradip, Singapore Bunker, China	EXIM Sea-web	
388	15-06-2013	Krishnapatnam	SETTIMES	9490779	Coal	55000	Milner (AUS)	Krishnapatnam	58,018		14	32 G	South East Asia	Singapore	Paradip	Singapore	Singapore	855	17-Jun	22-Jun	112	Krishnapatnam (1-13), Paradip (1-13), Haldia (1-13)	Sailed to Singapore Bunker. Previously called at Paradip, Haldia, Singapore Bunker, China, Milner (AUS), China, Singapore Bunker, Mozambique	EXIM Sea-web	
389	21-06-2013	Krishnapatnam	DHENDI RUM	9593816	Coal	40000	Indonesia	Krishnapatnam	81,810		14.2	GL	Gulf-Red Sea/India	Singapore	Singapore	Brazil	Brazil	Seaways	21-Jun	21-Jun		Krishnapatnam (1-13)	Sailed to Brazil. Previously called at Singapore Bunker, Indonesia, China	EXIM Sea-web	
390	24-06-2013	Krishnapatnam	GYUM BHAK	9592800	Coal	548140	Indonesia	Krishnapatnam	57000		14	34 G	Gulf-Red Sea/India	Singapore	Singapore	Singapore	Singapore	855				Ennore (1-13), Haldia (1-13, 2-12), Paradip (1-13), Tuticorin (2-13, 1-12)	Currently at Krishnapatnam. Previously called at Singapore, Indonesia, Singapore Bunker, Ennore, Singapore Bunker, China, Singapore Bunker, Haldia, Paradip, Singapore Bunker, Indonesia, Singapore Bunker, Tuticorin, Singapore Bunker	EXIM Sea-web	
391	25-06-2013	Krishnapatnam	AMNICA	9514418	Coal	439200	Indonesia	Krishnapatnam	56104	2100	14	30 G	South East Asia	Singapore	Singapore	Singapore	Singapore	Glory Faith	25-Jun	28-Jun	61	Krishnapatnam (1-13), Muldwarkat (1-12), Paradip (1-10)	Sailed to Singapore Bunker. Previously called at Singapore Bunker, Indonesia, Egypt, Turkey, Ukraine, Egypt, Turkey, Ukraine, Turkey, Egypt, Saudi, Yemen	EXIM Sea-web	
392	27-06-2013	Krishnapatnam	9056200	Coal	146715	Richards Bay	Krishnapatnam	149730		14.5	56.5 GL	South East Asia	Richards Bay	Richards Bay	Singapore	Singapore	Sri Srivasa	27-Jun	27-Jun		Krishnapatnam (1-13)	Sailed to Singapore Bunker. Previously called at RB, Darwin (AUS), RB, Singapore Bunker, China, Iran, Fujairah, Iran, Fujairah, Brazil, Singapore Bunker	EXIM Sea-web		
393	27-06-2013	Krishnapatnam	9480624	Coal	564020		Krishnapatnam	57970		14	32 G	Far East		China	China			855					Port Misamal, No India Call	EXIM Sea-web	
394	28-06-2013	Krishnapatnam	TANARU	9667200	Coal	54250	Indonesia	Krishnapatnam	56064	2230	14.5	G	South East Asia	Singapore	Singapore	Indonesia	Indonesia	Glory Faith	28-Jun	01-Jul	81	Krishnapatnam (1-13), Paradip (2-13), Vilag (1-13)	Sailed to Indonesia. Previously called at Singapore Bunker, Indonesia, South Korea, China, Singapore Bunker, Paradip, Vilag, Kakinada, Haldia, Singapore Bunker, Japan	EXIM Sea-web	
395	29-06-2013	Krishnapatnam	LEGHITT SKY	9399000	Coking Coal	312740	Vancouver (CAN)	Krishnapatnam	81503		14	36 GL	Gulf-Red Sea/India	Singapore	Singapore	Dharmu	not known	Unicorn	29-Jun	05-Jul	118	Krishnapatnam (1-13), Paradip (1-11), Vilag (1-11), New Mangalore (1-10)	Currently at Krishnapatnam. Previously called at Singapore Bunker, Vancouver (CAN), Japan, China, South Korea, Vancouver (CAN), China, Indonesia	EXIM Sea-web	
396	01-07-2013	Krishnapatnam	GOLDEN DHOUSHAN	9448910	Coal	162357	Richards Bay	Krishnapatnam	174834	4800	14	57 GL	Gulf-Red Sea/India	Richards Bay	Richards Bay			Sri Srivasa				Krishnapatnam (1-13)	Currently at Krishnapatnam. Previously called at Karachi, Singapore Bunker, HayPoint (AUS), China, Singapore Bunker, Brazil, Singapore Bunker, China, Singapore Bunker, Tuticorin, Singapore Bunker, China, Singapore Bunker, Turkey, Turkey, Ukraine, Turkey, Haldia, Haldia, Greece, South Korea, RB	EXIM Sea-web	
397	01-07-2013	Krishnapatnam	ANILON	9585220	Coal	36810	Hay Point (AUS)	Krishnapatnam	81540		14.8	38.2 GL	Gulf-Red Sea/India	Singapore	Karachi	not known	not known	Glory Faith	06-Jul	11-Jul	121	Krishnapatnam (1-13), Mormugao (1-12)	Currently at Krishnapatnam. Previously called at Singapore Bunker, Gladstone (AUS)	EXIM Sea-web	
398	01-07-2013	Krishnapatnam	RAVDS HOS	9254781	Coal	305400	Hay Point (AUS)	Krishnapatnam	55180	2410	14.7	G	Gulf-Red Sea/India	Singapore	Singapore	Haldia	not known	Sri Srivasa	03-Jul	03-Jul		Krishnapatnam (1-13), Mormugao (1-12), Tuticorin (2-10), Chennai (1-09)	Sailed Haldia 03/07. Previously called at Singapore Bunker, HayPoint (AUS), China, Singapore Bunker, RB, Durban, Madagascar, Fujairah	EXIM Sea-web	
399	05-07-2013	Krishnapatnam	AGRA	9584140	Coal	55310		Krishnapatnam	56,809		14	34 G	Gulf-Red Sea/India	Singapore	Singapore			855				Tuticorin (2-13), Krishnapatnam (2-13), Mumbai (1-12), Vilag (2-12)	Currently at Krishnapatnam. Previously called at Singapore Bunker, HK, China, Singapore Bunker, Tuticorin, Singapore Bunker, China, Singapore Bunker, Fujairah, Mina Sag	EXIM Sea-web	
400	07-07-2013	Krishnapatnam	COAL GLOFF	9100100	Coal	70500	Indonesia	Krishnapatnam	73470		14	29 GL	Gulf-Red Sea/India	Singapore	Singapore			Merchant Shipping				Krishnapatnam (1-13)	Currently at Krishnapatnam. Previously called at Singapore Bunker, Indonesia, Thailand, Singapore Bunker, Argentina, Uruguay, Argentina, Singapore, China, HK, China, Vancouver (CAN), South Korea, Panama, Pigeonholes (USA)	EXIM Sea-web	
401	07-07-2013	Krishnapatnam	LIBERTY DREAM	9600621	Coal	60780	Gladstone (AUS)	Krishnapatnam	81443	2540	13.5	35 GL	Gulf-Red Sea/India	Singapore	Singapore			Glory Faith				Krishnapatnam (1-13)	Currently at Krishnapatnam. Previously called at Singapore Bunker, Gladstone (AUS), Singapore Bunker, Brazil, Norfolk Island, Port Louis, Fujairah, Damman, Egypt, Canary Island, Brazil, Spain, Brazil, Gibraltar, Egypt	EXIM Sea-web	
402	12-07-2013	Krishnapatnam	ZINCO HADRAN	9423067	Coal	162790		Krishnapatnam	169020	3328	14	52 GL	East and South Africa	Richards Bay	Richards Bay			Marine Agency					Underway Krishnapatnam. Update needed	EXIM Sea-web	
403	13-07-2013	Krishnapatnam	SILVER TRADE	9107910	Coal	143300	Chennai		150390		14	46.5 GL	East coast South America	Chile	Chile			Marine Agency					Underway Krishnapatnam. Update needed	EXIM Sea-web	
404	01-08-2013	Chennai	920000	Coking Coal	720000		Chennai											Atlantic				Chennai (1-13), Tuticorin (2-13), Magalla (2-13), Mumbai (1-13), RB	Sailed to Singapore Bunker, Vietnam, Indonesia. Previously called at Tuticorin, Fujairah, Magalla, Pakistan, Magalla, Mumbai, Tuticorin, Fujairah, Mina Sag, RB	EXIM Sea-web	
405	12-09-2013	Chennai	9219440	Wheat	480000	Chennai	Vietnam	48,446	1785	14	27 G	South East Asia	Fujairah	Tuticorin	Singapore	Singapore	Hari	11-May	26-May	306	Paradip (1-13)		EXIM Sea-web		

406	29-06-2013	Mundra	SHAR	5999810	Steam Coal	1674360	Indonesia	Mundra	1,81,407	5807	14	62	GL	Gulf-Red Sea/India	Singapore	Singapore	Brazil	Brazil	J.M. Bai	30 Jun	05 Jul	116	Mundra[2-13]	Sailed to Brazil. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Brazil, Mundra, Singapore Bunker, China, AUS, Japan, HongKong(AUS), China	EXIM Sea-web
407	01-07-2013	Mundra	CAPE GARLAND	9397946	Steam Coal	1633373	Indonesia	Mundra	1,78,394	4781	14	52	GL	Gulf-Red Sea/India	Singapore	Singapore			Taurus Shipping	02 Jul	03 Jul	10	Mundra[1-13]	Currently at Mundra. Previously called at Singapore Bunker, Indonesia, China, Dampier(AUS), China, Japan, Singapore Bunker, Brazil, Gibraltar, France, HayPoint(AUS)	EXIM Sea-web
408	03-07-2013	Mundra	CAPE VIEWER	9008160	Steam Coal	1449573	Indonesia	Mundra	1,69,783	3900	14	53	G	Gulf-Red Sea/India	Malaysia, Port Klang	Malaysia, Port Klang			Taurus Shipping	05 Jul			Mundra[1-13]	Currently at Mundra. Previously called at Malaysia, Singapore, Indonesia, China, Suez, Turkey, Russia, Ukraine, Russia, Turkey, 88, Singapore	EXIM Sea-web
409	03-07-2013	Mundra	FRONTIER KOTOSUKI	9532081	Steam Coal	1641613	Indonesia	Mundra	1,74,810	5136	14.5	61	GL	Gulf-Red Sea/India	Singapore	Singapore			J.M. Bai	05 Jul			Mundra[1-13], Mormugao[1-12], Chennai[1-13]	Currently at Mundra. Previously called at Singapore Bunker, Indonesia, HK, China, HK, Dampier(AUS), Japan, Mexico, China, Japan, Singapore Bunker, Saitama(JP)	EXIM Sea-web
410	06-07-2013	Mundra	SHARP	9513913	Coaking Coal	538000	Abbot Point(AUS)	Mundra	55,340		14.5	32	G	Gulf-Red Sea/India	Singapore	Singapore			Magnus Shipping	08 Jul			Mundra[1-13], Tutuorin[1-13], Oman, Fujairah, Tutuorin, Indonesia, Singapore Bunker, Krikkhapp[1-13]	Currently at Mundra. Previously called at Singapore Bunker, AbbotPoint(AUS), Oman, Fujairah, Tutuorin, Indonesia, Singapore Bunker, Krikkhapp	EXIM Sea-web
411	19-06-2013	Kandla	PANAGIA STENION	9592020	Coal	714993	Indonesia	Kandla	76,072	2700	14.5	36	GL	Gulf-Red Sea/India	Singapore	Singapore	Fujairah	Fujairah	Arnav Shipping	20 Jun	30 Jun	226	Kandla[1-13]	Sailed to Fujairah. Previously called at Singapore Bunker, China, HK, Indonesia, Brazil, Fujairah, Jebel Ali, UAE, Fujairah, AlMbarra(AUS)	EXIM Sea-web
412	25-06-2013	Kandla	BAO YUN SHENG	9621015	Coal	290000	Indonesia	Kandla	56,928		14	34	G	Gulf-Red Sea/India	Singapore	Singapore	Redi Bunder	Bandar Abbas	Scorpio Shipping	25 Jun	29 Jun		Redi[1-13], Kandla[1-13]	Sailed to Redi, Jeddah, Bandar Abbas. Previously called at Singapore Bunker, Indonesia, HK, China, Indonesia, Singapore, China	EXIM Sea-web
413	24-06-2013	Kandla	UNITED MALIA	8432440	Rice	4400000	Kandla	South Korea	53,414	2000	14	32	G	South East Asia	Suez	Suez	Singapore	Singapore	Shantail Shipping	14 Jun	24 Jun		Kandla[1-13], Magdalla[1-13], 25, Mumbai[1-13]	Sailed to Singapore Bunker. Previously called at Suez, Malta, DSO(UK), Lithuania, Anwerp, Netherlands, Spain, Italy, Egypt, Jeddah, Magdalla, Mumbai, Singapore Bunker	EXIM Sea-web
414	29-06-2013	Kandla	STANLEY	9123399	Wheat	3210000	Kandla	Jebel Ali(UAE)	35,382		14	29	G	Gulf-Red Sea/India	Fujairah	Mundra	Jebel Ali(UAE)	Jebel Ali(UAE)		20 Jun	01 Jul	254	Jebel Ali[1-13], Paradi[1-13]	Sailed to Jebel Ali(UAE). Previously called at Mundra, Fujairah, Doha, Doha[1-13], Kakhada[1-13], Viag[1-13], 25, Mumbai[1-13]	EXIM Sea-web
415	25-06-2013	Kandla	REITHMA	9576360	Coal	550400	Indonesia	Kandla	57,000		14	34	G	Gulf-Red Sea/India	Indonesia	Indonesia	Fujairah	Fujairah	Aditya Marine	01 Jul	03 Jul		Kandla[1-13], Tutuorin[1-13], [Inoreni-13, 1-12], Faradi[1-13], 62, Viag[1-13]	Sailed to Fujairah, Mina Saeq. Previously called at Indonesia, Tutuorin, Ennore, Singapore, Indonesia, Singapore Bunker, Faradi, Malta, China, Singapore Bunker, Faradi, Viag, Kandla, Singapore Bunker	EXIM Sea-web
416	27-06-2013	Kandla	TRANS SPRING	9618440	Rice	4000000	Kandla		56,854	2400	14	34	G	Gulf-Red Sea/India	Karachi	Karachi			Shantail Shipping				Kandla[1-13]	At Kandla Anchorage. Previously called at Singapore Bunker, China, Indonesia, China, Indonesia, China	EXIM Sea-web
417	01-07-2013	Kandla	ZHE HAI SOS	9567477	Rice	1000000	Kandla	China	33,130		14		G	Gulf-Red Sea/India	Pakistan	Pakistan			Aditya Marine				Kandla[2-13], Mundra[1-13]	Currently at Kandla. Previously called at Pakistan, Mundra, Malaysia, Singapore Bunker, NewZealand, Kambal(AUS), NewZealand, Mumbai, Portland(USA)	EXIM Sea-web
418	28-06-2013	Kandla	JAMI	995234	Wheat	3000000	Kandla	Jebel Ali(UAE)	33,221		14	29	G	Far East	Jordan	Mundra				06 Jul	07 Jul	39	Kandla[1-13], Mundra[1-13], Cochin[1-13]	Currently at Kandla. Previously called at Mundra, Jordan, Saudi, Suez, Turkey, Bunkia, Turkey, Morocco, Uruguay, Argentina	EXIM Sea-web
419	03-07-2013	Kandla	CAPITAL	9124681	Coal	537860	Indonesia	Kandla	55,340		14.5	32	G	Gulf-Red Sea/India	Singapore	Pipavav			Scorpio Shipping	07 Jul			Kandla[1-13], Pipavav[1-13], Magdalla[1-13], Bedi[1-13]	Currently at Kandla. Called Pipavav 02/07. Coal Discharge. Previously called at Pipavav, Singapore, Indonesia, China, Bandar Abbas, Fujairah	EXIM Sea-web
420	08-07-2013	Kandla	COMMON SPIRIT	959471	Coal	550400	Indonesia	Kandla	57,070		14	34	G	South East Asia	Singapore	Singapore	Singapore	Singapore	Scorpio Shipping	10 Jun	10 Jun		Kandla[1-13], Mundra[1-12], Mundra[1-12], Viag[1-12]	Sailed to Singapore Bunker, Indonesia. Previously called at Singapore Bunker, Indonesia, Suez, Turkey, Russia, Turkey, Anwerp	EXIM Sea-web
421	08-07-2013	Kandla	RUHR ELUMEN	9476641	Coal	1811570	Richards Bay	Kandla	1,75,247		14	52	GL	East- South Africa / India	Richards Bay	Richards Bay			Scorpio Shipping				Mundra[1-13], Kandla[1-13]	Underway Mundra. Previously called at 88, Fujairah, 88, Mundra, Singapore Bunker, Indonesia, Taiwan, Singapore Bunker, Canada, CHN[13]	EXIM Sea-web
422	12-07-2013	Kandla	RAJUS	958853	Coal	290000	Indonesia	Kandla	56,928	2370	14	34	G	South East Asia	Singapore	Singapore			Scorpio Shipping				Mundra[1-13], Magdalla[1-13], Viag[1-12], Paradi[1-12], Kakhada[1-12]	Underway Kandla. Previously called at Indonesia, China, Singapore, Bandar Abbas, Mumbai, Magdalla, Singapore Bunker, Indonesia, China, Singapore Bunker	EXIM Sea-web
423	16-05-2013	Kandla	CHANG AN	955236	Wheat	3000000	Kandla	Indonesia	31,800		14	26	G	Australia	Singapore	Singapore	Singapore	Singapore	IOS	07 May	16 May	200	Paradi[1-11]	Sailed to Singapore Bunker, Indonesia, NewZealand. Previously called Singapore Bunker, NewZealand, Indonesia, Singapore Bunker, Thailand, China, Bunkia, China	EXIM Sea-web
424	19-05-2013	Kandla	MARUJO	9104150	Wheat	2200000	Kandla	UAE	26,472	1068	14	29	G	Gulf-Red Sea/India	Israel	Israel	Fujairah	Fujairah	J.M. Bai	04 May	15 May	267	Kandla[2-13]	Previously called at Israel, Jeddah, Sudan, Port Said, Malta, Brazil, Namibia, Morocco, Turkey	EXIM Sea-web
425	15-05-2013	Kandla		8451173	Wheat	2800000	Kandla	Yemen	57,266	2080	13.5	30	G	South East Asia	Fujairah	Fujairah	Yemen	Yemen	PMA	01 May	06 May	118	1-11, Enkorrhapp[1-12]	Sailed to Yemen, Oman, Viag, Singapore Bunker, Bunkia(AUS). Previously called at Fujairah, Jebel Ali, Suez, Turkey, Malta, France, Spain, Gibraltar, Morocco	EXIM Sea-web
426	14-05-2013	Kandla	MINDAN GRACE	9605839	Rice	4660000	Kandla	South Korea	57,000	2170	14	34	G	South East Asia	Singapore	Singapore	Singapore	Singapore	Chowpale 5	19 May	23 May	80	Kandla[1-13]	Sailed to Singapore Bunker, South Korea, Japan, China, HK, Indonesia. Previously called at Singapore Bunker, Indonesia, Philippines, Indonesia, Egypt, Turkey, Ukraine, Bulgaria	EXIM Sea-web
427	10-05-2013	Kandla	DABO MASAN	9240001	Wheat	1100000	Kandla	South Korea	11,880		13		G	Far East	Iran	Iran	Singapore	Singapore	J.M. Bai	01 May	10 May	164	Mumbai[1-13], 1-11, Mundra[1-12], 164, Mumbai[1-12], Nakhla[1-11]	Sailed to Singapore, Oman, Singapore, South Korea. Previously called at Haq, Damman, Abu Dhabi, Fujairah, Indonesia	EXIM Sea-web
428	10-05-2013	Kandla	PROPEL PROGRESS	9152316	Wheat	3000000	Kandla	Jebel Ali(UAE)	30,840	1300	14		G	Gulf-Red Sea/India	Fujairah	Mundra	Jebel Ali(UAE)	Jebel Ali(UAE)	Act Infraport	18 Apr	12 May	519	Kandla[2-13], Mundra[1-13], Magdalla[1-13], Doha[1-13], Kakhada[1-12], 22, Chennai[1-12]	Sailed to Jebel Ali, Qatar, Bandar Abbas, Fujairah. Previously called at Mundra, Fujairah, Bandar Abbas, Iraq, Fowah, Jebel Ali, Kandla, Magdalla, Doha, Nedland(AUS), Singapore	EXIM Sea-web
429	11-05-2013	Kandla	MOONDANCE II	9351191	Coal	550000	Indonesia	Kandla	55,544	1800	14	30	G	South East Asia	Indonesia	Mumbai	Bandar Abbas	Bandar Abbas	Intratrade	08 May	11 May		Kandla[1-13], Mumbai[1-13], Bedi[1-12], 22, Paradi[1-13], Chennai[1-11]	Sailed to Bandar Abbas, Fujairah, China, Indonesia. Previously called at Mumbai, Indonesia, China, Indonesia	EXIM Sea-web
430	04-05-2013	Kandla	DICALBUR	9207443	Wheat	5800000	Kandla	Ararat(USA)	73,974	2444	14	30	GL	West Coast US	Singapore	Tutuorin	Singapore	Singapore	Aditya Marine	02 May	04 May		Kandla[1-13], Tutuorin[1-13], Mormugao[1-12], Doha[1-13], HK, China	Sailed to Singapore Bunker, Vanuatu(AUS), Indonesia, Singapore Bunker, Korea, AbbotPoint(AUS), China, HK, China	EXIM Sea-web
431	07-05-2013	Kandla	TOPAZ II	7924839	Barley	1100000	Kandla	Bandar Imam	17,169	1049	14.5		G	Far East	Pakistan	Pakistan	Qatar	Qatar	Aditya Marine	28 Apr	09 May	275	Kandla[2-13], 1-12, 1-11, Nakhla[1-11]	Sailed to Qatar, Iran, Iraq. Previously called at Pakistan, Iran, Jebel Ali, Fowah, Iran, Kandla, Pakistan, Saudi, Fujairah, Oman	EXIM Sea-web
432	08-05-2013	Kandla	MARIJITA R	9391720	Wheat	5500000	Kandla	South Korea	56,020	2410	14	30	G	South East Asia	Mina Saqr(UAE)	Pipavav	Singapore	Singapore	IOS	07 May	15 May	189	Kandla[1-13], Pipavav[1-13], Doha[1-13], Tutuorin[1-13], Viag[1-11]	Sailed to Singapore Bunker, South Korea, Taiwan, Netherlands, Singapore Bunker. Previously called at Pipavav, UAE, Doha, Tutuorin, Chile, Peru, China	EXIM Sea-web
433	09-05-2013	Kandla	ISLAND SOLAR	900000	Rice	900000	Kandla	Chennai											Mitsui					Currently at Viag. Previously called at Trincomalee, Indonesia, Thailand, Vietnam, Viag, China, Russia, Japan, China, Singapore, Famba, Singapore, Thailand	EXIM Sea-web
434	09-05-2013	Chemical	WORLDWIDE	1400000	Coaking Coal	1400000	Chennai												GAC					Currently at Viag. Previously called at Trincomalee, Indonesia, Thailand, Vietnam, Viag, China, Russia, Japan, China, Singapore, Famba, Singapore, Thailand	EXIM Sea-web
435	09-05-2013	Viag	SURINAWA	9502800	Maliva	2500000	Viag		28,330	1370	14	23	G	Gulf-Red Sea/India	Trincomalee	Trincomalee			IOS				Viag[2-13], Kandla[1-12, 1-10], Tutuorin[1-12]	Currently at Viag. Previously called at Dittingang, Singapore, China, Japan, China, Russia, Japan, China, Bunkia, Vietnam, HK, China	EXIM Sea-web
436	11-06-2013	Viag	TH H SHENG	9593622	Maliva	2700000	Viag	Malaysia	27,000	2900	13.5		G	Gulf-Red Sea/India	Chittangong	Chittangong			IOS	15 Jun	10 Jul	700	Viag[1-13], Krikkhapp[2-13], Viag[1-11]	Sailed from Viag. Previously called at Dittingang, Singapore, China, Japan, China, Russia, Japan, China, Bunkia, Vietnam, HK, China	EXIM Sea-web
437	11-06-2013	Viag	INDIAHUBBERS	9595371	Steam Coal	3300000	Indonesia	Viag	34,062	1560	14	24	G	South East Asia	Singapore	Singapore	Singapore	Singapore	OSL	19 Jun	22 Jun	92	Viag[1-13], Tutuorin[1-13]	Sailed to Singapore Bunker, Malaysia, Tutuorin, Fremantle(AUS), LongBeach(USA), Japan	EXIM Sea-web
438	14-06-2013	Viag	MAA SAI OVA ROZUM	8421268	Maliva	4000000	Viag		41,736	1507	13		G	South East Asia					BS				Port Mummatch. No India call	EXIM Sea-web	
439	17-06-2013	Viag	NESTORA	9239897	Maliva	2500000	Viag		28,107	1439	13.5		G	Gulf-Red Sea/India	Singapore	Paradi			BS				Paradi[1-13], Doha[1-09], Chennai[1-09]	Currently at Viag. Previously called at Paradi, Singapore, China, Vietnam, HK, Taiwan, Dampier(AUS), Malaysia, Singapore, Fremantle(AUS)	EXIM Sea-web
440	18-06-2013	Viag	STX CROCUS	8441481	Steam Coal	5700000	Indonesia	Viag	57,269		13.5	30	G	South East Asia	Indonesia	Indonesia	Singapore	Singapore	Navship	17 Jun	25 Jun	190	Paradi[1-13], 1-11, Magdalla[1-13], 190, Paradi[1-12]	Sailed to Singapore, Indonesia. Previously called at Indonesia, Singapore Bunker, India, Bangladesh, Brazil, Durban(SA), Singapore Bunker, China, Singapore Bunker	EXIM Sea-web
441	24-06-2013	Viag	OSMAN CALYPSO	8594705	Steam Coal	3500000	Indonesia	Viag	37,000		14	34	G	Gulf-Red Sea/India	Singapore	Paradi			Seatram				Paradi[1-13], Mumbai[1-13, 1-12], NewMore[1-13], Magdalla[1-12], Ennore[1-12]	SOI at Paradi. Previously called at Paradi, Singapore Bunker, Indonesia, China, Singapore Bunker, Maputo, Mumbai, NewMore, Indonesia, Philippines, Fremantle(AUS), Singapore Bunker, Indonesia, China	EXIM Sea-web



442	26-06-2011	Vizag	SEANG SHIN ACIS	9426572	Steam Coal	53902	Indonesia	Vizag	57,000	2425	14	34 G	Gulf- Red Sea/ India	Singapore	Paradip		855			Mumbai(1-13), Mundra(2-12), Paradip(1-13), Vizag(1-13), Mormugao(1-12)	SIB at Paradip. Previously called at Paradip, Singapore Bunker, Indonesia, China, Singapore Bunker, Mumbai, Karachi, Singapore Bunker, South Korea, Poland, Sao Paulo(BRA), South Korea, Vancouver(CAN), Portland(USA), South Korea	EXIM Sea-web		
443	01-07-2011	Paradip	ATLANTIC LEGEND	9425667	Coking Coal	77363	Hay Point(AUS)	Vizag	83,681		14	37 GL	Gulf- Red Sea/ India	Singapore	Singapore	Gangavaram		855	06-Jul	10-Jul	114 Darda(1-12), Haldia(1-11)	Sailed to Gangavaram. Previously called at Singapore Bunker, HayPoint(AUS), China, Singapore Bunker, Brazil, Gangavaram, BB, Newport(USA), Spain	EXIM Sea-web	
444	04-07-2011	Paradip	TIGER DI	9630741	Steam Coal	55000	Indonesia	Paradip	58,000	2370	14	32 G	Gulf- Red Sea/ India	Singapore	Gangavaram	Kandla	Evstey			Paradip(1-13), Gangavaram(2-13)	Sailed to Kandla(05/07). Previously called at Gangavaram, Singapore Bunker, Thailand, Fujairah, Qatar, Fujairah, Fujairah, AB, Gangavaram, Singapore Bunker, China, Indonesia	EXIM Sea-web		
445	30-06-2011	Vizag	RMA	9594408	Steam Coal	55000	Indonesia	Vizag	56,740	2405	14	34 G	Gulf- Red Sea/ India	Singapore	Singapore			855	02-Jul		Chennai(1-13), Krishnapat(1-13)	Currently at Vizag. Previously called at Singapore Bunker, Indonesia, Japan, Singapore Bunker, Mumbai, Chennai, Fujairah, Fujairah, Singapore Bunker, Chennai(1-13), Krishnapat(1-13)	EXIM Sea-web	
446	23-06-2011	Vizag	FOUR MARIUCCO	9450635	Iron ore	33930E	Vizag	China	34,403	1530	14	25 G	Gulf- Red Sea/ India	Singapore	Singapore	Krishnapatnam	Sree Bani		26-Jun		Vizag(1-13), Mumbai(1-11)	Sailed to Krishnapat. Previously called at Singapore Bunker, China, Singapore Bunker, Bangladesh, Canary Islands, OS(UK), Lithuania, Netherlands, Antwerp, OS(UK)	EXIM Sea-web	
447	01-07-2011	Vizag	VISHVA NIDHI	9464742	Coking Coal	25000	Gladstone (AUS)	Vizag	57,144		13.5	30.5 G	Gulf- Red Sea/ India	Singapore	Singapore	Haldia	SAI		02-Jul	06-Jul	Haldia(1-13), Vizag(1-13), Tuticorin(1-13), 1-12, Mumbai(1-12)	Sailed to Haldia. Previously called at Singapore Bunker, Gladstone(AUS), China, Singapore Bunker, Mayun, Port Louis, Tuticorin, Singapore, China, Singapore Bunker, Mumbai, Tuticorin	EXIM Sea-web	
448	29-06-2011	Vizag	SUK PRIBALDO	9578913	Maize	25000E	Vizag		28,193	1538	14	23 G	Gulf- Red Sea/ India	Singapore	Singapore		OS		18-Jun		Vizag(1-13), Kandla(1-12), Mundra(1-12), Tuticorin(1-12)	Currently at Vizag. Previously called at Singapore, China, New Zealand, Bombay(AUS), Singapore, Vietnam, Brisbane(AUS)	EXIM Sea-web	
449	01-07-2011	Vizag	VISHVA PRITHI	9534490	Coking Coal	48796	Hay Point(AUS)	Vizag	80,250	2400	14	36 GL	Gulf- Red Sea/ India	Singapore	Singapore	Haldia	SAI		02-Jul	03-Jul	Paradip(1-13), Haldia(1-13), Vizag(1-13), 11-Mundra(1-13)	Sailed to Haldia, Paradip. Previously called at Singapore, HayPoint(AUS), China, Singapore Bunker, Brazil, Mundra	EXIM Sea-web	
450	02-07-2011	Vizag	FRANZTIP CHARIS	9461972	Maize	25000E	Vizag		34,000		14	G	Gulf- Red Sea/ India	Freemantle(AUS)	Gangavaram		OS			Gangavaram(1-13), Vizag(1-13)	Currently at Vizag. Previously called at Gangavaram, Freemantle(AUS), Haldia(AUS), China	EXIM Sea-web		
451	08-07-2011	Vizag	FAIR STAR 1	9355599	Maize	12000E	Vizag		13,236		13	G	South East Asia	Singapore	Singapore		Uthra				Kakinda(1-13, 1-12), Kandla(1-11), Pipavav(1-12)	Underway. Previously called at Singapore, Indonesia, Malaysia, Kakinda, Chittagong, Malaysia, Kakinda, Malaysia, Singapore, Malaysia	EXIM Sea-web	
452	27-06-2011	Jaigarh		9304191	Coking Coal	30000	Jaigarh		26,830	2470	14	35 GL	East- South Africa / India	Mozambique	Mozambique		GAC				Vizag(1-08)	Underway. Previously called at Mozambique, Colombo, Trincomalee, Singapore Bunker, Vancouver(CAN), South Korea, Panama, Pigeonholes(USA)	EXIM Sea-web	
453	30-06-2011	Jaigarh	VENUS HORIZON	9604852	Steam Coal	82500	Indonesia	Jaigarh	95,251	3748	14	42 GL	Gulf- Red Sea/ India	Singapore	Singapore		Hikal & CD		01-Jul	05-Jul	80 Jaigarh(1-13), Krishnapat(1-12)	Sailed from Jaigarh. Previously called at Singapore Bunker, Indonesia, Taiwan, Singapore Bunker, Brazil, China	EXIM Sea-web	
454	24-06-2011	Magdalah	RAMBUN	9481211	Iron ore	96000	Vizag	Magdalah	1,06,590	2834	14.5	GL	Gulf- Red Sea/ India			Mumbai	Vizag	FL		21-Jun	21-Jun	Multiple calls	Sailed to Vizag. Previously called at Mumbai, Vizag, Magdalah, Vizag, Magdalah	EXIM Sea-web
455	24-06-2011	Magdalah	SHAR SURYAN	9460727	Coal	55000	Indonesia	Magdalah	57,320		13.5	30.5 G	Gulf- Red Sea/ India	Singapore	Mumbai	Mina Sapt	Mina Sapt	Taurus Shipping		23-Jun	27-Jun	Paradip(1-13), Krishnapat(1-12), NewMora(1-12), Tuticorin(1-12), Paradip(1-12)	Sailed to Mina Sapt, Fujairah. Sailed to Vizag 12/07. Previously called at Mumbai, Singapore Bunker, Indonesia, Taiwan, China, Singapore Bunker, Portland, Singapore Bunker, Chittagong	EXIM Sea-web
456	29-06-2011	Portbandar	ANNA GRETA		Coal	34500	Portbandar											Scorpio Shipping				Also calling at Pipavav 17/06 Coal Discharge	EXIM Sea-web	
457	28-06-2011	Tuticorin	LUMINO JAYA	9244283	Coal		Indonesia	Tuticorin	53,021	1770	14	29 G	South East Asia	Singapore	Singapore	Singapore	Singapore	SMS		26-Jun	29-Jun	Tuticorin(1-13), Paradip(1-13), Vizag(1-13), Krishnapat(1-12)	Sailed to Singapore. Previously called at Singapore Bunker, Indonesia, China, Indonesia, Singapore Bunker, Paradip, Singapore Bunker, Indonesia	EXIM Sea-web
458	24-06-2011	Kakinda	WIZ SEY	9181886	Maize		Kakinda	Indonesia	8,932		18	G	South East Asia	Colombo	Colombo	Singapore	Singapore	OS		12-Jun	12-Jun	Kakinda(1-13), Chennai(1-09)	Sailed to Singapore. Previously called at Colombo, Singapore, South Korea, Russia, South Korea, China, Indonesia, Malaysia, Singapore, Taiwan	EXIM Sea-web
459	24-06-2011	Kakinda	SILVETTA	9276779	Rice		Kakinda		29,721		14	23 G	Gulf- Red Sea/ India	Canary Islands	Krishnapatnam		OS		15-Jun		Kakinda(1-13, 1-12), Krishnapat(1-13), Chennai, StPetersburg(RUS), Belfast(GB), Ireland, Argentina, Uruguay, Argentina, Ivory Coast, Turkey	Currently at Kakinda. Previously called at Krishnapat, Canary Islands OS(UK), Eilat(AUS), 1-12, Haldia(1-13), Haldia(1-13), Tuticorin(1-13), Vizag(1-12)	EXIM Sea-web	
460	24-06-2011	Kakinda	INDONESIA NUSA 1	9418648	Maize		Kakinda	Malaysia	6,540	410	13	G	South East Asia	Chittagong	Chittagong	Johor(Malaysia)	Johor(Malaysia)	OS		20-Jun	26-Jun	Kakinda(1-13), Kolkata(1-13), Haldia(1-13), Vizag(1-13), 1-12, Kandla(1-12)	Sailed to Kakinda. Previously called at Chittagong, Malaysia, Indonesia, Kakinda, Kakinda, Haldia, Malaysia, Vietnam, Malaysia, Myanmar, Kolkata, Malaysia	EXIM Sea-web
461	24-06-2011	Kakinda	YAN BHM 16	9016167	Maize		Kakinda	Vietnam	7,194		13	G	South East Asia	Singapore	Singapore		SI Sinhese					Underway. Update needed	EXIM Sea-web	
462	24-06-2011	Kakinda	THANAM CONQUER	9573281	Maize		Kakinda	Vietnam	7,304		10	G	Gulf- Red Sea/ India	Chittagong	Chittagong		Benline Agency				Gangavaram(1-13), Kolkata(1-13), Kakinda(1-13)	Currently at Kakinda. Previously called at Chittagong, Gangavaram, Kolkata, Singapore, Malaysia, Kakinda, Singapore, Malaysia, Vietnam	EXIM Sea-web	
463	24-06-2011	Paradip	CMS MAXIME	9425493	Iron ore		Paradip	China	57,982	2249	14	32 G	Far East	Suez	Vizag	Singapore	Singapore	J.M. Bani		15-Jun	17-Jun	Paradip(1-13), Vizag(1-13), Mormugao(1-11), Magdalah(1-11)	Sailed to Singapore Bunker, China. Previously called at Vizag, Suez, Malta, OS(UK), Denmark, Latvia, (pool)(UK), OS(UK), Netherlands	EXIM Sea-web
464	24-06-2011	Paradip	NORD FORTUNE	9442926	Coking Coal		Hay Point(AUS)	Paradip	26,596	2970	14	35 GL	Gulf- Red Sea/ India	Singapore	Singapore		PMA		21-Jun	27-Jun	Paradip(1-13), NewMora(1-12), Vizag(1-13)	Sailed from Paradip 27/06. Previously called at Singapore Bunker, HayPoint(AUS), Wejba(AUS), China, Wataro(AUS), Japan, Taiwan, Singapore Bunker	EXIM Sea-web	
465	28-06-2011	Paradip	GOLDEN TRADIS II	9567154	Steam Coal		Indonesia	Paradip	79,518	3070	14	39 GL	Gulf- Red Sea/ India	Singapore	Singapore		GAC		22-Jun	27-Jun	108 Paradip(1-13), Kawasaki(1-12)	Sailed from Paradip 27/06. Previously called at Singapore Bunker, Indonesia, Singapore Bunker, Uruguay, Argentina, Uruguay, Argentina, HayPoint(AUS), Taiwan, Brazil	EXIM Sea-web	
466	24-06-2011	Paradip	MAARITIME PUTAN	9227704	Coking Coal		Kembla(AUS)	Paradip	73,632	2800	14	34 G	South East Asia	Singapore	Singapore	Singapore	Singapore	Infinity		14-Jun	20-Jun	Paradip(1-13, 1-12), Vizag(1-13), 1-12, Mumbai(1-12)	Sailed to Singapore Bunker. Previously called at Singapore Bunker, China, Indonesia, Singapore Bunker, Chittagong, Singapore, Canada, South Korea, China, Singapore Bunker, Cape Town	EXIM Sea-web
467	24-06-2011	Paradip	INDEAVOUR STRAIT	9488878	Steam Coal		Indonesia	Paradip	56,806		14	34 G	South East Asia	Singapore	Singapore	Singapore	Singapore	Infinity		15-Jun	28-Jun	291 Paradip(1-13), Ennore(1-12), Vizag(1-11)		EXIM Sea-web
468	24-06-2011	Paradip	EVER EXCELLENT	9182174	Coking Coal		Hay Point(AUS)	Paradip	73,965	2250	14	31.5 GL	Gulf- Red Sea/ India	Singapore	Singapore	Vizag	DFE(LINE)		15-Jun	27-Jun	Vizag(1-13), Paradip(1-13), Cochin(1-13), Kandla(1-13)	Sailed to Vizag. Previously called at Singapore Bunker, HayPoint(AUS), China, Singapore Bunker, BB, Durban, AB, Cochin, Kandla, Singapore Bunker	EXIM Sea-web	
469	24-06-2011	Paradip	INDRO C	9548111	Steam Coal		Indonesia	Paradip	57,000		14	34 G	Gulf- Red Sea/ India	Singapore	Singapore	Singapore	Kakinda	Navship		18-Jun	29-Jun	Kakinda(1-13, 1-12), Paradip(1-13), Kandla(1-12), Tuticorin(1-11), Mormugao(1-10)	Sailed to Kakinda. Previously called at Singapore, Indonesia, Suez, Turkey, Russia, Turkey, Suez, Haldia, Fujairah, Oman, Fujairah, Bandar Abbas, Fujairah, Suez	EXIM Sea-web
470	24-06-2011	Paradip	WINDA NIDHI	9333648	Steam Coal		Indonesia	Paradip	61,847		14	32 G	South East Asia	Singapore	Singapore		ICC		19-Jun		Paradip(1-13), Kandla(1-13), Tuticorin(1-13), Vizag(1-13), Haldia(1-12), Multiple india calls 2012	Currently at Paradip. Previously called at Singapore Bunker, Indonesia, China, Indonesia, Kandla, Tuticorin, Vizag, Tuticorin, Haldia, Tuticorin	EXIM Sea-web	
471	24-06-2011	Paradip	STY DYNAMIC	9625249	Steam Coal		Indonesia	Paradip	81,148	2520	14	39 G	Gulf- Red Sea/ India	Singapore	Singapore	Haldia	NK		26-Jun	01-Jul	123 Paradip(1-13), Krishnapat(1-13)	Sailed to Haldia. Previously called at Singapore, Indonesia, China, Singapore Bunker, Brazil, Mumbai, Krishnapat, Singapore Bunker	EXIM Sea-web	
472	24-06-2011	Paradip	WIND 3	9119971	Iron ore	43100E	Paradip	China	46,664	1860	14	27 G	South East Asia	Chittagong	Vizag	Singapore	Singapore	855		23-Jun	26-Jun	Paradip(1-13, 1-12), Vizag(1-13), 20 Haldia(1-13), Gangavaram(1-13)	Sailed to Singapore, China. Previously called at Vizag, Chittagong, Singapore Bunker, China, Singapore Bunker, Indonesia, Singapore, Japan, China, Singapore, Haldia	EXIM Sea-web
473	29-06-2011	Samarang	SHANJAO		Coal	40000	Paradip																	
474	26-06-2011	Ennore	SHARVATIAHINI	9311165	Coal		Indonesia	Ennore	81,379	2379	14	35.5 G	South East Asia	Singapore	Singapore	Singapore	Singapore	Sektrans		23-Jun	26-Jun	Ennore(1-13), Chhat(1-13), Mumbai(1-12), 1-12, Krishnapat(1-13)	Sailed to Singapore, Indonesia. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, China, Mumbai, Singapore Bunker, Indonesia, Krishnapat, Singapore Bunker, Indonesia	EXIM Sea-web
475	26-06-2011	Kakinda	SHARVATIAHINI	9575153	Coal	60110	Paradip		63,500	2030	14	30 G	Gulf- Red Sea/ India	Suez	Paradip		855		24-Jun		Kakinda(1-13), Paradip(1-13), Gangavaram(1-13), Siba(1-12)	Currently at Kakinda. Previously called at Paradip, Gangavaram, Suez, Malta, OS(UK), Denmark, Lithuania, Germany, Norway, Greece, OS(UK), Canary Islands, China, Port Elizabeth(SA), AB	EXIM Sea-web	
476	26-06-2011	Kakinda	NEW LEADER	9121924	Coal	69950	Indonesia	Paradip	72,072	2244	14	30 GL	Gulf- Red Sea/ India	Singapore	Singapore		Evstey		25-Jun		Kakinda(1-13), Kandla(1-13), Mundra(1-12), Krishnapat(1-12)	Currently at Kakinda. Previously called at Singapore Bunker, Indonesia, HK, Kakinda(1-13), Kandla(1-13), Mundra(1-12), Krishnapat(1-12)	EXIM Sea-web	
477	26-06-2011	Paradip	AMS WISDOM 1	9426764	Coking Coal	59580	Hay Point(AUS)	Paradip	61,611		14.5	32 G	South East Asia	Singapore	Singapore	Indonesia	Indonesia	NK			Haldia(2-13, 1-12), Paradip(1-13), Vizag(1-13), Tuticorin(1-12), Mormugao(1-11)	Sailed to Haldia, Indonesia. Previously called at Singapore Bunker, HayPoint(AUS), China, Singapore Bunker, Vizag, Haldia, Singapore Bunker, HayPoint(AUS)	EXIM Sea-web	

478	28-06-2013	Paradip	SEA MARE	9621390	Steam Coal	781300	Indonesia	Paradip	81,177	2583	14	33 G	Gulf- Red Sea/ India	Singapore	Singapore			NK	03-Jul		Paradip(1-13), Mumbai(1-13, 1-12), Krishnapur(1-13), Ennore(1-13), Haldia(1-13), Kakinada(1-12)	Currently at Paradip. Previously called at Singapore Bunker, Mumbai, Singapore Bunker, Krishnapur, Indonesia, Singapore Bunker, Ennore, Singapore Bunker, Haldia	EXIM Sea web		
479	27-06-2013	Bhawanagar	SEA MARE	8906848	Coal	345500		Bhawanagar	42,025	1432	13	23 G	South East Asia									Update needed	EXIM Sea web		
480	27-06-2013	Magdala	ARIDMA	9592733	iron ore	535600		Paradip	56,969	2400	14	34 G	Gulf- Red Sea/ India	Jeddah	Paradip	Fujairah	Fujairah	DL	19-Jun	04-Jul	933	Magdala(1-13), Paradip(1-13), Krishnapur(1-13)	Sailed to Fujairah, Dammam. Previously called at Paradip, Jeddah, Jordan, Jeddah, Djibouti, Krishnapur, Chittagong, Brack, Canada, Brazil, Nigeria, Brazil	EXIM Sea web	
481	27-06-2013	Magdala	SEALINK	9624813	Coal	550000	Indonesia	Magdala	57,899	2087	13.5	31 G	Gulf- Red Sea/ India	Singapore	Singapore	Kandla	Singapore	Taurus Shipping	27-Jun	01-Jul	100	Kandla(1-13, 1-12), Magdala(1-13), Vizag(1-13), Haldia(1-13), Dharmu(1-13), NewHore(1-12)	Sailed to Kandla, Singapore. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Vizag, Haldia, Dharmu, Singapore Bunker, Haldia(Alt), South Korea, China, Singapore Bunker, Magdala	EXIM Sea web	
482	05-07-2013	Bhawanagar	THEOMATOR	9595700	Coal	345000	Indonesia	Bhawanagar	55,695		14	32 G	Gulf- Red Sea/ India	Singapore	Dahj							Dahj(1-13), Kandla(1-13), Bhawanagar(1-13)		EXIM Sea web	
483	06-05-2013	Pipavev	CHRISTINA W	9189770	Coal			Pipavev	73,493	2245	14	31.5 GL	East- South Africa / India									Scorpio Shipping		EXIM Sea web	
484	09-05-2013	Pipavev	ALPHASIS HADIS	9613410	Coal			Richard Bay	56,512	2410	14.5	32.5 G	Far East	Richard Bay	Richard Bay	Richard Bay	Richard Bay	Owlina Shipping	19-Jun	12-Jun	61	Pipavev(1-13, 2-12), Forbander(1-13), Mumbai(1-12), Krishnapur(1-12)	Update needed. At Santos. Returned 07/06 Coal discharge. Sailed to RB. Previously called at RB, Pipavev, RB, Forbander, Singapore, Indonesia, Singapore Bunker, Oman, Pipavev, RB	EXIM Sea web	
485	11-05-2013	Pipavev	MOONBEAM	9493887	Coal		Indonesia	Pipavev	58,138		14	32 G	Far East	Singapore	Singapore	Mumbai	Mina Sary	Overseas	10-May	10-May		Mumbai(1-13), Pipavev(1-13), Vizag(1-13)	Sailed to Mumbai, Magdala, Singapore Bunker, China	EXIM Sea web	
486	28-05-2013	Pipavev	SHANE WIND	9565170	Coal			Richard Bay	56,735	2405	14	34 G	Gulf- Red Sea/ India	Singapore	Singapore	Mumbai	Fujairah	Overseas	30-May	30-May		Mumbai(1-13), Magdala(1-13), Pipavev(1-13), Ennore(1-13), Tutcorin(1-13), Krishnapur(1-12)	Sailed to Mumbai, Magdala, Mumbai, Fujairah. Previously called at Singapore Bunker, China, Singapore Bunker, RB, Maputo, Port Louis, Ennore, Singapore Bunker, Tutcorin	EXIM Sea web	
487	31-05-2013	Pipavev	THIFFIN	8995761	Coal		Indonesia	Pipavev	55,698		14	32 G	South East Asia	Singapore	Singapore	Forbander	Singapore	Scorpio Shipping	02-Jun	04-Jun	40	DHAC(1-13), Forbander(1-13), Pipavev(1-13), Mumbai(1-13), Kandla(1-12)	Sailed to Forbander, Uda, Singapore Bunker. Previously called at Singapore Bunker, Indonesia, China, Fujairah, Iran, Mumbai, Singapore Bunker, China, Philippines, China, HK, China, Fujairah	EXIM Sea web	
488	27-06-2013	Pipavev	SHARABEEDIN	9366097	Coal			Richard Bay	53,553	1940	14.5	33 G	Gulf- Red Sea/ India	Richard Bay	Richard Bay	Mina Sary	Mina Sary	Owlina Shipping	30-Jun	30-Jun	11	Pipavev(1-13), Mumbai(1-13, 1-11), NewHore(1-12, 1-11), Vizag(1-11)	Sailed to Mina Sary, Fujairah, DDUK. Previously called at RB, Kema, Fujairah, Mina Sary, Mumbai, Singapore Bunker, Kambala(Alt), Singapore Bunker	EXIM Sea web	
489	30-06-2013	Pipavev	TEEN	9266190	Coal			Pipavev	50,209		14	30 G	Gulf- Red Sea/ India					OS						EXIM Sea web	
490	09-07-2013	Tutcorin	KAYO PLATANOS	9612080	Coal	200000	Indonesia	Tutcorin	56,750		14	34 G	Gulf- Red Sea/ India	Singapore	Ennore								Tutcorin(1-13), Ennore(1-13), Navasari(1-12), Kandla(1-12)	Currently at Tutcorin. Previously called at Ennore, Singapore Bunker, Indonesia, Singapore Bunker, Vancouver(CAN), China, Singapore Bunker, RB, Maputo	EXIM Sea web
491	12-06-2013	Tutcorin	LUSA COLOSUS	9420180	Coal	333500	Indonesia	Tutcorin	55,455	1930	14	32 G	Gulf- Red Sea/ India	Singapore	Singapore								Tutcorin(1-13), Karaka(1-12), Chennai(1-11), Daba(1-11)	Currently at Tutcorin. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Brazil, Morocco, Gibraltar, Algeria, Uruguay, Argentina	EXIM Sea web
492	13-06-2013	Tutcorin	WALFENDELT		Coal	241380		Tutcorin															No data	EXIM Sea web	
493	13-05-2013	Tutcorin	ALFA MARA	9622679	Coal	500000		Tutcorin	81,404	2760	15	36 GL	East Coast South America										SPS	Fort Munchach. No India call	EXIM Sea web
494	11-05-2013	Tutcorin	SIANAUTE	9587870	Coal	550000		Tutcorin	55,660		14	32 G	Far East	Singapore	Singapore	Richard Bay	Richard Bay	MTA	10-May	14-May	10	Tutcorin(1-13), Vizag(1-12)	Called RB, Singapore Bunker, China. Previously called at Singapore Bunker, Malaysia, Davao, Ipoh(Alt), DDUK, Germany, Antwerp	EXIM Sea web	
495	06-05-2013	Tutcorin	AQUITANIA	9300481	Coal	500000	Indonesia	Tutcorin	55,932	2280	14	30 G	UE	Singapore	Karakal	Mozambique	Mozambique	AMU	06-May	11-May		Tutcorin(1-13), Karaka(1-13), Kandla(1-12), Navasari(1-12), Ennore(1-12)	Sailed to Mozambique, Durban, Canary Islands, DDUK, Netherlands, DDUK. Previously called at Karaka, Singapore Bunker, Indonesia, China, Singapore Bunker, Liberia, Ivory Coast, Turkey	EXIM Sea web	
496	07-05-2013	Tutcorin	SEKS HAIL	9625790	Coal	250000	Indonesia	Tutcorin	57,700	1900	14	31 G	Far East	Singapore	New Mangalore	Maputo Bay, Mozambique	Maputo Bay, Mozambique	DML	06-May	09-May		Tutcorin(1-13), NewHore(1-13), Magdala(1-13), Kandla(1-13), Haldia(1-13), Vizag(1-13), Mormugao(1-11)	Sailed to Maputo Bay, RB, Singapore Bunker, China. Previously called at Singapore Bunker, Indonesia, Thailand, Singapore Bunker, Magdala, Kandla, Singapore, Indonesia, Haldia, Vizag, Singapore Bunker	EXIM Sea web	
497	03-05-2013	Tutcorin	EVRA	9232183	Coal	550000	Indonesia	Tutcorin	53,806		14	32 G	Far East	Singapore	Singapore	Durban	Durban	SPS	02-May	06-May		Tutcorin(1-13), Kandla(1-12), Paradip(1-12)	Sailed to Durban, Singapore Bunker, China. Previously called at Singapore Bunker, Indonesia, China, Singapore Bunker, Iran, Dammam, Singapore, China	EXIM Sea web	

World Coal Handling Terminals

Country	Terminal	State/Province	Operator	Annual Capacity (MMT)	Status	Type
Australia	Abbot Point Coal Terminal	south of Townsville, Queensland	Adani Group	25	Expanding	Exports
Australia	Balacava Island Coal Terminal	north of Gladstone, Queensland	Xstrata Coal	20	Proposed	Exports
Australia	Barney Point Coal Terminal	Gladstone, Queensland		8	Existing	Exports
Australia	Brisbane Coal Terminal	Brisbane, Queensland	New Hope Corporation	18	Existing	Exports
Australia	Bunbury Berth 14	Western Australia	Lanco Infratech		Proposed	Exports
Australia	Carrington Coal Terminal	Newcastle, New South Wales	Port Waratah Coal Services	25	Existing	Exports
Australia	Dalrymple Bay Coal Terminal	south of Mackay, Queensland	DBCT Management		Existing	Exports
Australia	Derby Export Facility	Derby, Western Australia	Rey Resources	3	Proposed	Exports
Australia	Dudgeon Point Coal Terminal	Queensland	North Queensland Bulk Ports Corporation		Proposed	Exports
Australia	Fitzroy Terminal Project	Adjacent to Port Alma, Queensland		22	Proposed	Exports
Australia	Hay Point Coal Terminal	Queensland	BHP Billiton	45	Existing	Exports
Australia	Kooragang Coal Terminal	New South Wales	Port Waratah Coal Services	88	Existing	Exports
Australia	Kwinana Bulk Terminal	Western Australia			Existing	Exports
Australia	Port Anthony	Victoria			Proposed	Exports
Australia	Port Kembla Coal Terminal	New South Wales		15	Existing	Exports
Australia	Port of Gladstone	Queensland			Expanding	Exports
Australia	Port of Hastings expansion	Victoria			Expanding	Exports
Australia	RG Tanna Coal Terminal	Queensland	Queensland Ports Corporation	70	Existing	Exports

World Coal Handling Terminals

Australia	Sheep Hill Deep Water Port	Port Lincoln, South Australia		5	Proposed	Exports
Australia	Wiggins Island Coal Terminal	Queensland			Proposed	Exports
Bangladesh	Port of Mongla	Khulna Division			Existing	Exports
Canada	Deltaport Terminal	British Columbia			Existing	Exports
Canada	International Coal Pier Canada	Nova Scotia	Emera Corporation		Existing	Imports
Canada	Neptune Bulk Terminal Canada	British Columbia	Neptune Bulk Terminals		Existing	Exports
Canada	Prince Rupert Port	British Columbia	Ridley Terminals Inc.		Expanding	Exports
Canada	Roberts Bank Superport	British Columbia			Existing	Exports
Canada	Thunder Bay Coal Terminal Canada	Ontario	Thunder Bay Terminals		Existing	Domestic
Canada	Westshore Terminals	British Columbia	Westar Management Ltd.	29	Expanding	Exports
China	Fuzhou Port	Fujian province			Existing	Imports
China	Jingtang Port	Hebei province			Existing	Imports
China	Jinzhou Port	Liaoning province			Existing	Imports
China	Nantong Port	Jiangsu province	Nantong Port Group		Existing	Imports
China	Ningbo Port	Zhejiang province			Existing	Imports
China	Port of Basuo	Hainan province			Existing	Imports
China	Port of Beihai	Guangxi province			Existing	Imports
China	Port of Dalian	Liaoning province			Existing	Imports
China	Port of Dandong	Liaoning province			Existing	Imports
China	Port of Fangcheng	Guangxi Zhuang Autonomous Region			Existing	Imports
China	Port of Guangzhou	Guangdong province			Existing	Imports
China	Port of Lianyungang	Jiangsu province		21	Existing	Imports
China	Port of Qingdao	Shandong province			Existing	Imports
China	Port of Qinhuangdao	Hebei province		209	Existing	Imports
China	Port of Shanghai	Shanghai province		30	Existing	Imports
China	Port of Tianjin	Hebei province		89	Existing	Imports

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China	Port of Xiamen	Fujian province	Xiamen Port Authority	10	Existing	Imports
China	Port of Yantian	Guangdong province			Existing	Imports
China	Port of Yingkou	Liaoning province			Existing	Imports
China	Port of Zhanjiang	Guangdong province			Existing	Imports
China	Port of Zhapu	Zhejiang province			Existing	Imports
China	Rizhao Port	Shandong province			Existing	Imports
China	Shantou Port	Guangdong province			Existing	Imports
China	Zhoushan Port	Zhejiang province			Existing	Imports
Colombia	Port of Barranquilla	Magdalena Department			Existing	Exports
Colombia	Port of Buenaventura	Choco	Sociedad Portuaria Regional de Buenaventura SA	1	Existing	Imports
Colombia	Puerto Bolivar coal export terminal	La Guajira Department	Cerrejon Coal Company		Existing	Exports
Colombia	Puerto De Mamonal	Bolivar Department			Existing	Exports
Colombia	Puerto Drummond coal port	Magdalena Department			Existing	Exports
Colombia	Puerto Prodeco coal port	Magdalena Department	Glenco International		Existing	Exports
Colombia	Rio Cordoba coal port	Córdoba Department	Vale		Existing	Exports
Colombia	Sociedad Portuaria de Santa Marta	Magdalena Department	Carbosan		Existing	Exports
Croatia	Plomin Port				Existing	Imports
India	Bedi Port	Gujarat			Existing	Imports
India	Cochin Port	Kerala		0	Existing	Imports
India	Dahanu Port	Maharashtra			Existing	Imports
India	Dahej Port	Gujarat			Existing	Imports
India	Dharamtar Port	Maharashtra			Existing	Imports
India	Ennore Port	Tamil Nadu			Existing	Imports
India	Gangavaram Port	Andhra Pradesh	Gangavaram Port Ltd.	10	Existing	Imports
India	Haji Bunder Port (MBFL)	Maharashtra	Mumbai Port Trust		Existing	Imports
India	Haldia Port	West Bengal			Existing	Imports

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India	Nhava Sheva Port	Maharashtra	Jawaharlal Nehru Port Trust		Existing	Imports
India	Kakinada Port	Andhra Pradesh			Existing	Imports
India	Kandla port	Gujarat			Existing	Imports
India	Karaikal Port	Puducherry			Existing	Imports
India	Krishnapatnam Port	Andhra Pradesh			Existing	Imports
India	Magadalla Port	Gujarat			Existing	Imports
India	Mormugao Port	Goa		7	Existing	Imports
India	Muldwarka Port	Gujarat			Existing	Imports
India	Mundra Port	Gujarat	Adani Enterprises	40	Existing	Imports
India	New Mangalore Port	Karnataka			Existing	Imports
India	Okha Port	Gujarat			Existing	Imports
India	Panjim (Panaji) Port	Goa			Existing	Imports
India	Paradip Port	Orissa		20	Existing	Imports
India	Pipavev Port	Gujarat	APM Terminals		Existing	Imports
India	Porbandar Port	Gujarat			Existing	Imports
India	Port of Chennai	Tamil Nadu		15	Existing	Imports
India	Sikka Port	Gujarat			Existing	Imports
India	Trombay Coal Terminal	Maharashtra		2	Expanding	Imports
India	Tuticorin Port	Tamil Nadu		10	Existing	Imports
India	Visakhapatnam Port	Andhra Pradesh			Existing	Imports
Indonesia	Tanjung Bara Coal Terminal	East Kalimantan		27	Existing	Exports
Indonesia	Apar Bay anchorage	East Kalimantan			Existing	Exports
Indonesia	Separi barge loading facility	East Kalimantan		20	Existing	Exports
Indonesia	Bontang Coal Terminal	East Kalimantan		19	Existing	Exports
Indonesia	Balikpapan Coal Terminal	East Kalimantan	PT Bayan Resources	15	Existing	Exports
Indonesia	Tanjung Jati Coal Terminal	Central Java		14	Existing	Exports
Indonesia	North Pulau Laut Coal Terminal	South Kalimantan	Arutmin	13	Existing	Exports
Indonesia	Indonesian Bulk Terminal - South Pulau Laut	South Kalimantan			Existing	Exports

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Indonesia	Suralaya coal terminal	West Java		11	Existing	Exports
Indonesia	Tarahan Coal Port	Sumatra		10	Existing	Exports
Indonesia	Muara Pantai Coal Terminal	East Kalimantan		7	Existing	Exports
Indonesia	Banjarmasin anchorage	East Kalimantan		6	Existing	Exports
Indonesia	Muara Berau/Muara Jawa Coal Terminal	East Kalimantan			Existing	Exports
Indonesia	Jorong Port	South Kalimantan		6	Existing	Exports
Indonesia	Muara Satui Barge Port	South Kalimantan			Existing	Exports
Indonesia	Samarinda anchorage	East Kalimantan		6	Existing	Exports
Indonesia	Sebuku anchorage	South Kalimantan		6	Existing	Exports
Indonesia	Paiton coal terminal	East Java			Existing	Exports
Indonesia	Port of Teluk Bayur	Sumatra		0	Existing	Exports
Indonesia	Padang, Teluk Bayur	Sumatra		4	Existing	Exports
Indonesia	Pulau Laut Coal Terminal	South Kalimantan			Existing	Exports
Indonesia	Adang Bay Port	East Kalimantan		3	Existing	Exports
Indonesia	Bengkulu Port	East Kalimantan		3	Existing	Exports
Indonesia	Cigading anchorage	West Java		3	Existing	Exports
Indonesia	Jambi, Muara Sabak coal terminal	Sumatra		3	Existing	Exports
Indonesia	Muara Banyu Asin anchorage, Palembang	Sumatra		3	Existing	Exports
Indonesia	Taboneo anchorage	East Kalimantan			Existing	Exports
Indonesia	Tanah Merah Coal terminal	East Kalimantan			Existing	Exports
Indonesia	Pulau Baai Coal Terminal	Sumatra		3	Existing	Exports
Indonesia	Satui anchorage	South Kalimantan		3	Existing	Exports
Indonesia	Tanjung Batu - Tarakan	East Kalimantan		3	Existing	Exports
Indonesia	Tanjung Pemancingan anchorage	South Kalimantan		3	Existing	Exports
Indonesia	Tarakan Coal Terminal	East Kalimantan		3	Existing	Exports
Indonesia	Tembilahan, Sungai Bankong	Sumatra		3	Existing	Exports

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Indonesia	Kertapati Coal Port	Sumatra		2	Existing	Exports
Indonesia	Tuban coal terminal	Central Java		2	Existing	Exports
Mexico	Port of Guaymas	Sonora			Proposed	Exports
Mexico	Port of Lázaro Cárdenas	Michoacán			Existing	Imports
Mozambique	Beira Port	Sofala Province			Expanding	Exports
		Maputo Province	Maputo Port Development Company		Proposed	Exports
Mozambique	Maputo port					
Mozambique	Nacala port	Nampula Province			Proposed	Exports
Mozambique	Port of Quelimane	Zambezia Province			Proposed	Exports
Netherlands	Port of Rotterdam	South Holland		29	Existing	Imports
New Zealand	Lyttelton Port of Christchurch	Canterbury Region	Lyttelton Port Company	2	Expanding	Exports
New Zealand	Port Taranaki	Taranaki Region	Port Taranaki Limited		Existing	Exports
New Zealand	Westport Harbour	West Coast Region	Westport Harbour Limited		Proposed	Exports
Pakistan	Port Qasim	Baluchistan			Proposed	Exports
Poland	Port of Gdynia	Pomeranian	Port of Gdynia Authority SA	1	Existing	Exports
Russia	Maly Port	Primorsky Krai			Existing	Exports
Russia	Port of Murmansk	Murmansk Oblast		10	Existing	Exports
Russia	Port of Ust-Luga	Leningrad Oblast			Existing	Exports
Russia	Vanino Bulk Terminal	Khabarovsk Krai			Existing	Exports
Russia	Vostochny Port	Primorsky Krai		15	Existing	Exports
South Africa	Durban Coal Port	KwaZulu-Natal	Bluff Coal Loading Appliance		Existing	Exports
South Africa	Port of East London	East Cape Province		2	Proposed	Exports
South Africa	Richards Bay Coal Terminal	Natal Province	Richards Bay Coal Terminal Company	76	Expanding	Exports
Turkey	Zonguldak TTK Port	Turkey			Existing	Imports
Ukraine	Port of Mariupol	Kherson Oblast	Mariupol Sea Commercial Port	5	Existing	Exports



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United Kingdom	Hunterston Terminal	Scotland	Clydeport		Existing	Imports
United States	Millennium Bulk Logistics Longview Terminal	Washington	Millennium Bulk Terminals	80	Proposed	Exports
United States	McDuffie Coal Terminal	Alabama		68	Expanding	Exports
United States	Gateway Pacific Terminal	Washington	SSA Marine	54	Proposed	Exports
United States	Lamberts Point Terminal	Virginia		48	Existing	Exports
United States	Port of Duluth	Minnesota		20	Existing	Domestic
United States	CNX Marine Terminal	Maryland	CONSOL Energy	12	Existing	Exports
United States	Port of Baltimore	Maryland		9	Existing	Exports
United States	Myrtle Grove Midstream Terminal	Louisiana	Kinder Morgan Energy Partners	6	Expanding	Exports
United States	Port of Houston	Texas	Kinder Morgan Energy Partners	2	Expanding	Exports
United States	Port of Green Bay	Wisconsin		1	Existing	Domestic
United States	Port of Los Angeles	California		0	Existing	Exports
United States	Burnside Terminal	Louisiana	Trafigura		Proposed	Exports
United States	Cahokia Terminal	Illinois	Kinder Morgan Energy Partners		Existing	Domestic
United States	Chesapeake Bulk Stevedores	Maryland	Kinder Morgan Energy Partners		Existing	Imports
United States	Cora (Rockwood) Terminal	Illinois	Kinder Morgan Energy Partners		Existing	Domestic
United States	Fairless Hills Terminal	Pennsylvania	Kinder Morgan Energy Partners		Existing	Imports and Exports
United States	Grand Rivers Terminal	Kentucky	Kinder Morgan Energy Partners		Existing	Domestic
United States	Kellogg Terminal	Illinois	Kinder Morgan Energy Partners		Existing	Domestic
United States	Keystone Coal Terminal	Florida	Keystone Coal Company		Proposed	Imports
United States	Keystone Terminal Ironton	Ohio	Keystone Industries		Existing	Domestic
United States	Milwaukee Bulk Terminal	Wisconsin	Kinder Morgan Energy Partners		Existing	Domestic

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United States	Newport News coal terminal	Virginia			Existing	Exports
United States	Owensboro Gateway Terminal	Kentucky	Kinder Morgan Energy Partners		Existing	Domestic
United States	Pier IX	Virginia	Kinder Morgan Energy Partners		Existing	Imports and Exports
United States	Port of Coos Bay	Oregon			Proposed	Exports
United States	Port of Corpus Christi	Texas			Expanding	Exports
United States	Port of Grays Harbor	Washington			Proposed	Exports
United States	Port of Morrow	Oregon			Proposed	Exports
United States	Port of St. Helens	Oregon			Proposed	Exports
United States	Port Westward	Oregon			Proposed	Exports
United States	Seward Coal Terminal	Alaska			Expanding	Exports
United States	Shipyard River Coal Terminal	South Carolina	Kinder Morgan Energy Partners		Proposed	Imports
United States	Tampa Bay Stevedores	Florida	Kinder Morgan Energy Partners		Existing	Imports
Venezuela	Santa Cruz de Mara export terminal	Zulia	Carbones del Guasare		Existing	Exports
Vietnam	Cam Pha Port	Quang Ninh Province	Vinacomin		Existing	Exports

Upcoming Coal-Fired Power Projects India

State	Plant	Company	MW	Type	Status	Year
Andhra Pradesh	Adilabad Power Station Unit 1	Singareni Collieries	600		Construction	2012
Andhra Pradesh	Adilabad Power Station Unit 2	Singareni Collieries	600		Early	2016
Andhra Pradesh	Adilabad power station (Shalivahana Power Corp.)	Shalivahana Power Corp.	300		Uncertain	
Andhra Pradesh	Ankulapatur power station phase 1	VSF Projects	350	Supercritical	Construction	
Andhra Pradesh	Ankulapatur power station phase 2	VSF Projects	135	Supercritical	Planning	
Andhra Pradesh	Pynampuram Thermal Power Project Units 1 and 2	Thermal Powertech Corporation	1320	Supercritical	Advanced development	2014
Andhra Pradesh	Bhavanapadu Thermal Power Project (Kakarapalle)	East Coast Energy	2640	Supercritical	Deferred	
Andhra Pradesh	Bhavavipuram Cement power station	Deccan Cements	18		Construction	
Andhra Pradesh	Budele power station	Indu Projects Limited	1000		Unconfirmed	
Andhra Pradesh	Damodaram Sanjeevaiah Thermal Power Station (Krishnapatnam)	Andhra Pradesh Power Generation Corporation (APGENCO)	1600	Supercritical	Construction	2013
Andhra Pradesh	Damodaram Sanjeevaiah Thermal Power Station (Krishnapatnam) expansion	Andhra Pradesh Power Generation Corporation (APGENCO)	2400	Supercritical	Cancelled	
Andhra Pradesh	Dharmavaram power station	Nava Bharat Ventures Ltd	150		Deferred	
Andhra Pradesh	Dr. RKP Power Ankulapatur power station phases 1 and 2	Dr. RKP Power	430		Advanced development	
Andhra Pradesh	Garividi power station	Facor Power	45		Construction	
Andhra Pradesh	Gopuwanipalam Mega Thermal Power Project (Chinnapuram, Machilipatnam)	Nagarjuna Construction Company	1980	Supercritical	Unconfirmed	
Andhra Pradesh	Gudur Thermal Power Project (Momidi) Phases I and II	Pragdisa Power Private Ltd	2640	Supercritical	Planning	
Andhra Pradesh	Gunipudi power station (NBPL proposal)	Namratha Bizili Private Limited	300		Deferred	
Andhra Pradesh	Gunipudi power station (STEAPL proposal)	Suryachakra Group	1320	Ultra Supercritical	Advanced development	
Andhra Pradesh	Hindupur power station	Sheshadri Power & Infrastructure	1320		Unconfirmed	
Andhra Pradesh	Jaipur power station	Singareni Collieries	600		Construction	2013
Andhra Pradesh	Jharapudi power station	Suryachakra Group	140		Unconfirmed	
Andhra Pradesh	Kakatiya Thermal Power Project Stage-II	Andhra Pradesh Power Generation Corporation (APGENCO)	600		Construction	2012

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Andhra Pradesh	Kineta Power Stage I (Krishnapatnam)	Kineta Power Limited	1320	Supercritical	Advanced	
Andhra Pradesh	Kineta Power Stage II (Krishnapatnam)	Kineta Power Limited	660	Supercritical	Planning	
Andhra Pradesh	Komarada power station	Alfa Infraprop Pvt. Ltd.	2640	Supercritical	Planning	
Andhra Pradesh	Kotapally power station (SKIL Group)	SKIL Group	600		Unconfirmed	
Andhra Pradesh	Kothagudem Phase V Unit 10, Phase VI Unit 11	Andhra Pradesh Power Generation Corporation (APGENCO)	1000		Newly commissioned	2011
Andhra Pradesh	Kothagudem TPS expansion	Andhra Pradesh Power Generation Corporation (APGENCO)	800		Planning	
Andhra Pradesh	Krishnapatnam Navayuga thermal station Phase I	Navayuga Power	1320	Supercritical	Advanced development	2014
Andhra Pradesh	Krishnapatnam Navayuga thermal station Phase II	Navayuga Power	660	Supercritical	Planning	
Andhra Pradesh	Krishnapatnam Ultra Mega Power Project 1-2	Reliance Power	1320		Deferred	2013
Andhra Pradesh	Krishnapatnam Ultra Mega Power Project 3-6	Reliance Power	2640		Deferred	2015
Andhra Pradesh	Latchayapeta power station	NCS Sugars Ltd.	600		Planning	
Andhra Pradesh	Lovapalem power station	My Home Power Ltd.	1000		Unconfirmed	
Andhra Pradesh	Meenakshi Energy Thermal Power Project Phase-I	Meenakshi Energy	300		Construction	2012
Andhra Pradesh	Meenakshi Energy Thermal Power Project Phase-II	Meenakshi Energy	600		Advanced development	2013-2014
Andhra Pradesh	Meghavaram Kakrapalli power station	Meghavaram Power	450		Deferred	
Andhra Pradesh	Muthukur Mandal power station (Painampuram)	Nelcast Energy Corporation Ltd	1320	Supercritical	Early development	
Andhra Pradesh	Nagarjuna Construction Company Sompeta Thermal Plant	Nagarjuna Construction Company	2640		Deferred	
Andhra Pradesh	NCC Vamsadhara Mega Power Project	Nagarjuna Construction Company	1960		Unconfirmed	
Andhra Pradesh	Ontimavadi power station	GMR Energy	6300		Planning	
Andhra Pradesh	Paloncha power station expansion #1	Nava Bharat Ventures Ltd	150		Construction	
Andhra Pradesh	Paloncha power station expansion #2	Nava Bharat Ventures Ltd	150		Planning	
Andhra Pradesh	Pegadapalli (Jaipur Mandal) power station	Singareni Collieries	600		Construction	

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Andhra Pradesh	Pentakota power station	Namratha Bizili Private Limited	150		Deferred	
Andhra Pradesh	Pentakota power station (Srinivasam Energy)	Srinivasam Energy Limited	1320	Supercritical	Unconfirmed	
Andhra Pradesh	Pudimadaka Ultra Mega Power Project	NTPC	4000	Supercritical	Advanced	
Andhra Pradesh	Ramagundam Stage-IV	NTPC	1000		Early	
Andhra Pradesh	Rayalaseema Thermal Power Project Stage-III (Unit 5)	Andhra Pradesh Power Generation Corporation (APGENCO)	210		Newly commissioned	2010
Andhra Pradesh	Rayalaseema Thermal Power Project Stage-IV (Unit 6)	Andhra Pradesh Power Generation Corporation (APGENCO)	600		Construction	2014
Andhra Pradesh	Saggonda power station	Andhra Sugars	120		Planning	
Andhra Pradesh	Sattupally Thermal Power Station	Andhra Pradesh Power Generation Corporation (APGENCO)	600		Early development	
Andhra Pradesh	Sigma Infrarop power station (Khamman)	Sigma Infrarop Ltd	2640		Unconfirmed	
Andhra Pradesh	Simhadri power station units 3 and 4	NTPC	1000		Newly	2011,
Andhra Pradesh	Sompeta power station (Suryachakra)	Suryachakra Group	1200		Unconfirmed	
Andhra Pradesh	Sree Siva Satyadeva Power Plant	Sree Siva Satyadeva Power Plant Pvt.	2000		Cancelled	
Andhra Pradesh	Sri Damodaram Sanjeevaiah (Krishnapatnam) Thermal Power Station	Andhra Pradesh Power Generation Corporation (APGENCO)	1600		Construction	2012
Andhra Pradesh	Srikakulam Thermal Power Station	Andhra Pradesh Power Generation Corporation (APGENCO)	2400		Early development	
Andhra Pradesh	Thamminapatnam power station (Simhapuri) Phase I Unit 1	Simhapuri Energy	150	Subcritical	Newly commissioned	2012
Andhra Pradesh	Thamminapatnam power station (Simhapuri) Phase I Unit 2	Simhapuri Energy	150	Subcritical	Newly commissioned	2012
Andhra Pradesh	Thamminapatnam power station (Simhapuri) Phase-II	Simhapuri Energy	300	Subcritical	Construction	2012
Andhra Pradesh	Thamminapatnam power station (Simhapuri) Phase-III	Simhapuri Energy	1320	Supercritical	Advanced development	2013
Andhra Pradesh	Uppada power station	Spectrum Power Generation	1320		Cancelled	
Andhra Pradesh	Vadarevu Ultra Mega Power Project Stages II-III	Andhra Pradesh Power Generation Corporation (APGENCO)	2400		Planning	
Andhra Pradesh	Varadevu Ultra Mega Power Project Stage I	Andhra Pradesh Power Generation Corporation (APGENCO)	1600		Early development	

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Andhra Pradesh	VBF Ferro Alloys Bodepalli plant	VBC Ferro Alloys	120		Planning	
Andhra Pradesh	Vijayawada Thermal Power Station (IGCC)	Andhra Pradesh Power Generation Corporation (APGENCO)	182	IGCC	Early development	2014
Andhra Pradesh	Vijayawada Thermal Power Station expansion	Andhra Pradesh Power Generation Corporation (APGENCO)	800		Planning	
Andhra Pradesh	Vikas Power thermal plant	Vikas Power	540		Planning	
Andhra Pradesh	Vizag Thermal Power Plant	Hinduja National Power Corporation	1040		Construction	2013
Andhra Pradesh	Welspun Andhra Pradesh project	Welspun Energy	1320	Supercritical	Early	
Assam	Bongaigaon power station Stage I	NTPC	750		Construction	
Assam	Bongaigaon power station Stage II	NTPC	250		Planning	
Assam	Borgolai power station	Assam Power Projects Development Company Ltd	250		Planning	
Assam	Margherita power station	NEEPCO and APGCL	480		Planning	
Assam	Naitor power station	Globe Power & Steel	1320	Supercritical	Planning	
Bihar	Banka Power Project	Abhijeet Group	3960	Supercritical	Uncertain	2014
Bihar	Barauni power station expansion	Bihar State Electricity Board	500		Early	2014
Bihar	Barh I power station	NTPC	1980		Construction	
Bihar	Barh II power station	NTPC	1320	Supercritical	Construction	
Bihar	Bhagalpur Power Project	Ganga Power & Natural Resources	2640		Early	
Bihar	Buxar Thermal Power Station (Chausa)	Buxar Bijlee Company	1320		Early	2016
Bihar	Indragacchi power station	India Power Corporation	1320	Supercritical	Early	2015
Bihar	Jagdishpur power station Stage 1	AES India	1320		Early	2016
Bihar	Jagdishpur power station Stage 2	AES India	1320		Planning	
Bihar	Kahalgaon power station (Cement Manufacturing Co.)	Cement Manufacturing Company Ltd.	500		Cancelled	
Bihar	Kahalgaon power station (East-West Power)	East-West Power Generation Co. Ltd.	1000		Cancelled	
Bihar	Kahalgaon power station (Sarvottam)	Sarvottam Infrastructure	540		Cancelled	
Bihar	Kahalgaon Super Thermal Power Plant St-III Extension	NTPC	500		Planning	
Bihar	Kiul Thermal Power Project (Lakhisarai)	Mirach Power Pvt. Ltd	1320		Planning	
Bihar	Kochar power station	Triton Energy Ltd.	1320		Planning	
Bihar	Lakhisarai power station (SPML)	SPML	1200		Planning	

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Bihar	Lakhisarai Thermal Power Station (Kajara)	Lakhisarai Bijlee	1320		Advanced	2016
Bihar	Meherpur power station	Usha Martin	1200		Uncertain	
Bihar	Muzaffarpur power station extension	Bihar State Electricity Board	390		Construction	2013
Bihar	Nabinagar (Majhiyan) Super Thermal Power Project	Nabinagar Power Generating Company	1980	Supercritical	Advanced development	2016
Bihar	Nabinagar Thermal Power Project	NTPC and Ministry of Railways	1000		Construction	
Bihar	Pirpainti power station (CESC)	CESC	2000		Early	2017
Bihar	Pirpainti power station (Essar)	Essar Energy	1800		Deferred	
Bihar	Pirpainti Thermal Power Station	Pirpainti Bijlee Company	1320		Early	2016
Bihar	Prabhawati Nagar power station	Arrissan Power Limited	1320		Early	
Bihar	Sirdala power station	Global Powmin	2640		Early	2014
Chhattisgarh	Akaltara Ultra Mega Power Project	Akaltara Power	4000		Cancelled	
Chhattisgarh	Amarkantak Thermal Power Project phase I (Pathadi) unit 2	Lanco	300		Newly commissioned	2010
Chhattisgarh	Amarkantak Thermal Power Project phase II (Pathadi) units 3 and 4	Lanco	1320	Supercritical	Construction	2013, 2014
Chhattisgarh	Amoda power station	DCM Shriram Consolidated	600		Early	
Chhattisgarh	Arasmeta Expansion Power Plant	KSK Energy Ventures	43		Construction	
Chhattisgarh	Athena Chhattisgarh power station	Athena Chhattisgarh Power Limited	1200		Construction	2014
Chhattisgarh	Avantha Bhandar power station Unit 1	Avantha Power and Infrastructure	600		Construction	2013
Chhattisgarh	Avantha Bhandar power station Unit 2	Avantha Power and Infrastructure	600		Early	
Chhattisgarh	BALCO Korba power station expansion	Bharat Aluminium Company	600		Construction	2013-2014
Chhattisgarh	BALCO Korba power station expansion	Bharat Aluminium Company	600		Construction	
Chhattisgarh	Balpur power station	Jain Energy	1200		Early	
Chhattisgarh	Baradarha power station	DB Power	1200		Construction	2013
Chhattisgarh	Bhaiso power station (Janjgir-Champa) Phase 1	KVK Power & Infrastructure Pvt. Ltd.	600		Early development	
Chhattisgarh	Bhaiso power station (Janjgir-Champa) Phase 2	KVK Power & Infrastructure Pvt. Ltd.	600		Planning	
Chhattisgarh	Bhaiyathan Thermal Power Project	Indiabulls Power and Chhattisgarh State Power Generation Company	1320		Early development	2013
Chhattisgarh	Bhandhakhar power station	Maruti Clean Coal and Power	300		Construction	2013
Chhattisgarh	Bhengari power station	Mahavir Global Coal Limited (MGCL)	540		Planning	

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Chhattisgarh	Bhushan Steel Chhattisgarh project	Bhushan Steel	1000		Planning	
Chhattisgarh	Birra Thermal Power Project	Moser Baer Power & Infrastructures	1320		Early	
Chhattisgarh	BLA Chhattisgarh power station	BLA Power	540		Cancelled	
Chhattisgarh	Bunji Bundeli Thermal Power Project	Chhattisgarh State Power Generation	500		Early	
Chhattisgarh	Chakabura power station expansion unit 1	ACB (India)	135	Subcritical	Newly	2011
Chhattisgarh	Chakabura power station expansion unit 2	ACB (India)	135	Subcritical	Construction	2012
Chhattisgarh	Champa Adhunik power station	Adhunik Power and Natural Resources	1320		Planning	
Chhattisgarh	Champa Power Project	ACB (India)	1200		Early	
Chhattisgarh	Chandan Nagar power station	IFFCO Chhattisgarh Power	1000		Planning	
Chhattisgarh	Chhattisgarh GMR power station Phase I	GMR Energy	1370		Advanced	2014
Chhattisgarh	Chhattisgarh GMR power station Phase II	GMR Energy	685		Early	2015
Chhattisgarh	Dhardai power station	JSW ISPAT Steel	1200		Unconfirmed	
Chhattisgarh	Facor Power Chhattisgarh power project	Facor Power	600	Supercritical	Early	
Chhattisgarh	Godhna power station	Karnataka Power Corporation	1600		Planning	
Chhattisgarh	Gorra Thermal Power Plant	Patni Power Projects	540		Planning	
Chhattisgarh	IFFCO-CSPGCL Thermal Power Project	Chhattisgarh State Power Generation	1320		Early	
Chhattisgarh	Janjgir power station	Karnataka Power Corporation	1200		Planning	2013
Chhattisgarh	Kasaipalli power station	Aryan Coal Benefications	270		Newly	2011-2012
Chhattisgarh	Khamhar power station	AES Chhattisgarh Energy	1440		Planning	
Chhattisgarh	Korba III power station	NTPC	500		Newly	2010
Chhattisgarh	Korba South Thermal Power Project Unit 1 and Unit 2	Chhattisgarh State Power Generation Company	1000		Early development	2014
Chhattisgarh	Korba West (Hasdeo Thermal Power Station) Extension	Chhattisgarh State Power Generation Company	500		Construction	2013
Chhattisgarh	KSK Mahanadi Power Project Units 1-4	KSK Energy Ventures	2400		Construction	2013,
Chhattisgarh	KSK Mahanadi Power Project Units 5-6	KSK Energy Ventures	1200		Planning	
Chhattisgarh	KSK Narmada Power Project	KSK Energy Ventures	1800		Early	
Chhattisgarh	Kukurda power station	JSW Energy	1320	Supercritical	Early	
Chhattisgarh	Kukurda power station	JSW Energy	1320	Supercritical	Advanced	
Chhattisgarh	Lanco Chhattisgarh Thermal Power Project	Lanco	2000		Planning	
Chhattisgarh	Lara Integrated Thermal Power Project 1-2	NTPC	1600	Supercritical	Advanced	2014
Chhattisgarh	Lara Integrated Thermal Power Project 3-4	NTPC	1600	Supercritical	Planning	2015



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Chhattisgarh	Lara Integrated Thermal Power Project 5	NTPC	800	Supercritical	Planning	2016
Chhattisgarh	Marwa power station	Chhattisgarh State Power Generation	1000		Construction	2013
Chhattisgarh	Moser Baer Captive Power Project	Moser Baer Power & Infrastructures and PTC India	150		Early development	
Chhattisgarh	Pathadi power station	Lanco and KVK	1320		Construction	
Chhattisgarh	Raigarh Power Project (TRN/ACB)	ACB (India)	600		Construction	2014
Chhattisgarh	Raigarh power station (SKS Ispat)	SKS Ispat and Power	1200		Construction	2014-2015
Chhattisgarh	Raigarh Project (Jindal)	Jindal Power	1320	Supercritical	Advanced	
Chhattisgarh	Raigarh project (VISA Power)	VISA Power	1200		Advanced	2013
Chhattisgarh	Raikheda power station	GMR Energy	1370	Supercritical	Construction	2014
Chhattisgarh	Ratija Power Project Phase I	ACB (India)	50	Subcritical	Construction	2012
Chhattisgarh	Ratija Power Project Phase II	ACB (India)	50	Subcritical	Early	
Chhattisgarh	Sapnai power station	Topworth Energy	1260		Early	
Chhattisgarh	Sapos power station (BEC Power)	BEC Power	500		Early	
Chhattisgarh	Sapos power station (Suryachakra)	Suryachakra Group	1320	Ultra Supercritical	Advanced development	
Chhattisgarh	Sipat I power station expansion, units 1, 2, and 3	NTPC	1980	Supercritical	Newly commissioned	2011, 2012
Chhattisgarh	Surguja Ultra Mega Power Project	not selected	4000		Uncertain	
Chhattisgarh	SV Power project (Renki) phase II	KVK	300		Early	
Chhattisgarh	Tamnar II Project	Jindal Power	2400	Subcritical	Construction	2014-2015
Chhattisgarh	Uchpinda power station	RKM Powergen Private Limited	1440		Construction	2013-2014
Gujarat	Akrimota Power Project expansion	Gujarat Mineral Development	250		Unconfirmed	
Gujarat	Amreli power station	Avantha Power and Infrastructure	1320	Supercritical	Planning	2016
Gujarat	Bhadreshwar power station (OPG)	OPG Power Ventures	300		Deferred	
Gujarat	Bhadreshwar Thermal Power Project (Adani)	Adani Power	3300		Planning	
Gujarat	Bharuch DCM power station	DCM Shriram Consolidated	48		Planning	
Gujarat	Bhavnagar power station	Gujarat Power Corporation	500		Construction	2013
Gujarat	Bherai power station	VISA Power	1320		Early	
Gujarat	Dahej power station (JSW Energy)	JSW Energy	2400		Planning	
Gujarat	Dahej Thermal Power Project	Adani Power	2640		Deferred	
Gujarat	Dholera Power Plant	Gujarat State Electricity Corp	1600		Planning	2018

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Gujarat	Dhuvaran Super Thermal Power Project	NTPC	1320		Planning	
Gujarat	Gujarat Power Project (Valia)	Neyveli Lignite Corporation	500		Planning	
Gujarat	Hazira II power plant	Essar Energy	270		Construction	
Gujarat	Jamnagar Complex power station	Reliance Industries	1000		Planning	
Gujarat	Mundra Thermal Power Project (Adani) Phase I Units 1-9	Adani Power	4620	Subcritical	Newly commissioned	2009-2012
Gujarat	Okha power station	SPR Infrastructure India	2640	Supercritical	Early	
Gujarat	Pipavav power station	Torrent Power and Gujarat Power	2000		Early	
Gujarat	Salaya I power plant	Essar Energy	1200	Subcritical	Newly	2012
Gujarat	Salaya II power plant	Essar Energy	1320	Supercritical	Construction	
Gujarat	Salaya III power plant	Essar Energy	600	Circulating Fluidized Bed	Construction	
Gujarat	Sikka Thermal Power Station Units 3-4	Gujarat State Electricity Corp	500		Construction	2013
Gujarat	Simar power station	JSW Energy	1600		Cancelled	
Gujarat	Surat Lignite Ext Units 3-4	Gujarat Industries	250		Newly	2011
Gujarat	Suryachakra captive power plant	Suryachakra Group	200		Early	
Gujarat	Tata Mundra Ultra Mega Power Project 1-2	Tata Power	1600	Supercritical	Newly	2011-2012
Gujarat	Tata Mundra Ultra Mega Power Project 3-5	Tata Power	2400	Supercritical	Construction	2013
Gujarat	Ukai Thermal Power Station Unit 6	Gujarat State Electricity Corp	500		Construction	2013
Gujarat	Wanakbori Thermal Power Station Unit 8	Gujarat State Electricity Corp	800		Early	2016
Haryana	Deenbandhu Chhotu Ram Thermal Power Plant expansion	Haryana Power Generation Company	660	Supercritical	Planning	
Haryana	Indira Gandhi Super Thermal Power Project Unit 3	NTPC	500	Subcritical	Construction	2012
Haryana	Indira Gandhi Super Thermal Power Project Units 1-2	NTPC	1000	Subcritical	Newly commissioned	2011
Haryana	Jhajjar power station	CLP India	1320	Supercritical	Newly	2012
Haryana	Mahatma Gandhi Thermal Power Project Units 1 and 2	Haryana Power Generation Company	1320		Newly commissioned	2012
Haryana	Rajiv Gandhi Thermal Power Project Hisar Unit I	Haryana Power Generation Company	600		Newly commissioned	2010
Haryana	Rajiv Gandhi Thermal Power Project Hisar Unit II	Haryana Power Generation Company	600		Newly commissioned	2011

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Jharkhand	Baranda power station	JSW Energy	1620		Early	
Jharkhand	Bhagalpur power station	Gagan Power & Natural Resources	1320		Early	
Jharkhand	Bokaro A Thermal Power Station	Damodar Valley Corporation	500		Construction	2014
Jharkhand	Bokaro Steel City Thermal Power Station expansion	Damodar Valley Corporation	500		Planning	
Jharkhand	Chandil Singh power station	HDIL Energy	1320	Supercritical	Unconfirmed	
Jharkhand	Chandrapura power station	Damodar Valley Corporation	500		Newly	2011
Jharkhand	Chandwa Power Project Phase I	Abhijeet Group	1080	Subcritical	Construction	2013
Jharkhand	Chandwa Power Project Phase II	Abhijeet Group	675		Early	
Jharkhand	Chandwa Power Project Phase III	Abhijeet Group	660		Early	
Jharkhand	Chichro Patsimal power station	NTPC & Coal India	2000		Cancelled	
Jharkhand	Dumka power station (CESC) Phase I	CESC	600		Early	2016
Jharkhand	Dumka power station (CESC) Phase I	CESC	660		Planning	
Jharkhand	Dumka Project	Jindal Power	1300	Supercritical	Early	2014
Jharkhand	Godda Project	Jindal Power	660	Supercritical	Advanced	
Jharkhand	Gumla power station (Kamdara)	Jharkhand State Electricity Board	1320		Early	
Jharkhand	Mahadev Prasad Super Thermal Power Station stage I	Adhunik Power and Natural Resources	270	Subcritical	Newly commissioned	2012
Jharkhand	Mahadev Prasad Super Thermal Power Station stage II	Adhunik Power and Natural Resources	270		Construction	2013
Jharkhand	Mahadev Prasad Super Thermal Power Station stage III	Adhunik Power and Natural Resources	540		Planning	
Jharkhand	Jharkhand Aluminium power station	Hindalco Industries	900		Early	
Jharkhand	Jharkhand Project	Jindal Power	2640	Supercritical	Planning	
Jharkhand	Jojobera Power Plant unit 5	Tata Power	120		Newly	2011
Jharkhand	Kamdara power station	Jharkhand State Electricity Board	1320		Construction	
Jharkhand	Koderma Thermal Power Station Unit 1	Damodar Valley Corporation	500		Newly	2011
Jharkhand	Koderma Thermal Power Station Unit 2	Damodar Valley Corporation	500		Construction	2012
Jharkhand	KVK Jharkhand project	KVK Nilachal Power Pvt. Ltd.	1000		Early	
Jharkhand	Maithon Right Bank Thermal Power Station	Damodar Valley Corporation and Tata Power	1050	Subcritical	Newly commissioned	2011-2012
Jharkhand	Maithon Right Bank Thermal Power Station Phase II	Damodar Valley Corporation and Tata Power	1600	Subcritical	Early development	

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Jharkhand	Malaxmi Mega Thermal Power Project (Thakurbari)	Malaxmi	2640		Unconfirmed	
Jharkhand	Patratu power station (Jinbhuvish Energy)	Jinbhuvish Energy (East)	1320		Planning	
Jharkhand	Rahem power station	Gupta Energy	1000		Unconfirmed	
Jharkhand	Sahibganj power station	Madhucon Projects	1320		Early	
Jharkhand	Saraikela power station	Kohinoor Power	215		Construction	
Jharkhand	Tilaiya Ultra Mega Power Project 1-5	Reliance Power	3300	Supercritical	Early	2015
Jharkhand	Tilaiya Ultra Mega Power Project 6	Reliance Power	660	Supercritical	Early	2017
Jharkhand	Tiruldih Power Project	Tata Power	1980		Early	
Jharkhand	Tori power plant	Essar Energy	1200		Construction	2014
Jharkhand	Visa Power Jharkhand project	VISA Power	2640		Early	
Jharkhand	Welspun Energy Parbahal Thermal Power Plant	Welspun Energy	1980		Early development	
Karnataka	Bellary Thermal Power Station 2	Karnataka Power Corporation	500		Newly	2012
Karnataka	Bellary Thermal Power Station 3	Karnataka Power Corporation	700		Planning	2014
Karnataka	Chamalapura power station	Karnataka Power Corporation	1000		Cancelled	
Karnataka	Edlapura power station	Karnataka Power Corporation	800	Supercritical	Planning	
Karnataka	Ghataprabha power station	Power Company of Karnataka (PCKL)	1320		Early	
Karnataka	Gulbarga power station	Power Company of Karnataka (PCKL)	1320	Supercritical	Early	
Karnataka	Hanakon Thermal Power Project	Ind-Barath Power	450		Cancelled	
Karnataka	Hassan power station	Hassan Thermal Power (P) Ltd	1000		Early	
Karnataka	Jewargi power station	Jewargi Power Pvt Ltd.	1320		Planning	
Karnataka	JSW Vijayanagar power station expansion	JSW Energy	660	Supercritical	Advanced	
Karnataka	Kadachur power station	Atlas Power India	1320		Early	
Karnataka	Karnataka Gupta power station	Gupta Power	1320		Unconfirmed	
Karnataka	Kudgi Super Thermal Power Project Stage I	NTPC	2400	Supercritical	Construction	2015-2016
Karnataka	Kudgi Super Thermal Power Project Stage II	NTPC	1600	Supercritical	Early development	
Karnataka	Mangoli power station	Flamingo Energy Ventures	1320	Supercritical	Early	
Karnataka	Mulwad power station	Luxor Energy	1320	Supercritical	Early	
Karnataka	Raichur Thermal Power Station expansion	Karnataka Power Corporation	250	Subcritical	Newly	2010
Karnataka	Tadri Ultra Mega Power Project	NTPC	4000		Deferred	

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Karnataka	Udupi Power unit 1	Lanco	600	Subcritical	Newly	2010
Karnataka	Udupi Power unit 2	Lanco	600	Subcritical	Newly	2011
Karnataka	Udupi Power units 3 & 4	Lanco	1320		Early	
Karnataka	Vadlur power station	Surana Power Ltd	420		Advanced	2013
Karnataka	Vantamuri power station	Shree Renuka Energy	1050		Early	
Karnataka	Yedlapur thermal station	Karnataka Power Corporation	850	Supercritical	Advanced	2014
Karnataka	Yeramarus thermal station	Karnataka Power Corporation	850	Supercritical	Advanced	2014
Kerala	Kasargod power station	Kerala State Industrial Development	2520	Supercritical	Early	
Madhya Pradesh	Anuppur power station (Newzone)	New Zone India	1320	Supercritical	Early	
Madhya Pradesh	Anuppur Thermal Power Project Phase 1	Moser Baer Power & Infrastructures	1200	Subcritical	Construction	
Madhya Pradesh	Anuppur Thermal Power Project Phase 2	Moser Baer Power & Infrastructures	1320		Early	
Madhya Pradesh	Banas Thermal Power project (Anuppur)	KVK Power & Infrastructure Pvt. Ltd.	1320		Planning	
Madhya Pradesh	Bansagar power station	MPTradco	1600	Supercritical	Early	2015
Madhya Pradesh	Barethi Super Thermal Power Project	NTPC	3960	Supercritical	Early	
Madhya Pradesh	Bina Refinery power station	Bharat Oman Refinery	99		Construction	
Madhya Pradesh	Bina Thermal Power Project additional units	Jaiprakash Power Ventures	750		Planning	2012
Madhya Pradesh	Bina Thermal Power Project Unit 1	Jaiprakash Power Ventures	250		Newly	2012
Madhya Pradesh	Bina Thermal Power Project Unit 2	Jaiprakash Power Ventures	250		Construction	2013
Madhya Pradesh	Chhindwara JSW power station	JSW Energy	1320	Supercritical	Cancelled	
Madhya Pradesh	Chitrangi Power Project	Reliance Power	3960	Supercritical	Advanced	
Madhya Pradesh	Dada Dhuniwale Thermal Power Project	M.P. Power Generating Company	1600		Early	
Madhya Pradesh	Gadarwara power station (BLA)	BLA Power	140	Subcritical	Advanced	
Madhya Pradesh	Gadarwara Super Thermal Power Project	NTPC	1320		Early	
Madhya Pradesh	Jabalpur Thermal Power Project	VISA Power	1320		Early	
Madhya Pradesh	Jaypee Nigrie Super Thermal Power Project	Jaiprakash Power Ventures	1320	Supercritical	Construction	2013
Madhya Pradesh	Jhabua (Chetak) power station	Chetak Enterprises	1320		Deferred	
Madhya Pradesh	Jhabua Power Seoni power station phase 1	Avantha Power and Infrastructure	600	Subcritical	Construction	2014
Madhya Pradesh	Jhabua Power Seoni power station phase 2	Avantha Power and Infrastructure	600	Subcritical	Advanced development	
Madhya Pradesh	Katni power station	Welspun Energy	1980	Supercritical	Advanced	

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Madhya Pradesh	Khargaone power station	NTPC	0		Planning	
Madhya Pradesh	Madhya Pradesh Jain Energy power station (Birhulee)	Jain Energy	1320		Early development	
Madhya Pradesh	Mahan Aluminium power station	Hindalco Industries	900		Construction	
Madhya Pradesh	Mahan I power plant	Essar Energy	1200	Subcritical	Construction	2012-2013
Madhya Pradesh	Mahan II power plant	Essar Energy	600		Planning	
Madhya Pradesh	Maharjapur power station	Sudama Mahavir Power	1320	Supercritical	Early	
Madhya Pradesh	Mandsaur power station	Chetak Enterprises	1320		Deferred	
Madhya Pradesh	Pench Thermal Power Project	Adani Power	1320	Supercritical	Deferred	
Madhya Pradesh	Sasan Ultra Mega Power Project 1	Reliance Power	660	Supercritical	Newly	2013
Madhya Pradesh	Sasan Ultra Mega Power Project 2	Reliance Power	660	Supercritical	Construction	2013
Madhya Pradesh	Sasan Ultra Mega Power Project 3	Reliance Power	660	Supercritical	Construction	2014
Madhya Pradesh	Sasan Ultra Mega Power Project 4-5	Reliance Power	1320	Supercritical	Construction	2015
Madhya Pradesh	Sasan Ultra Mega Power Project 6	Reliance Power	660	Supercritical	Construction	2016
Madhya Pradesh	Satpura Thermal Power Station Units 10-11	M.P. Power Generating Company	500		Construction	2013
Madhya Pradesh	Shahdol power station (formerly SJK Powergen)	GMR Energy	1370		Early development	2014
Madhya Pradesh	Shahpura power station	MP Power Trading Company Limited	1500		Early	
Madhya Pradesh	Shree Singaji Thermal Power Project Stage I Unit 1	M.P. Power Generating Company	600		Construction	2013
Madhya Pradesh	Shree Singaji Thermal Power Project Stage I Unit 2	M.P. Power Generating Company	600		Construction	2013
Madhya Pradesh	Shree Singaji Thermal Power Project Stage II	M.P. Power Generating Company	1320		Planning	
Madhya Pradesh	Sidhi Power Project	ACB (India)	1200		Advanced	2014
Madhya Pradesh	Suryachakra Thermal (Madhya Pradesh)	Suryachakra Group	1320	Supercritical	Deferred	
Madhya Pradesh	Vindhyachal-IV power station unit 11	NTPC	500		Newly	2012
Madhya Pradesh	Vindhyachal-IV power station unit 12	NTPC	500		Construction	2013
Madhya Pradesh	Vindhyachal-V power station	NTPC	500		Planning	
Madhya Pradesh	Welspun Amla power station	Welspun Energy	1320		Early	
Madhya Pradesh	Welspun Energy Anuppur Thermal Power Plant	Welspun Energy	1980		Early development	

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Madhya Pradesh	Welspun Mega Industrial & Energy Park	Welspun Energy Park Pvt. Ltd.	5280		Early	
Maharashtra	Amravati Thermal Power Project Phase I	Indiabulls Power	1350		Construction	2013-2014
Maharashtra	Amravati Thermal Power Project Phase II	Indiabulls Power	1350		Construction	2014-2015
Maharashtra	Bela power station	Ideal Energy Projects	270		Construction	2012
Maharashtra	Bela power station (Mantri Power)	Mantri Power	540		Unconfirmed	
Maharashtra	Bhadravati power station (Ispat)	JSW ISPAT Steel	2000		Planning	
Maharashtra	Bhadravati power station (MIDC)	Maharashtra Industrial Development Corporation	1320		Early development	
Maharashtra	Bhandewadi power station	Nagpur Municipal Corporation	500		Deferred	
Maharashtra	Bhusawal Thermal Power Station Unit 6	Maharashtra State Power Generation	660		Advanced	
Maharashtra	Bhusawal Thermal Power Station Units 4-5	Maharashtra State Power Generation Company	1000		Newly commissioned	2011
Maharashtra	Bijora power station	Jinbhuvish Power Generations	1260		Advanced	
Maharashtra	Butibori power station	Reliance Power	600		Construction	2012
Maharashtra	Chandrapur CESC power station (Tadali)	CESC	600		Construction	2013
Maharashtra	Chandrapur Gupta power station stage 2	Gupta Energy	540		Advanced	
Maharashtra	Chandrapur Gupta power station stage I	Gupta Energy	120		Construction	
Maharashtra	Chandrapur Thermal Power Station unit 8	Maharashtra State Power Generation	500		Construction	2013
Maharashtra	Chandrapur Thermal Power Station unit 9	Maharashtra State Power Generation	500		Construction	2014
Maharashtra	Coastal Maharashtra Project Phase I	Tata Power	1600	Supercritical	Deferred	
Maharashtra	Coastal Maharashtra Project Phase II	Tata Power	800		Deferred	
Maharashtra	Dahanu power station upgrade	Reliance Infrastructure Limited	1200		Uncertain	
Maharashtra	Devgad UMPP	NTPC	4000		Uncertain	
Maharashtra	Dhakore power station	Ind-Barath Power	1050		Unconfirmed	
Maharashtra	Dhariwal power station	Haldia Energy	600		Construction	2013
Maharashtra	Dhopave coal plant (NTPC)	NTPC	1600		Planning	
Maharashtra	Dhopave Thermal Power Station (Mahagenco) Unit 1-3	Maharashtra State Power Generation Company	1980	Supercritical	Deferred	
Maharashtra	Dhopave Thermal Power Station (Mahagenco) Unit 4	Maharashtra State Power Generation Company	800	Supercritical	Cancelled	
Maharashtra	Dondaicha Thermal Power Station Stage I (Units 1 and 2)	Maharashtra State Power Generation Company	1320		Advanced development	2016

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Maharashtra	Dondaicha Thermal Power Station Stage II (Unit 3-5)	Maharashtra State Power Generation Company	1980		Planning	2017
Maharashtra	EMCO Energy Warora Power Project	EMCO Energy	600		Construction	2013
Maharashtra	Ghugus power station phase I	Gupta Coalfields & Washeries	120		Advanced	
Maharashtra	Ghugus power station phase II	Gupta Coalfields & Washeries	540		Planning	
Maharashtra	Girye Ultra Mega Power Project	Coastal Maharashtra Power Ltd.	4000		Deferred	
Maharashtra	GMR Energy coal plant	GMR Energy	1800		Unconfirmed	
Maharashtra	Hari Hareshwar power station (Veshvi and Bankot)	Hari Hareshwar Power Company	1600		Planning	
Maharashtra	Khaperkheda TPS Unit 5	Maharashtra State Power Generation	500		Newly	2011
Maharashtra	Khursapar power station	Lenexis Energy	1320		Early	
Maharashtra	Khutafali (Kolura) power station	Jinbhuvish Power Generations	1320	Supercritical	Early	
Maharashtra	Kinebodi power station	Nandlal Enterprises	750		Early	
Maharashtra	Koradi Thermal Power Station 10	Maharashtra State Power Generation	660		Construction	2014
Maharashtra	Koradi Thermal Power Station 8	Maharashtra State Power Generation	660		Construction	2014
Maharashtra	Koradi Thermal Power Station 9	Maharashtra State Power Generation	660		Construction	2014
Maharashtra	Lanco Vidarbha Thermal Power	Lanco	1320	Supercritical	Construction	2014
Maharashtra	Latur power station	Maharashtra State Power Generation	1320	Supercritical	Planning	2016
Maharashtra	Madhekar power station	Patni Energy	405	CFB	Unconfirmed	
Maharashtra	Mauda-I STPP (Nagpur) Unit 1	NTPC	500		Newly	2012
Maharashtra	Mauda-I STPP (Nagpur) Unit 2	NTPC	500		Construction	2013
Maharashtra	Mauda-II STPP (Nagpur)	NTPC	1320		Early	
Maharashtra	Mendki thermal power project	Maharashtra State Power Generation	1320		Planning	
Maharashtra	Nardana power station (Vaghode)	Shirpur Power	300		Advanced	
Maharashtra	Nasik Thermal Power Project Phase I (Indiabulls)	Indiabulls Power	1350		Construction	2013-2015
Maharashtra	Nasik Thermal Power Project Phase I (Indiabulls)	Indiabulls Power	1350		Construction	2014-2015
Maharashtra	Nasik Thermal Power Station (Sinnar) expansion	Maharashtra State Power Generation Company	1320	Supercritical	Early development	2017
Maharashtra	Paras power station extension	Maharashtra State Power Generation	660		Planning	
Maharashtra	Paras power station unit 4	Maharashtra State Power Generation	250		Newly	2010
Maharashtra	Parli Thermal Power Station Unit 7	Maharashtra State Power Generation	250	Subcritical	Newly	2010



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Maharashtra	Parli Thermal Power Station Unit 8	Maharashtra State Power Generation	350	Subcritical	Construction	2013
Maharashtra	Rampur coal plant	Finolex	1000		Planning	
Maharashtra	Ratnagiri Power Plant	JSW Energy	1200		Newly	2011
Maharashtra	Ratnagiri Power Plant expansion	JSW Energy	3200	Supercritical	Deferred	
Maharashtra	Shahpur Thermal Power Project	Reliance Power	1200		Cancelled	
Maharashtra	Solapur power station	NTPC	1320	Supercritical	Advanced	2016
Maharashtra	Tiroda Thermal Power Project Phase I Unit 1	Adani Power	660	Supercritical	Newly commissioned	2012
Maharashtra	Tiroda Thermal Power Project Phase I Unit 2	Adani Power	660		Construction	2012
Maharashtra	Tiroda Thermal Power Project Phases II and III	Adani Power	1980		Construction	2013
Maharashtra	Trombay Power Station Proposed Conversion of Unit 6 to coal	Tata Power	500	Sub-critical	Planning	2014 (approx)
Maharashtra	Waral power station	Ind-Barath Power	450		Cancelled	
Maharashtra	Wardha Warora Power Plant Unit 1-2	KSK Energy Ventures	270		Newly	2010
Maharashtra	Wardha Warora Power Plant Units 3-4	KSK Energy Ventures	270		Newly	2011
Maharashtra	Welspun Maxsteel power station	Welspun Energy	330		Early	
Meghalaya	Garo Hills power station	NEEPCO	500		Early	
Meghalaya	West Khasi Hills power station	NEEPCO	240		Planning	
Orissa	Aditya Aluminium power station	Hindalco Industries	900		Construction	
Orissa	Angul I power station (Derang) Unit 1	Jindal India Thermal Power	600		Construction	2013
Orissa	Angul I power station (Derang) Unit 2	Jindal India Thermal Power	600		Construction	2013
Orissa	Angul I power station (Derang) Unit 3	Jindal India Thermal Power	600		Planning	
Orissa	Angul II power station (Derang)	Jindal India Thermal Power	1320		Planning	
Orissa	Angul Smelter power station units 9 and 10	National Aluminium Company	240		Newly commissioned	2010
Orissa	Angul Steel power station	Jindal Steel & Power	810		Construction	2012
Orissa	Babandh power station	Lanco	1320	Supercritical	Construction	2014
Orissa	Balangir power station	Sahara India Power Corporation	1320		Early	
Orissa	Baragaon power station	Jinbhuvish Power Generations	1320		Early	
Orissa	Basundhara power station	Mahanadi Coalfields Limited	1600	Supercritical	Early	
Orissa	Bhadrak Ultra Mega Power Project	Power Finance Corporation	4000	Supercritical	Planning	

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Orissa	Bhubaneshwar Jasper power station	Bhubaneshwar Power	135		Planning	
Orissa	Brahmani power project	NTPC & Coal India	2000		Planning	
Orissa	Choudwar power station	Indian Metals & Ferro	30	Subcritical	Newly	
Orissa	Choudwar power station	Indian Metals & Ferro	120	Subcritical	Advanced	
Orissa	Cuttack power station (KVK Nilachal) Phase I	KVK	350		Construction	2014
Orissa	Cuttack power station (KVK Nilachal) Phase II	KVK	700		Planning	
Orissa	Cuttack power station (VISA Power)	VISA Power	1320	Supercritical	Planning	
Orissa	Darlipali Super Thermal Power Station	NTPC	1600	Supercritical	Advanced	
Orissa	Dhenkanal power station	CESC	1000		Planning	
Orissa	Gajmara Super Thermal Power Station	NTPC	1600		Advanced	
Orissa	Ganjam power station	SPR Infrastructure India	2640	Supercritical	Early	
Orissa	Ghogarpalli Ultra Mega Power Project	Power Finance Corporation	4000		Planning	
Orissa	IB Thermal Power Station expansion	Orissa Power Generation Corporation	1320		Advanced	
Orissa	Jharsuguda CPP power station Units 8 & 9	Vedanta Resources	270		Newly	2011
Orissa	Jharsuguda Ind-Barath power station Phase I	Ind-Barath Power	700		Construction	2013
Orissa	Jharsuguda Ind-Barath power station Phase II	Ind-Barath Power	660	Supercritical	Planning	
Orissa	Jharsuguda Sterlite power station Unit 1-4	Sterlite Energy	2400	Subcritical	Newly	2010 -
Orissa	JR Power Project	KSK Energy Ventures	1980		Early	
Orissa	Kamalanga power station phase I	GMR Energy	1050		Construction	2013
Orissa	Kamalanga power station phase II	GMR Energy	350		Advanced	
Orissa	Kishore Nagar Coal-to-Liquids Project	Jindal Steel & Power	1350		Planning	
Orissa	Malibrahmani power station	Monnet Power Company	1050	Subcritical	Advanced	2014
Orissa	Naraj Marthapur power project	Tata Power	660		Planning	
Orissa	Navabharat II power station	Essar Energy	1200		Planning	
Orissa	Navabharat power station	Essar Energy	1050		Construction	2014
Orissa	Neulapoi power station (Dhenkanal)	CESC	1200		Early	2015
Orissa	Paradip power plant	Essar Energy	120	Subcritical	Construction	
Orissa	Pitamohul power station	Ind-Barath Power	1320		Planning	
Orissa	Randia power station	Facor Power	100	Subcritical	Construction	

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Orissa	Rengali power station	Neyveli Lignite Corporation	2000		Planning	
Orissa	Sakhigopal Ultra Mega Power Project	Power Finance Corporation	4000		Planning	
Orissa	Sri Ramchandrapur power project	Dr. RKP Power	120	Subcritical	Planning	
Orissa	Srirampur Coal-to-Liquids Project	Strategic Energy Technology Systems	0		Planning	
Orissa	Sundargarh Ultra Mega Power Project (Lankahuda)	NTPC	4000		Planning	
Orissa	Talabira thermal station	Neyveli Lignite Corporation, Mahanadi Coal Fields	2000		Cancelled	
Orissa	Talcher Super Thermal Power Station second expansion	NTPC	1320		Planning	
Orissa	Talcher Thermal Power Station first expansion	NTPC	500		Planning	
Orissa	Wardha Naini Power Project	KSK Energy Ventures	1800		Early	
Punjab	Gidderbaha power station	Punjab State Electric Board	2640		Deferred	
Punjab	GNDTP Bathinda Extn. Stage-II	Punjab State Electric Board	500		Planning	
Punjab	Gobindpura power station	Indiabulls Power	1320		Planning	
Punjab	Goindwal Sahib Thermal Power Plant	GVK	540		Construction	2013
Punjab	Goindwal Sahib Thermal Power Plant expansion	GVK	1320	Supercritical	Planning	
Punjab	Guru Hargobind (Lehra Mohabbat) Power Station Stage III	Punjab State Electric Board	500		Planning	
Punjab	Mukerian power station	Punjab State Power Corporation	1320		Early	
Punjab	Rajpura Thermal Power Project (Nalash)	Punjab State Power Corporation	1320		Construction	2014
Punjab	Rajpura Thermal Power Project (Nalash) phase II	Punjab State Power Corporation	700		Planning	
Punjab	Ropar thermal plant expansion	Punjab State Electric Board	1320		Planning	
Punjab	Talwandi Sabo Power Project Unit 4	Sterlite Energy	660	Supercritical	Cancelled	
Punjab	Talwandi Sabo Power Project Units 1-3	Sterlite Energy	1980	Supercritical	Construction	2014
Rajasthan	Banswara Cement power station	India Cements	20		Planning	
Rajasthan	Banswara Thermal Power Station	Rajasthan RV Utpadan Nigam	1320	Supercritical	Early	
Rajasthan	Barsingsar Thermal Power Project Unit 1	Neyveli Lignite Corporation	125		Newly	2010
Rajasthan	Barsingsar Thermal Power Project Unit 2	Neyveli Lignite Corporation	125		Newly	2011
Rajasthan	Bikaner power station	OM Metals Infraprojects and SPML	70		Early	

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Rajasthan	Bithnok Thermal Power Project	Neyveli Lignite Corporation	250		Advanced	
Rajasthan	Chhabra power station Unit 2 expansion	Rajasthan RV Utpadan Nigam	250		Newly	2010
Rajasthan	Chhabra power station Unit 3-4 expansion	Rajasthan RV Utpadan Nigam	500		Construction	2013
Rajasthan	Chhabra power station Unit 5-6 expansion	Rajasthan RV Utpadan Nigam	1320	Supercritical	Early	
Rajasthan	JSW Barmer (Jalipa Kapurdi) power station unit 2	JSW Energy	135	Subcritical	Newly commissioned	2010
Rajasthan	JSW Barmer (Jalipa Kapurdi) power station units 3-4	JSW Energy	270	Subcritical	Newly commissioned	2011
Rajasthan	JSW Barmer (Jalipa Kapurdi) power station units 5-8	JSW Energy	540		Construction	2013-2015
Rajasthan	JSW Barmer (Jalipa Kapurdi) power station units 9-10	JSW Energy	270		Advanced development	
Rajasthan	Kalisindh Thermal Power Station	Rajasthan RV Utpadan Nigam	1200	Supercritical	Construction	2013
Rajasthan	Kalisindh Thermal Power Station Stage II	Rajasthan RV Utpadan Nigam	1320	Supercritical	Planning	
Rajasthan	Kawai Thermal Power Project	Adani Power	1320	Supercritical	Construction	2013
Rajasthan	Suratgarh Super Thermal Power Station Unit 7-8	Rajasthan RV Utpadan Nigam	1320		Early development	
Rajasthan	Suratgarh Super Thermal Power Station Unit 9-10	Rajasthan RV Utpadan Nigam	1320	Supercritical	Early development	
Rajasthan	VS Lignite Plant	KSK Energy Ventures	135	Subcritical	Newly	2010
Tamil Nadu	Chennai power station I	OPG Power Ventures	77	Subcritical	Newly	2010
Tamil Nadu	Chennai power station II	OPG Power Ventures	77	Subcritical	Construction	2012
Tamil Nadu	Chennai power station III	OPG Power Ventures	160	Subcritical	Advanced	2013
Tamil Nadu	Chennai power station III additional expansion	OPG Power Ventures	80	Subcritical	Planning	
Tamil Nadu	Cheyur Ultra Mega Power Project	Coastal Tamil Nadu Power	4000		Planning	
Tamil Nadu	Cuddalore power station	Cuddalore Powergen Corporation	1320		Deferred	
Tamil Nadu	Cuddalore SRM power station	SRM Energy	1980	Supercritical	Planning	
Tamil Nadu	Ennore SEZ Super Critical Thermal Power Project (Vayalur)	Tamil Nadu Generation and Distribution Corporation	1600	Supercritical	Planning	
Tamil Nadu	Ennore Thermal Power Station expansion	Tamil Nadu Generation and Distribution Corporation	1200		Planning	
Tamil Nadu	Jayamkondam power station	Neyveli Lignite Corporation	1600		Planning	

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Tamil Nadu	Marakkanam Super Thermal Power Project	NTPC	4000		Planning	
Tamil Nadu	Mettur Thermal Power Station Stage III	TANGEDCO	600		Construction	2012
Tamil Nadu	Nagai Power project (Nagapattinam)	KVK Energy	300		Planning	2013
Tamil Nadu	New Neyveli Thermal Power Station	Neyveli Lignite Corporation	1000		Planning	2015
Tamil Nadu	Neyveli TPS-II Expansion unit 1	Neyveli Lignite Corporation	250	Circulating Fluidized Bed	Newly commissioned	2011
Tamil Nadu	Neyveli TPS-II Expansion unit 2	Neyveli Lignite Corporation	250	Circulating Fluidized Bed	Construction	2013
Tamil Nadu	North Chennai Thermal Power Station - Stage-II Unit 1	Tamil Nadu Generation and Distribution Corporation	600	Subcritical	Construction	2012
Tamil Nadu	North Chennai Thermal Power Station - Stage-II Unit 2	Tamil Nadu Generation and Distribution Corporation	600		Construction	2012
Tamil Nadu	Savarimangalam power station	SPR Infrastructure India	2640		Early	
Tamil Nadu	Thoothukudi power station (IBPGL)	Ind-Barath Power	126		Newly	2010
Tamil Nadu	Thoothukudi power station (IBPGL) expansion	Ind-Barath Power	63		Planning	
Tamil Nadu	Thoothukudi power station (IBTPL Hanakon replacement)	Ind-Barath Power	300		Early development	
Tamil Nadu	Tirunelveli power station	India Cements	50		Planning	
Tamil Nadu	Melamaruthur Power Station Phase I	Coastal Energen	1200	Subcritical	Construction	2013
Tamil Nadu	Melamaruthur Power Station Phases II and III	Coastal Energen	1600	Supercritical	Planning	
Tamil Nadu	Tuticorin power station (Ind-Barath) Phase I	Ind-Barath Power	660	Supercritical	Advanced development	
Tamil Nadu	Tuticorin power station (Ind-Barath) Phase II	Ind-Barath Power	660	Supercritical	Planning	
Tamil Nadu	Tuticorin Thermal Power Project	Tamil Nadu Generation and Distribution Corporation and Neyveli	1000		Construction	2013
Tamil Nadu	Udangudi power station	Tamil Nadu Generation and Distribution Corporation and Bharat Heavy Electricals Limited	1600	Supercritical	Advanced development	

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Tamil Nadu	Uppur power station (Thiruvadana)	Tamil Nadu Generation and Distribution Corporation	1600	Supercritical	Early development	
Tamil Nadu	Vallur Thermal Power Plant Unit 1	NTPC and Tamil Nadu Generation and Distribution Corporation	500		Newly commissioned	2012
Tamil Nadu	Vallur Thermal Power Plant Units 2 and 3	NTPC and Tamil Nadu Generation and Distribution Corporation	1000		Construction	2013
Uttar Pradesh	Amauli Fatehpur power station	Uttar Pradesh Power Corporation and Neyveli Lignite Corporation	1980		Construction	2015
Uttar Pradesh	Anpara power station (Lanco)	Lanco	1200	Subcritical	Newly	2011
Uttar Pradesh	Anpara-C power station	UP Rajya Vidyut Nigam Ltd	1200		Newly	2011
Uttar Pradesh	Anpara-D power station Unit I	UP Rajya Vidyut Nigam Ltd	500		Construction	2014
Uttar Pradesh	Anpara-D power station Unit II	UP Rajya Vidyut Nigam Ltd	500		Construction	2014
Uttar Pradesh	Anpara-E power station	UP Rajya Vidyut Nigam Ltd	1320		Planning	
Uttar Pradesh	Auraiya IGCC power station	NTPC and BHEL	300	IGCC	Deferred	
Uttar Pradesh	Auraiya Unitech power station	Unitech Machines	250		Planning	
Uttar Pradesh	Bara Thermal Power Project Phase I	Jaiprakash Power Ventures	1980		Construction	2014
Uttar Pradesh	Bara Thermal Power Project Phase II	Jaiprakash Power Ventures	1320		Planning	
Uttar Pradesh	Bargarh power station	Bajaj Hindusthan	1980		Early	
Uttar Pradesh	Barkera Mill power station	Bajaj Hindusthan	80		Planning	
Uttar Pradesh	Bhogpur power station	Lanco	2640		Early	
Uttar Pradesh	Bilhaur Super Thermal Power Plant	NTPC	1320		Early	
Uttar Pradesh	Chola power station	Tata Power	1320		Planning	
Uttar Pradesh	Dopaha Thermal Power Plant	Uttar Pradesh Power Corporation	1980	Supercritical	Early	
Uttar Pradesh	Fatehpur power station	Uttar Pradesh Power Corporation	1320		Planning	2015
Uttar Pradesh	Feroz Gandhi Unchahar Power Project Stage IV	NTPC	500		Planning	
Uttar Pradesh	Harduaganj TPS Extn - Stage III (Kasimpur)	Uttar Pradesh Rajya Vidyut	660	Supercritical	Planning	
Uttar Pradesh	Harduaganj TPS Extn Stage II Unit 8 (Kasimpur)	Uttar Pradesh Rajya Vidyut	250		Newly commissioned	2011
Uttar Pradesh	Harduaganj TPS Extn Stage II Unit 9 (Kasimpur)	Uttar Pradesh Rajya Vidyut	250		Newly commissioned	2012
Uttar Pradesh	Jawaharpur Thermal Project	Jawaharpur Vidyut Utpadan Nigam	1320		Planning	2013
Uttar Pradesh	Karchana Thermal Power Project	Jaypee Group	1980		Deferred	

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Uttar Pradesh	Lalitpur power project (Mirchawar)	Bajaj Hindusthan	1980		Early	2014-2015
Uttar Pradesh	Meja Thermal Power Project	NTPC and Uttar Pradesh Rajya Vidyut	1320	Supercritical	Advanced	2016
Uttar Pradesh	NCTPP IGCC demonstration (Dadri)	NTPC	100		Planning	
Uttar Pradesh	NCTPP Stage II (Dadri)	NTPC	980		Newly	2010
Uttar Pradesh	Obra thermal station extension	UP Rajya Vidyut Nigam Ltd	1600		Planning	
Uttar Pradesh	Panki Thermal Power Station extension	UP Rajya Vidyut Nigam Ltd	250		Planning	
Uttar Pradesh	Parichha power station Unit 5	Uttar Pradesh Rajya Vidyut	250		Newly	2012
Uttar Pradesh	Parichha power station Unit 6	Uttar Pradesh Rajya Vidyut	250		Construction	2013
Uttar Pradesh	Rihand III power station Unit 5	NTPC	500		Newly	2012
Uttar Pradesh	Rihand III power station Unit 6	NTPC	500		Construction	2013
Uttar Pradesh	Rosa Thermal Power Plant	Reliance Power	1200		Newly	2010-2012
Uttar Pradesh	Singrauli Super Thermal Power Station Stage III	NTPC	500		Planning	
Uttar Pradesh	Tanda power station expansion	NTPC	1320		Planning	
Uttar Pradesh	Welspun Energy Mirzapur power station	Welspun Energy	1320		Early	
Uttar Pradesh	Welspun Ghazipur project	Welspun Energy	1320		Planning	2015
West Bengal	Adra Purulia power station	NTPC and Indian Railways	1320		Cancelled	
West Bengal	Bakreswar Thermal Power Station Unit 6	West Bengal Power Development	660		Planning	
West Bengal	Balagarh power station	CESC	1320	Supercritical	Planning	
West Bengal	Bankura Concast power station	Concast Bengal Industries	20.5		Planning	
West Bengal	Bhushan Steel West Bengal project	Bhushan Steel	1000		Deferred	
West Bengal	Durgapur Projects Limited power station unit 8	Durgapur Projects Limited	250		Construction	2014
West Bengal	Durgapur Steel City power station	Damodar Valley Corporation	1000		Newly	2011-2012
West Bengal	Farakka III power station (Unit 6)	NTPC	500		Newly	2011
West Bengal	Haldia Energy power station Phase 1	CESC	600		Construction	2014
West Bengal	Haldia Energy power station phase 2	CESC	1400		Planning	
West Bengal	Katwa Super Thermal Power Project (NTPC)	NTPC	1600		Deferred	
West Bengal	Larsen & Tubro power station	Larsen & Tubro	3200		Planning	
West Bengal	Mejia power station phase II units 1 and 2	Damodar Valley Corporation	1000		Newly	2010-2011
West Bengal	Raghunathpur Thermal Power Station phase I	Damodar Valley Corporation	1200	Subcritical	Construction	2013

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West Bengal	Raghunathpur Thermal Power Station phase II	Damodar Valley Corporation	1320	Supercritical	Planning	
West Bengal	Sagardighi Thermal Power Station Phase II	West Bengal Power Development	1000	Subcritical	Construction	2014
West Bengal	Salboni 1 (CPP-IV)	JSW Bengal Steel	300		Construction	2014
West Bengal	Salboni 2 and 3	JSW Energy	1320	Supercritical	Advanced	2016-2017
West Bengal	Santaldih Thermal Power Station unit 6	NTPC	250	Subcritical	Newly	2011
West Bengal	Santaldih Thermal Power Station units 7 and 8	NTPC	1320	Supercritical	Cancelled	