



THE CHINA NAVIGATION CO. LTD.

Environmental Report 2006

including the Liner Trade subsidiaries:





Foreword

A Step Forward

It is my pleasure to introduce the CNCo Environmental Report 2006. Historically, CNCo has always placed a strong emphasis on preserving the environment in which it operates and has sought ways in which to conserve resources and minimize the impact our operations have. A great deal of investment has gone into this process, and rightly so.

However the end of 2006 has marked a significant step forward. The increasing evidence of the threat posed by global warming has persuaded us of the need to increase our efforts and provide some leadership on the issue within the shipping industry. In the coming year CNCo will be looking at a number of possible initiatives to benefit the environment (in particular, ways to limit our carbon emissions), assessing new 'green' technology for installation on our fleet and assisting the scientific community with vital research projects. CNCo will aim to achieve the Swire Group policy of being amongst the 'Best in Class'.

However, perhaps most importantly for the short term, we are also strengthening our reporting standards. By widening the scope of environmental data we collect

from our ships and offices worldwide we will develop a clearer picture of the impact we have on the environment and a better understanding of how effective our year-on-year efforts are at minimizing that impact. To this end, CNCo will now be publishing a full annual Environmental Report starting from January 2008 that will cover the year of 2007 and document our aims for 2008.

'Esse Quam Videri'

By implementing a full reporting process, we intend to live up to our company motto – 'Esse quam videri', or 'to be rather than to seem to be'. Through disclosure of our performance, we will hold ourselves accountable to our policies, and will ensure that we 'do what we say' and 'say what we do'.

Richard Kendall
Managing Director



CNCo Environmental Policy

Protection of the environment is an integral part of The China Navigation Company's (CNCo) business philosophy and CNCo will aim to ensure that its business practices minimise, or eliminate where possible, detrimental effects on the environment.

CNCo's staff, both at sea and ashore, will carry out their work giving environmental concerns the highest priority possible and, by doing so, aspire to being "best in class" concerning all related environmental matters.

To achieve these aims CNCo will:

- Seek to optimise its operations by using the latest technology and best practice to achieve operational efficiency in reducing CNCo's effect on the environment.
- Comply with all international and local environmental regulations and, where laws or regulations do not exist, ensure that best practice standards are met.
- Regularly review its policy to ensure that it is up to date and meeting its objectives in protecting the environment.
- Train all its employees to ensure that they can be proactive and have a positive attitude to all environmental issues.
- Provide its shore management with the most up to date environmental training to ensure that all shore staff are fully advised of all international environmental laws and standards and can apply them in CNCo's business dealings.
- Engage with its customers and contractors during its business dealings to ensure that they carry out their operations in accordance with good environmental principles that meet or exceed existing legal standards. Where a customer or contractor does not have an environmental policy or is not following any environmental standard, CNCo's staff are to encourage them to cooperate with its policy during its business relationship with them.
- Publish its operational data in the public domain to show CNCo's performance for environmental protection.

Richard Kendall
Managing Director



Scope of Report

CNCo's Activities

The China Navigation Co. Ltd. (CNCo) is the deep-sea shipping arm of John Swire & Sons Ltd. The company is UK-registered and has established Owner's Representative offices in Hong Kong, Australia, New Zealand, Japan, Singapore, Indonesia, Papua New Guinea, India and the United States.

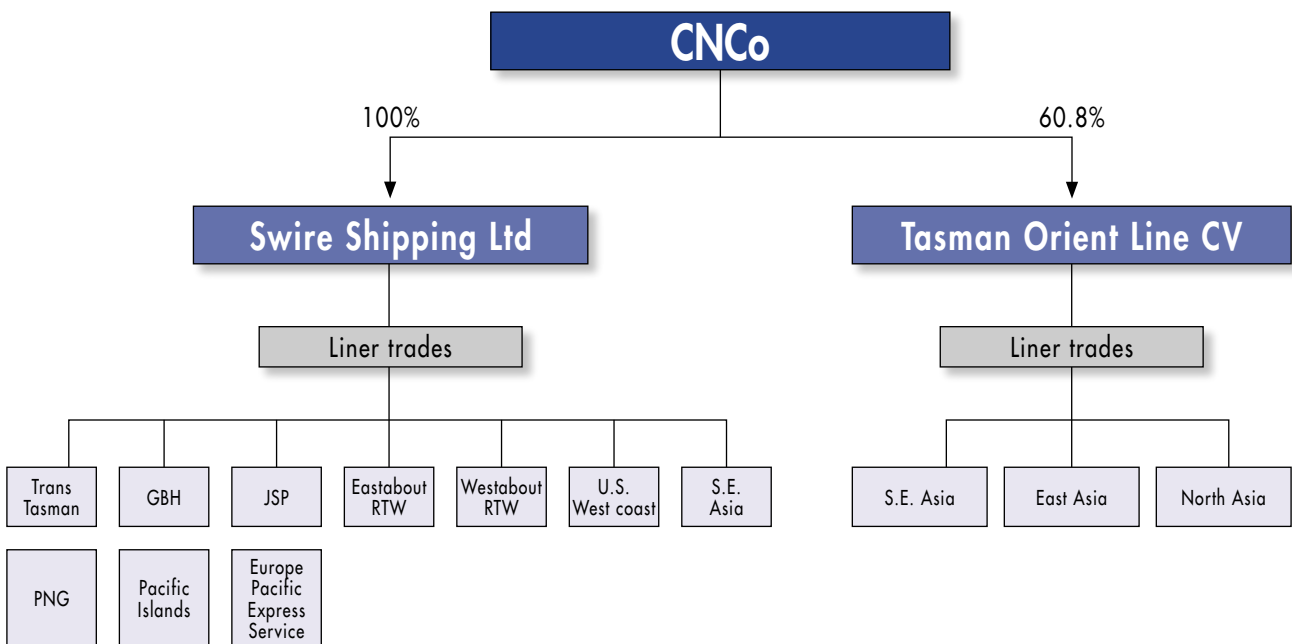
CNCo's liner services managed by Swire Shipping and Tasman Orient Line serve over 130 ports worldwide employing a mix of owned and chartered vessels. CNCo also operates a global network of shipping agencies and stevedoring operations. In addition, CNCo has developed diversified drybulk interests involving a Capesize pool and bulk logistics activities.

The group's ownership and managed liner trade structure is shown below:

Fleet covered in CNCo's Environmental Report as of 26.01.07

- CNCo: 2 vessels
 - 1 x Panamax – owned and operated by CNCo
 - 1 x Capesize – operated by CNCo
- Swire Shipping: 13 CNCo vessels [11 Multipurpose, 2 container], 20 chartered, 2 sub-let [Multipurpose and Conbulkers]
- TOL: 4 CNCo vessels [Multipurpose], 7 chartered [Multipurpose], 2 sub-let [Multipurpose]

The scope of this Environmental Report covers all vessels owned, chartered or sublet by CNCo and its managed liner trades, in addition to shore-based activities in the respective offices worldwide, (initially excluding CNCo's Agency network).





Marine Environmental Protection

Introduction

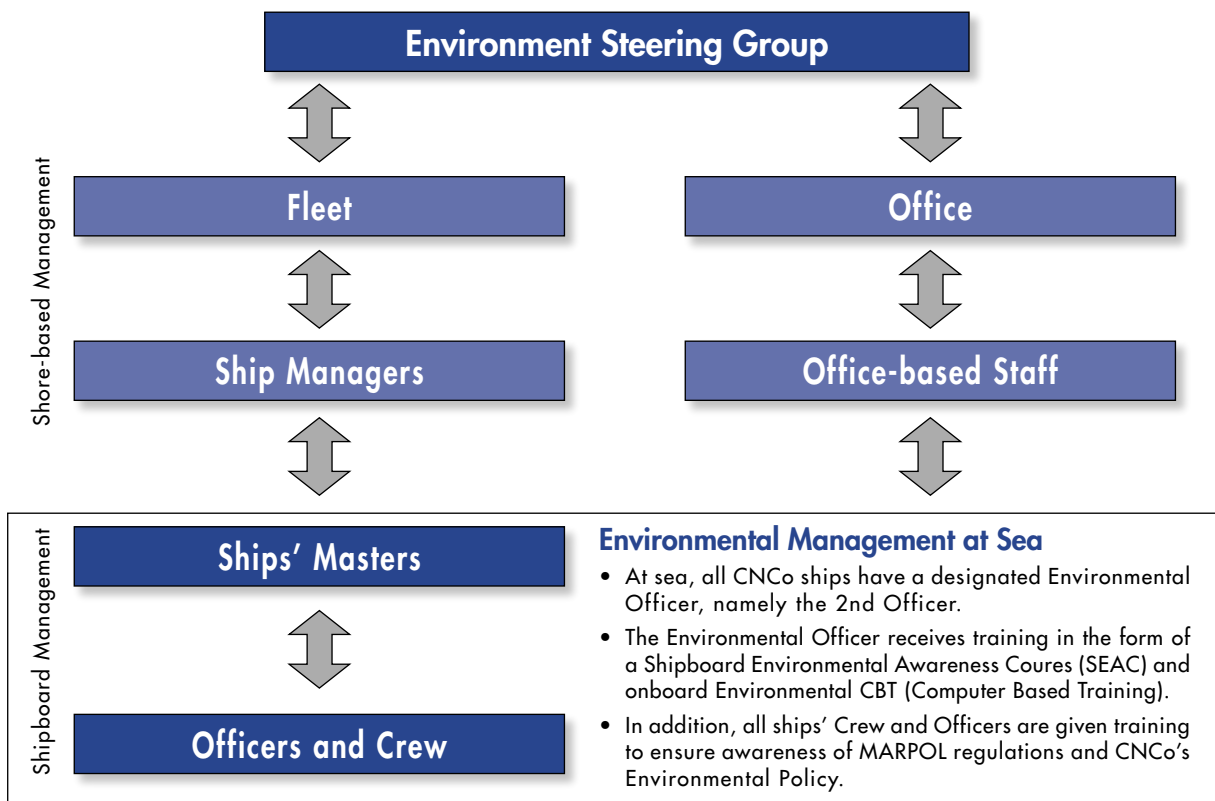
Pollution of the marine environment from ships may originate from a variety of sources, including accidental and operational pollution. Accidental pollution may result from the loss of cargo or fuel after a grounding or collision and from minor accidents on board such as a hose breaking or a tank overflowing. Operational pollution results from the discharge of shipboard generated wastes such as garbage, sewage, dirty bilge water and tank washings as well as from engine exhaust and tank venting emissions.

Measures to prevent marine pollution and to improve maritime safety are addressed by the International Maritime Organization (IMO), a United Nations agency dealing with maritime affairs. The control of pollution of the seas by ships is addressed in the International Convention for the Prevention of Pollution from Ships (MARPOL).

The MARPOL convention lays down requirements for construction (e.g., double hulls on oil and chemical tankers), inspection (including enhanced surveys on existing tankers), equipment (i.e., oily/water separators), record keeping (e.g., Oil Record Books, Cargo Record Books) and in-port procedures (i.e., receipts for the discharge of wastes to shore reception facilities, tank cleaning in port). It further includes six technical annexes, which deal with pollution from oil, chemicals, packaged goods, garbage, sewage and air emissions.

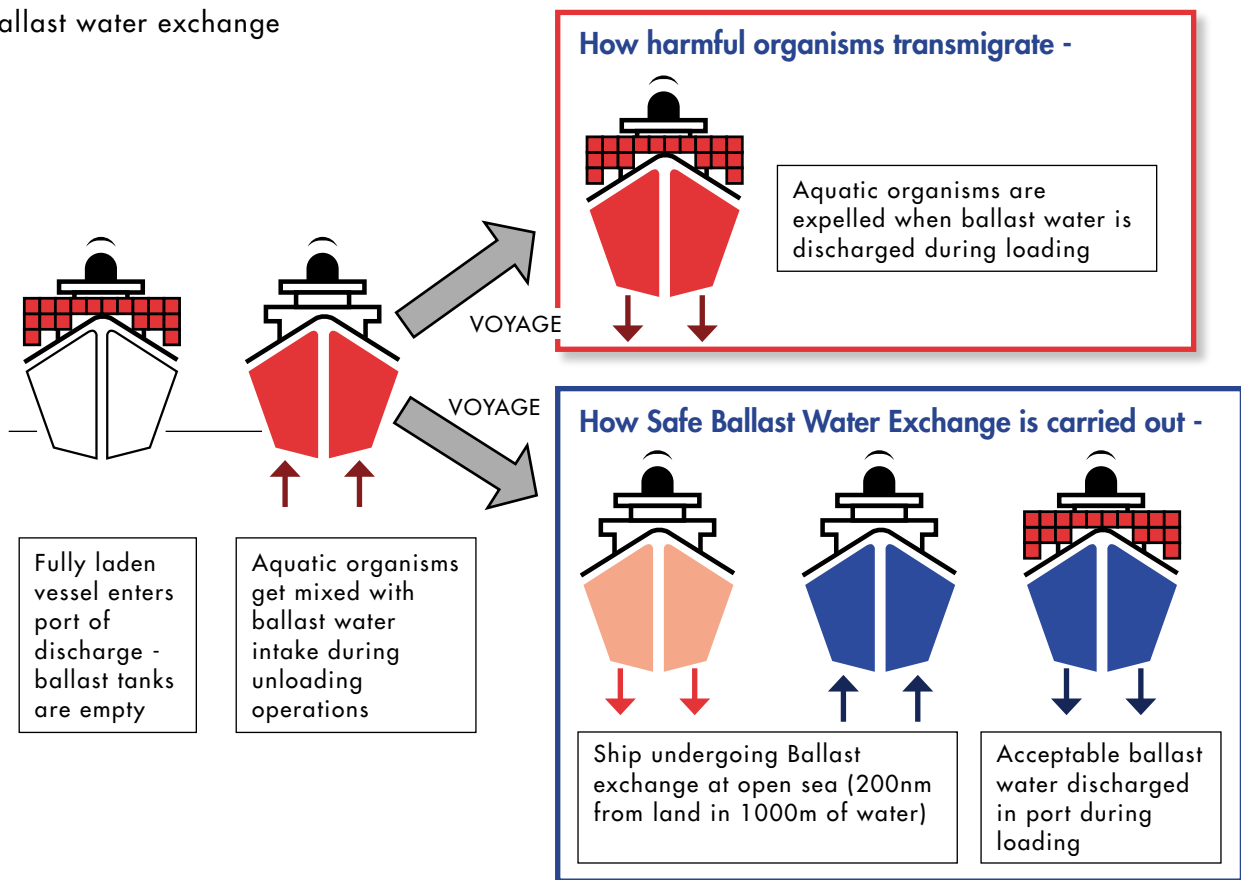
CNCo's Environmental Management Structure

A CNCo Environmental Steering Group was established in 2003. The Group meets periodically in order to oversee the implementation of CNCo's Environmental Policy.



Ballast Water Management

Ballast water exchange



To ensure safe operation of a ship, it is necessary to stabilise the vessel and enhance the efficiency of the propeller by allowing seawater into the ballast tanks. This ballast seawater is taken on or discharged in amounts corresponding to the mass of cargo loaded or unloaded in port, and is adjusted for the vessel's trim and draft. However, ballast water discharged in port may contain alien marine organisms, transported from another marine environment, which can have adverse effects on the local ecosystem.

The International Maritime Organisation (IMO) adopted guidelines to prevent the invasion of foreign aquatic organism at unloading destinations in 1997. More recently the International Convention for the Control

and Management of Ships' Ballast water and Sediments was adopted at a diplomatic conference held at IMO's headquarters in London in February 2004. This treaty obligates vessels to treat ballast water to be released with a device meeting a specified standard from 2016 onwards.

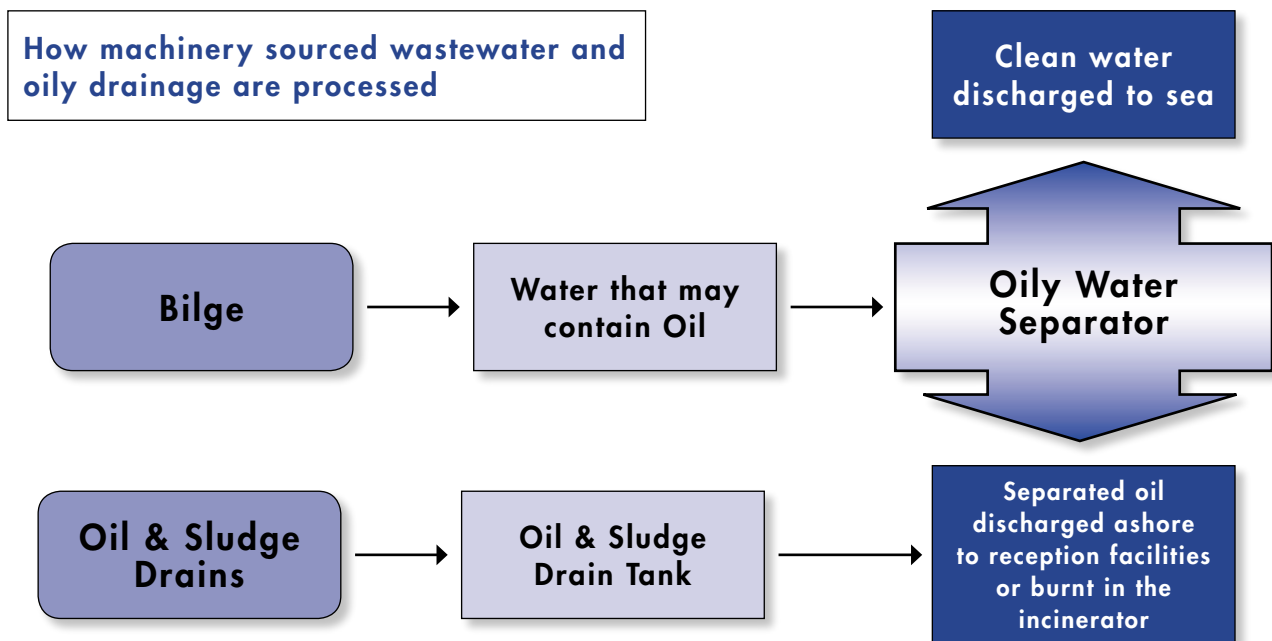
CNCo has adopted a policy where ballast water is only exchanged at deep-sea to prevent transmigration of species, this is in accordance with the guidelines mentioned above. In addition, all CNCo vessels are provided with a ballast plan, a measure that is aimed at ensuring that CNCo operates at a level higher than expected mandatory regulations.



Oily Wastewater

Wastewater that contains oil accumulates on board a vessel as a result of open maintenance, leaks in pipes, machinery etc. IMO regulations require that in the processing of wastewater, water containing oil must first be separated into oil and water, and only then may the water be discharged from the vessel (in designated waste water disposal areas).

CNCo has adopted a policy whereby all vessels are fitted with oily water separators including spare monitor alarms to ensure no oil is discharged over the side. Furthermore, it is company policy to dismiss any crewmember found to be disobeying IMO regulations regarding the processing of wastewater.





Shipboard Waste

Vessels are not only a means of cargo transportation, but are also the continuous living areas for their crews. Consequently, apart from waste resulting from dunnage used in day-to-day cargo operations, a wide range of garbage including paper, food, bottles, cans and other household waste is produced.

CNCo vessels separate garbage into various categories for recycling and disposal. A waste management (or general EHS) officer is appointed for each vessel. Food scraps and other nonharmful waste is ground up and disposed of in designated areas. Plastics are held on board the vessel until arrival in port for discharge and disposal/recycling. All disposals are recorded in a "Garbage Record Book" and entered into the ships' monthly data reporting system (see Environmental Data Reporting 2006 section).

Emissions

Regulations for the Prevention of Air Pollution from Ships were adopted in the 1997 Protocol to MARPOL 73/78 and are included in Annex VI of the Convention; they came into effect on 19th May 2005.

MARPOL Annex VI sets limits on Sulphur oxide (SO_x) and Nitrogen oxide (NO_x) emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances. The annex includes a global cap of 4.5% m/m on the sulphur content of fuel oil and calls on IMO to monitor the worldwide average sulphur content of fuel after the Protocol came into force.

Annex VI contains provisions allowing for special SO_x Emission Control Areas (SECAS) to be established with more stringent controls on sulphur emissions. In these areas, the sulphur content of fuel oil used onboard ships must not exceed 1.5% m/m. Alternatively, ships must fit an exhaust gas cleaning system or use any other technological method to limit SO_x emissions. The Baltic Sea Area is designated as a SO_x Emission Control area in the Protocol.

CNCo ensures that Sulphur content on all fuel oil used is below 4.5% m/m. In 2005 the average sulphur content of fuel used by CNCo vessels was 2.93%, dropping to 2.90% in 2006.

In addition CNCo utilises fuel saving measures to help reduce emissions. Measures include:

- The reduction of cruising speed where appropriate
- Weather routing
- Regular maintenance of the main engine, generators and boilers
- Hull and propeller cleaning
- Gritblasting ship bottoms in dry dock
- Use of antifouling paints



Environmental Data Reporting 2006

Notes

- (1) It should be noted that Environmental Data reporting is still in its early stages at CNCo. While CNCo goes to every reasonable length to ensure its accuracy, we are unable to guarantee the data 100%. For example, as this is only the second year of reporting, changes in data may be due to an improvement in accurate data collection rather than a sudden change in CNCo's environmental performance. Any significant year-on-year changes (positive or negative) for which CNCo is able to attribute a specific cause are highlighted.
- (2) Data reporting for CNCo-owned ships is not yet entirely consistent with that of the ships which are chartered in. For example, 'distance traveled' data is reported by CNCo-owned ships but not by chartered ships. In addition, data relating to the cargo carried by each ship is reported in DWT (see below for definitions) by owned ships, but in RT by chartered ships. This means that for analysis purposes, fuel efficiency for CNCo-owned ships is measured in fuel consumed per ton-mile, whereas for chartered ships it is measured in fuel consumed per RT. This does not allow a complete analysis of fuel efficiency as it excludes the distance traveled. For this reason CNCo's data reporting procedures are being improved (see Section 6) so that a full data set will be available for analysis for the 2007 Environmental Report.
- (3) For graph scaling purposes, some data is multiplied by a specific factor. This is stated in all instances.

Definitions

The following is a table defining the terms used in this Environmental Report.

Term	Abbreviation	Definition
Metric Ton	mt	Equivalent to 1,000 kilograms
Nautical Mile	nm	Measurement of distance used in the maritime industry - equivalent to one minute of latitude, or 1,853 metres
Deadweight Tonnage	dwt	Measurement of weight in metric tons, referring to a ship's cargo, fuel and stores
Kilograms	kg	Measurement of weight
Revenue-Ton	RT	If cargo is rated as weight or measure (W/M), whichever produces the highest revenue is be considered the revenue ton
Ton-Mile	-	Nautical Miles travelled multiplied by Metric Tons of cargo carried
Marine Fuel Oil	MFO	Used by ships' engines and boilers for steaming from port to port and generating electricity
Marine Diesel Oil	MDO	Occasionally used on CNCo ships' propulsion engines, boilers and for generation electricity
Gas Oil	GO	Very light form of Diesel Oil, used in propulsion engine and generation of electricity on <i>Erawan</i>



Waste Management 2005-2006 – CNCo-owned Fleet only

Classification	Items	Total Amount Discharged (m ³) 2005			Total Amount Discharged (m ³) 2006		
		To Sea	To Shore	Incinerated	To Sea	To Shore	Incinerated
Category 1	Plastic	-	447	-	-	452	-
Category 2	Biodegradable paper and timber packing materials	56	199	56	82	375	30
Category 3	Ground biodegradable paper goods, rags, glass, metal etc	56	104	38	46	99	39
Category 4	Paper products, rags, glass, metal, bottles etc	172	226	359	152	287	177
Category 5	Food waste	312	72	90	297	119	17
Category 6	Incinerator ash (excl. plastic which may contain toxic / heavy metal residues)	19	23	-	23	23	-
	Bilge water	6,659	89	-	5,147	48	-
	Waste Oil & Water	-	1,726	1,190	-	3,164	4,001
	Lead Acid Batteries	-	61	-	-	78	-
	Drums (Oil/paint/chemical)	-	100	-	-	259	-
COST	Cost of landing waste products		US\$19,765.2			US\$35,090	

Waste per man-day

	Sum of Categories 1, 3, 4 and 5 - m ³	Total Man-days	Waste Produced Per 100 Man-days
2005	1,877	167,175	1.12
2006	1,684.5	161,454	1.04

By adding together the total waste produced in Categories 1, 3, 4 and 5 (those which are most directly attributable to non-cargo-related activities) and dividing this figure by the total man-days worked, it is possible to establish how much waste is produced per person on the CNCo Fleet. The comparison between 2005 and 2006 shows a 7% reduction in waste produced, from 1.12 m³ to 1.04 m³ for every 100 mandays.



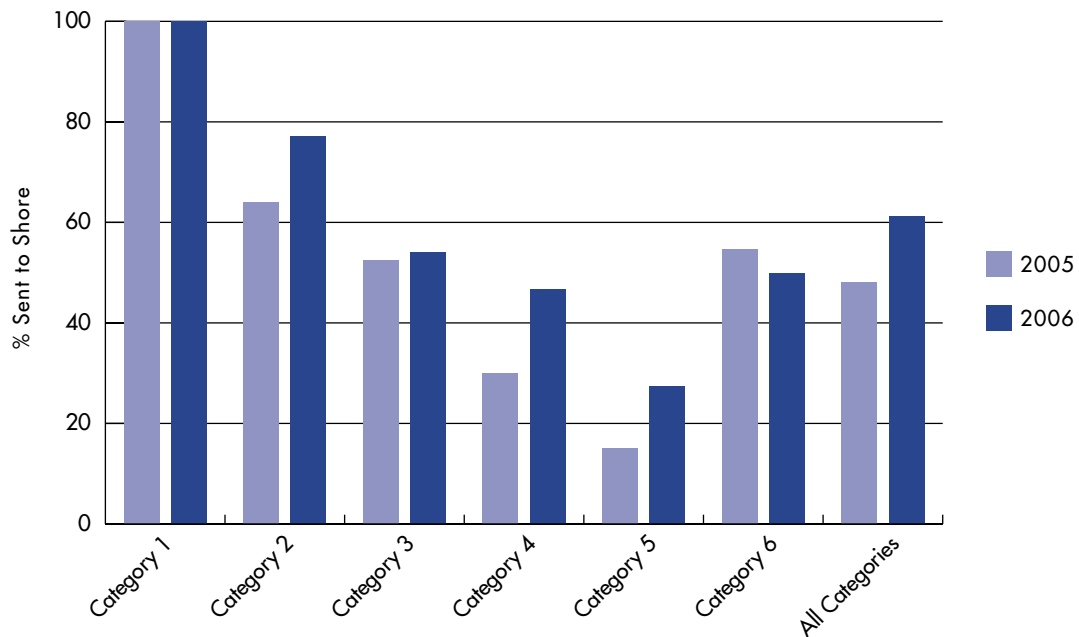
Waste Management 2005-2006 – Analysis

Classification	Items	Total Amount Discharged (m ³) 2005			Total Amount Discharged (m ³) 2006		
		Total	Amount to Shore as % of Total	Amount incinerated as % of Total	Total	Amount to Shore as % of Total	Amount incinerated as % of Total
Category 1	Plastic	447	100	-	452	100	-
Category 2	Biodegradable paper and timber packing materials	311	64	18	487	77	6
Category 3	Ground biodegradable paper goods, rags, glass, metal etc	198	52	19	184	54	21
Category 4	Paper products, rags, glass, metal, bottles etc	758	30	47	616	47	29
Category 5	Food waste	474	15	19	433	27	4
Category 6	Incinerator ash (excl. plastic which may contain toxic / heavy metal residues)	42	55	-	46	50	-
	Bilge water	6,748	1	-	5,195	1	-
	Waste Oil & Water	2,916	59	41	7,165	44	56
	Lead Acid Batteries	61	100	-	78	100	-
	Drums (Oil/paint/chemical)	100	100	-	259	100	-

Please turn to the next page for a graphic representation of this table.

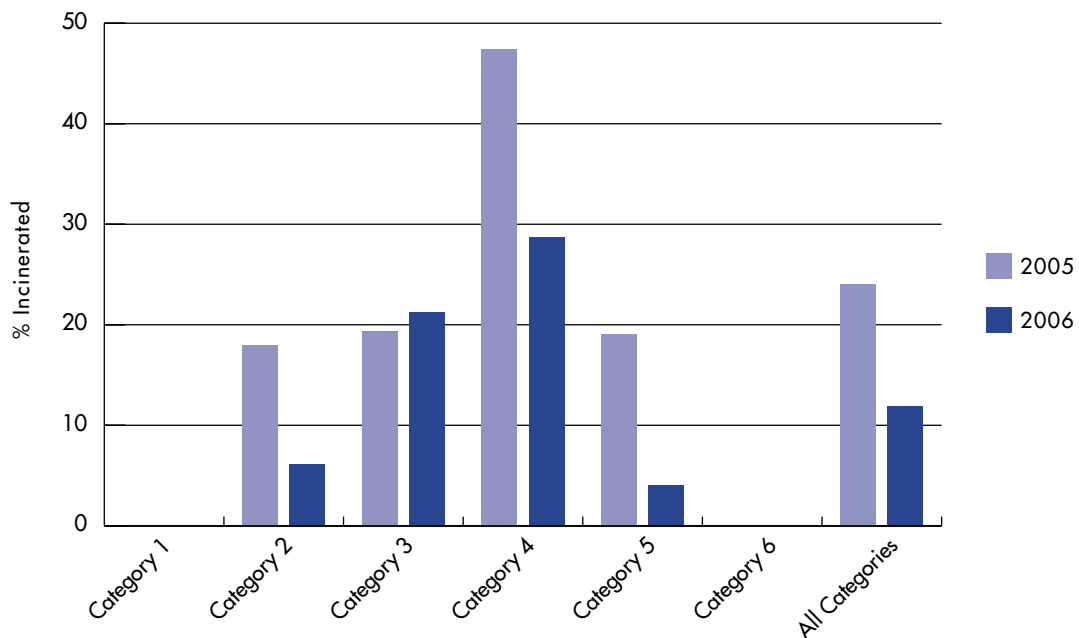


1. Amount of Waste Sent to Shore as % of Total Waste, by Waste Category



Graph 1 shows a significant improvement in waste management by the CNCo-owned fleet. Between 2005 and 2006 CNCo has increased the proportion of waste landed ashore (as opposed to incinerating or releasing to the sea) from 48% to 61%. This equates to an increase in costs of US\$15,325 to a total of US\$35,090 for 2006.

2. Amount of Waste Incinerated as % of Total Waste, by Waste Category



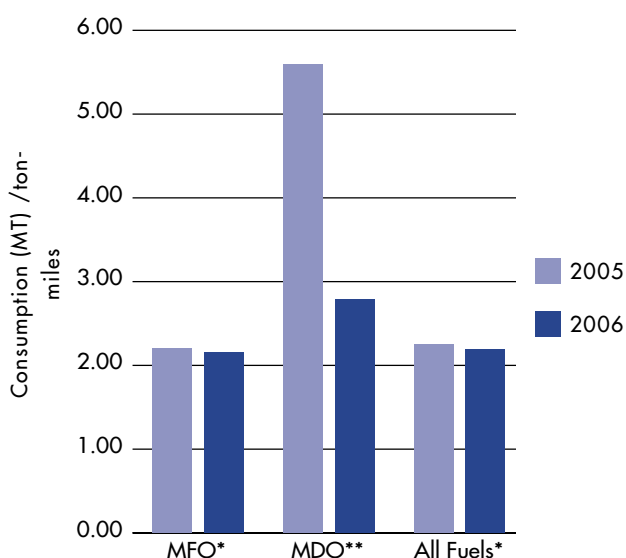
Graph 2 also shows an improvement. Waste categories 2, 4 and 6 all reduced significantly, leading to an overall reduction of all categories from 24% to 12%. This means that in 2006, CNCo-owned ships incinerated 12% of all its waste, compared with 24% in 2005.



Fuel consumption 2005-2006 – CNCo-owned Fleet only

Type	2005		2006	
	Total Amount	Amount/ton-mile	Total Amount	Amount/ton-mile
MFO consumption - mt	132,508	2.20	143,005	2.16
MDO consumption - mt	3,374	5.59	1,847	2.79
All Fuel	135,882	2.25	144,853	2.19
Cargo Loaded - mt	4,656,632	—	4,715,392	—
Distance Travelled - nm	1,295,452	—	1,403,354	—
MFO Sulphur content (average)	2.93%	—	2.91%	—

CNCo Fleet Fuel Consumption 2005-2006



* Figure multiplied by factor of 100mn

** Figure multiplied by factor of 10bn

This graph shows the fuel consumed by the CNCo-owned fleet in 2005 and 2006 divided by the ton-mile figure. In other words, this shows how much fuel CNCo's ships burn for every ton-mile.

As the graph shows, MFO efficiency has improved marginally, while MDO has seen a marked improvement. This is due to the fact that in 2005 one of CNCo's ships suffered a boiler failure, rendering her unable to use MFO as fuel, with MDO having to be substituted until repairs could be made. Once the boiler was repaired, the ship was able to return to using MFO, resulting in lower amounts of MDO consumed for 2006.

Overall the data collected shows a 2.7% improvement in fuel efficiency for 2006. This is thanks to prudent ship management, regular ships' docking and maintenance activities such as gritblasting hulls and applying super-polishing paints which reduce friction in the water and lower fuel consumption. In addition, CNCo ships now utilize Weather Routing software to ensure high fuel efficiency by avoiding unfavourable weather conditions – for more information, see the section 'Weather Routing' on p20.



Refrigerant consumption 2005-2006 – CNCo-owned Fleet only

	Living Area Refrigerant	Cargo Refrigerant	Total - kg
	R22 - kg	R134a - kg	
2005	897.3	102.0	999.30
2006	1,639.00	21	1,660.00

R22 refrigerants are used for ships' systems – e.g. Living Area air-conditioning. R134a is used specifically for containerised cargo that requires refrigeration (known as 'Reefer' containers). 2006 shows a significant decrease in use of R134a within the CNCo-owned Fleet. However the use of Living Area refrigerants has almost doubled from 2005 to 2006. By looking at individual ships' reports CNCo has been able to identify specific ships which are using above-average levels of refrigerant, enabling us to rectify the problem.

Summary of CNCo-owned Fleet Emissions

Intertanko, the leading Technical Spokesgroup for the tanker industry, has developed a system to index ships' emissions in order that they can be compared year-on-year. Below is the data from the CNCo Fleet, entered into the Intertanko spreadsheet:

	MFO Consumed - mt	MDO/MGO Consumed - mt	Distance nm	Cargo dwt	CO2 Index	GHG Index	Total SO2 Emissions - MT	Emissions gr/ton-mile
2005	132,508	3,374	1,295,452	4,656,632	0.0702	0.0708	7,777	0.001289
2006	143,005	1,847	1,403,354	4,715,392	0.0682	0.0691	8,323	0.001258

Analysing the change from 2005 to 2006, the results are positive. 2006 shows a 2.9% decrease in the CO2 index and a 2.4% decrease in the GHG index. Overall emissions per ton-mile were down 2.4% in 2006.

Ballast Management

	Total Amount Exchanged (m ³)	Revenue Tons	Total Ballast Exchanged / RT
2005	1,116,731	8,399,220	0.13
2006	1,552,815	8,512,635	0.18

The data collected shows a 38% increase in the volume of ballast exchanged per revenue ton. This increase benefits the environment by minimising unwanted transmigration of species.



Fuel consumption 2005-2006 – entire Fleet (CNCo-owned and chartered)

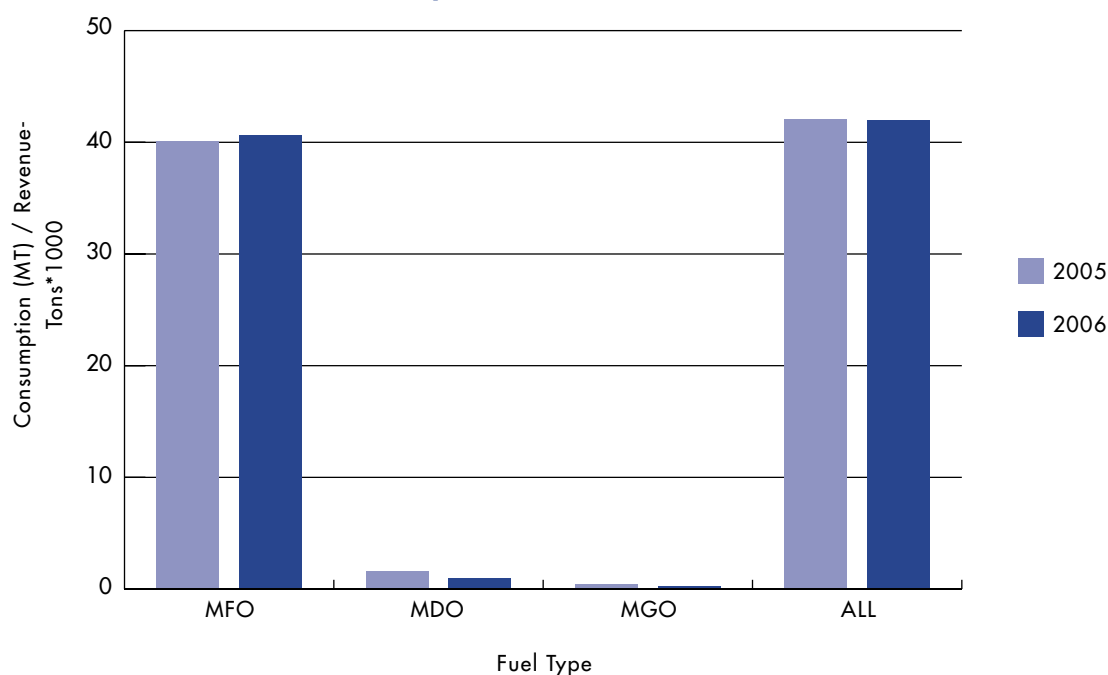
The table below shows the quantities of fuel consumed in metric tons, by fuel type, for 2005 and 2006:

	mt MFO	mt MDO	mt MGO	mt TOTAL
2005	336,343.00	13,199.76	3,545.14	353,087.90
2006	345,950.35	8,324.22	3,122.64	357,397.20

The table below displays the quantities of each fuel type consumed, as a proportion of the Revenue-Tons of cargo carried for the years 2005 and 2006:

All figures multiplied by factor of 1,000					
Revenue Tons	mt MFO / RT	mt MDO / RT	mt MGO / RT	mt ALL FUEL / RT	
2005	8,399,220.00	40.04	1.57	0.42	42.04
2006	8,512,635.00	40.64	0.98	0.37	41.98

Fuel Consumption – All Vessels – 2005-2006



This graph demonstrates that more MFO was burnt per RT during 2006 than 2005. However, less MDO and MGO was burnt per RT during 2006, resulting in an overall slight decrease in fuel consumption per RT.



Environmental Data Reporting - Looking Forward


From January 2008 CNCo will issue an expanded Environmental Report. We intend to measure and report the full environmental impact of CNCo's operations, and will therefore begin recording data across all sea and landside activities from January 1st 2007.

'At Sea' Data reporting

2006 saw a major improvement in the quality of environmental data reporting from CNCo's fleet. In response to a proposition from Intertanko, the lead technical spokesperson of the tanker

industry, CNCo has taken the decision to upgrade the functionality of the monthly reporting system, enabling us to now index our ships' emissions.

We will be able to report the levels of Sulphur, Carbon and CFC gas emissions from our ships; combining this with a 'per ton mile' figure for the amount of cargo and distance we carry it will produce Indices for Carbon and Greenhouse Gas emissions. This information will be used to assist CNCo's decision-making to achieve more environmentally friendly standards.

THE CHINA NAVIGATION CO. LTD.  **MONTHLY SHIPS ENVIRONMENTAL REPORT**

Vessels Details
 Name: KIRIBATI CHIEF Call Sign: VBOB Month: August
 Type: Container IMO No: 8809189 Year: 2006 Approximate Trading Area: Pacific Island - Australia

Waste Products
 Amount Discharged (m³) Incinerated (m³)
 To Sea To Shore Onboard
 Category 2: 0.0 0.0 0.0
 Category 3: 0.0 0.0 0.0
 Category 4: 1.0 0.4 4.3
 Category 5: 1.0 0.5 0.0
 Category 6: 0.05 0.1 0.0
 Bilge Water: 18.0 (1)
 Category 1: 0.0
 Waste Oil: 0.0 8.2
 Lead Acid Batteries: 0
 Drums: 0 (1)
 Total Cost of landing Waste Products (USD):

Refrigerants
 Type Used
 1 R-22 x 0.0 kg
 2 x 0.0 kg
 3 x 0.0 kg
 Cylinders returned ashore
 x Exchange Cylinders
 x Disposable Cylinders
 Total Gas Refill: 0.000 tonnes

Fuel, Cargo & Ballast
 Ballast Water exchanged: 912 m³ (2) Total Loaded
 Cargo loaded: 16424 tonnes (2) Distance
 Diesel Oil consumption: 0.0 tonnes 7278 Nm
 Sulphur content: 0.0 % (2) Total Ballast
 Fuel Oil consumption: 567.2 tonnes Distance
 Sulphur content: 0.0 % (2) 0 Nm
 Factor: Tonne - Miles: 119533872

Lube Oils
 Total Engine Oils consumed
 (1) System Oils: 0 Ltr
 (2) Cylinder Oil: 0 Ltr
 Total oils consumed as follows:
 (1) Main Engine System + Generator Startup
 (2) Main Engine Cylinder Oil
 Total Oils: 0.00 tonnes

Vapour & Emissions Indexes
 CO2 Index: 14.776 GHG Index: 14.776 Total SO2 Emissions: 0.000 Emissions Index: 0.000 (Intertanko - 8014000)

Garbage categories
 Cat. 1: Plastic
 Cat. 2: Floating dunnage, lashing, or packing materials
 Cat. 3: Discard paper products, rags, glass, metal, bottles, crockery, etc.
 Cat. 4: Paper products, rags, glass, metal, bottles, crockery etc.
 Cat. 5: Food waste
 Cat. 6: Incinerator ash except from plastic products which may contain toxic or heavy metal residues

Notes:
 (1) Brief summary - PNG to New Zealand, US East Coast, Australia Pacific Islands
 (2) Sulphur content - if more than one bunker supply, then average %
 - if no bunker supply, then sulphur content from last bunker receipt
 (3) Bilge water via Oil Water Separator
 (4) Includes paint, dunnage and slushings
 (5) Total cargo loaded for month, ie 1000 t for port 1, 1000 t for port 2 = 2000 tonnes
 If no cargo loaded for the month, then use total cargo remaining onboard at the end of the month
 (6) Total ballast exchanged as per Ballast Exchange Reports



Below are the data points we will report from CNCo ships from 1st January 2007. Blue text denotes data that will be reported both by CNCo-owned ships and ships which CNCo charters from 3rd parties.

Voyage Data		CNCo-owned Ships	Chartered-in Ships
Trade Data	Cargo carried - revenue tonnes	✓	✓
	Distance travelled (berth-to-berth)	✓	✓
Ballast	Ballast exchanges - m ³	✓	✗
Efficiency	DO consumed / revenue tonne - mile	✓	✓
	FO consumed / revenue tonne - mile	✓	✓
	DO consumed / mile	✓	✓
	FO consumed / mile	✓	✓
	System Lubes consumed per mile - ltr/mile	✓	✗
	Cylinder Lubes consumed per mile - ltr/mile	✓	✗
	Generator System Lubes consumed - ltr/1000 kWh	✓	✗
Waste Management			
Garbage	Category 1 - m ³ - to Shore	✓	✗
	Category 2 - m ³ - Sea/Shore/Incinerated	✓	✗
	Category 3 - m ³ - Sea/Shore/Incinerated	✓	✗
	Category 4 - m ³ - Sea/Shore/Incinerated	✓	✗
	Category 5 - m ³ - Sea/Shore/Incinerated	✓	✗
	Category 6 - m ³ - Sea/Shore/Incinerated	✓	✗
	Category 7 - m ³ - Dunnage - to Shore	✓	✓
Recycling	Paper - m ³	✓	✗
	Plastic - m ³	✓	✗
	Bottles - m ³	✓	✗
Bilge Water	m ³ - to Sea/Shore	✓	✗
Waste Oil	m ³ - to Shore/Incinerated	✓	✗
Acid batteries	numbers consumed	✓	✗
Drums	numbers consumed	✓	✗
Emissions			
CFCs	Total number of reefers operated	✓	✓
	% of reefers using R134a	✓	✓
	Total amount of R134a supplied to reefers - kg	✓	✓
	Total amount of R22 supplied to reefers - kg	✓	✓
	Total amount of R134a supplied to Living Area - kg	✓	✗
	Total amount of R22 supplied to Living Area - kg	✓	✗
GHGs	Total SO ₂ emitted - tons	✓	✓
	CO ₂ index - gr/revenue - ton miles	✓	✓
	GHG index - gr/revenue - ton miles	✓	✓
	Emissions index - gr/revenue - ton miles	✓	✓
Fuel and Oils			
Fuel	Fuel Oil consumption - tons	✓	✓
	Diesel Oil consumption - tons	✓	✓
	Sulphur content of Fuel Oil - %	✓	✓
	Sulphur content of Diesel Oil - %	✓	✓
Lubricating Oils	System Lubes consumed - ltr	✓	✗
	Cylinder Lubes consumed - ltr	✓	✗
	Generator System Lubes consumed - ltr	✓	✗



'Landside' Data reporting

In order to gain a full understanding of CNCo's impact on the environment, from 1st January 2007 all offices of CNCo, Swire Shipping and TOL will be reporting the following data points:

Resource Consumption

Electricity	Amount consumed - kWh % lightbulbs energy saving
Paper	Amount used % of paper which is from recycled source % paper which is chlorine-free Amount recycled
Per Person	Headcount of each office kWh / person Paper used / person
Business Travel	Airmiles traveled by management Airmiles traveled by crew and officers

The data will be collected on a monthly basis. CNCo Hong Kong will retain these records in order to track the environmental performance of each office over time.



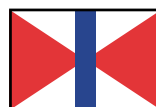
CNCo's Environmental Initiatives 2006

CNCo is continually seeking ways to reduce the impact we have on the environment. Here is a small selection of CNCo's initiatives during this year.

Swire National Oceanography Centre Ocean Monitoring System (SNOMS)



**National Oceanography
Centre, Southampton**
UNIVERSITY OF SOUTHAMPTON AND
NATURAL ENVIRONMENT RESEARCH COUNCIL



SWIRE

The Swire Group Charitable Trust has donated £100,000 to sponsor a research project being carried out by the UK's National Oceanographic Centre, based at Southampton University.

The research aims to establish the role that the ocean plays in reducing the rate of global warming by absorbing Carbon Dioxide (CO₂). At present 30% to 50% of Carbon dioxide generated by man is taken up by the oceans each year. Data is required in order to establish where and how this is happening so that scientists can better predict the likely progress of climate change.

Between January and March 2007 instruments will be installed on CNCo's ship Pacific Celebes (previously Indotrans Celebes) which operates within a round-the-world service and travels through some of the world's most remote marine environments. It

is anticipated that the data gathered will provide an insight into the levels of Carbon absorption in the ocean.

The National Oceanography Centre will be publishing live data once the project goes live at the following website - www.noc.soton.ac.uk/snoms/



Westabout RTW (Bank Line) Retrofitting

Between December 2005 and February 2006 the four ships operating the round-the-world (RTW) Bank Line service were taken off-line for docking.

Aside from the standard maintenance requirements, CNCo took this opportunity to ensure the ships were operating in as environmentally-friendly a manner as possible. Following an environmental audit, it was decided to implement two key modifications.

Firstly, the ships' propulsion efficiency was improved by installing a propeller wake duct and rudder bulb. These increase fuel efficiency by channeling water flow over the propeller more effectively, thus generating additional forward thrust.



A model ship was tank tested using the new configuration and showed an improvement in fuel consumption of between 6 and 9% based on speed and trim. Although this has proved difficult to measure in service due to the ships' varying drafts and trims which are

not always at optimum levels, empirical feedback from the vessels suggests that the saving is about 5% overall. The ships can now manage about 15% of the voyage on one engine burning 33 mt/day, with the remainder of the journey running at 16kts fully-laden, burning 64 mt/day. Pre-docking they only managed about 15kts on the same quantity and could only run on one engine for about 10% of the voyage.

The resulting fuel saving for one engine running per year is about 415 metric tons, a cost saving of \$124,740. With an installation cost for the rudder bulb and wake duct of \$200,000, the upgrade will pay back in 1.6 years.

This is an example of the dual benefits that can be realised from environmental initiatives such as this. For not only did CNCo reduce its fuel consumption and harmful emissions, it also created long-term cost-savings – a demonstration that tackling climate change and commercial endeavour are not mutually exclusive.



Fuel Conservation Initiatives

As a fuel-saving initiative, whenever schedule permits, ships operating on the Eastabout RTW Service (ex Indotrans) are instructed to 'ecosteam' at a reduced speed of 12.5kts. Exact fuel savings are difficult to measure due to the high number of variable factors involved such as amount of cargo carried, trim, weather and currents. However data so far analysed suggests ecosteaming can generate savings of approximately 600mt fuel per ship per voyage, which is approximately 12% of total fuel consumption.



This is another example of how sensible environmental management in the marine industry can achieve significant benefits to the environment while also contributing to the overall business.

Additionally, CNCo is planning to trial the use of very accurate fuel flow on Pacific Java. If successful, this will enable accurate readouts of fuel efficiency to be displayed in real-time on the ship's Bridge, allowing the Officer on watch to optimise the ship's performance through small alterations in speed and vessel trim.

Electric Crane Trial

During 2006 CNCo's Indotrans line (now RTW Eastbound) evaluated the benefits of an electric crane to replace our current electro-hydraulic cranes. The main environmental benefit is a major reduction in the consumption of lube oils. The first crane, manufactured by MacGregor, will be installed as a trial on Pacific Flores in March 2007 at Unithai Dockyard to replace No.2 crane. If the trial proves successful, electric cranes will be considered for future newbuilds or conversions.

Weather Routing

Since Q2 2006 CNCo has been using Weather News International (WNI) to provide detailed weather information directly to the Fleet. Masters use the information to select the optimum course, thereby avoiding unfavourable weather and sea conditions. By optimising the routes in this way, CNCo is able to save fuel that would have otherwise been burnt navigating through difficult weather systems.

Landside Activities

CNCo's Hong Kong-based Head Office has successfully implemented the transition from T4 to T5 type office lights. T5 lights are 30% more energy efficient than T4, and the resulting cost-savings will pay back the cost of conversion within 3 years. In addition we now source only 100% Chlorine free paper for use in the CNCo office.