THE CHINA NAVIGATION CO. LTD.

CNCo Environmental Report
2007

including the Liner Trade subsidiaries:

SWIRE SHIPPING

TASMAN ORIENT

Index

1 Foreword

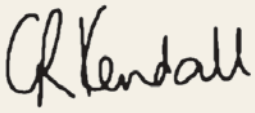
It is with pleasure that I once again introduce CNCo's Environmental Report. CNCo and the Swire group are continuing to devote significant time and resources into facing up to what will become the most significant challenge that has to be met by business as well as the wider community. Risk to industry, especially sectors such as shipping which are currently perceived to leave a poor environmental footprint, cannot be overestimated. Those businesses which do nothing to prepare themselves for future challenges will struggle. CNCo wants a sustainable future and to this end it must take responsibility for the impact its operations have on the environment and do whatever it can to mitigate those risks before its hand is forced by regulation.

Since CNCo's 2006 environmental report, much progress has been made; from the use of efficiency-improving technology such as wake ducts and advanced paint systems, to the engagement with other ship owners to share environmental ideas. CNCo's efforts have been recognised in a number of ways such as the Green Flag Environmental Achievement Award from the Port of Long Beach and being invited to speak in the Green Ship conference in Singapore last year.

CNCo is pleased that its 2007 report has been extended to show our full environmental impact; this means we now report on all of our ships, including those which are chartered in, and our offices including those of subsidiary companies. This is an important step for us and one which will allow us to chart our progress, set ourselves targets and see the effects of our efforts more clearly as we move forwards.

Over the course of 2008 CNCo plans to implement several environmental initiatives. The most high-profile of which will be beginning the work towards gaining ISO14001 accreditation for our fleet and offices. Compliance to this standard will benefit us by providing a formal structure for continuously improving our environmental performance. We are also planning to engage our suppliers and waste disposal contractors on environmental matters in an effort to mitigate the pollution indirectly caused by our operations and encourage better performance on their part. CNCo has also been engaged in designing a series of new building multi-purpose vessels for deployment in its own trades. A great deal of time and resources have been invested in creating an efficient hull design, specifying in a large de-rated engine, an advanced paint system, waste heat recovery system and other features all designed to save fuel and lower CO^2 emissions.

We hope you find this a stimulating and constructive report which forms a small but interesting part of the ongoing environmental dialogue within the maritime industry.



Richard Kendall
Managing Director

2 CNCo Environmental Policy and Swire Group Sustainable development policy

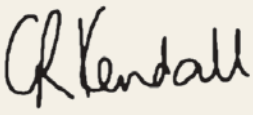
CNCo Environmental Policy

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

John Swire & Sons

CNCo has adopted the Swire Group Sustainable Development Policy to provide a framework for its policy on environment, health and safety, staff, business partner and community issues. This policy is used by CNCo's Head Office to frame the policies, including the Environmental Policy which guide activity on board ships.

Swire Group Sustainable Development Policy

We adopt this policy because:

- Long-term value creation for our shareholders depends on the sustainable development[1] of our businesses and the communities in which we operate.
- We wish to excel as corporate citizens.

Our policy:

- Industry leadership: We will work with others to promote sustainable development in the industries in which we operate.
- In our operations: We will meet or exceed all legal requirements and:
  - Be a good steward of the natural resources and biodiversity under our influence and ensure that all potential adverse impacts of our operations on the environment are identified and appropriately managed.
  - Operate as far as is reasonably practicable in a manner which safeguards the health and safety of all our stakeholders.
  - Strive to be an employer of choice by providing an environment in which all employees are treated fairly and with respect and can realise their full potential.
  - Favour suppliers and contractors who promote sustainable development and encourage the responsible use of our products and services by our customers and consumers.
  - Promote good relationships with the communities of which we are a part and enhance their capabilities while respecting people's culture and heritage

Making it happen:

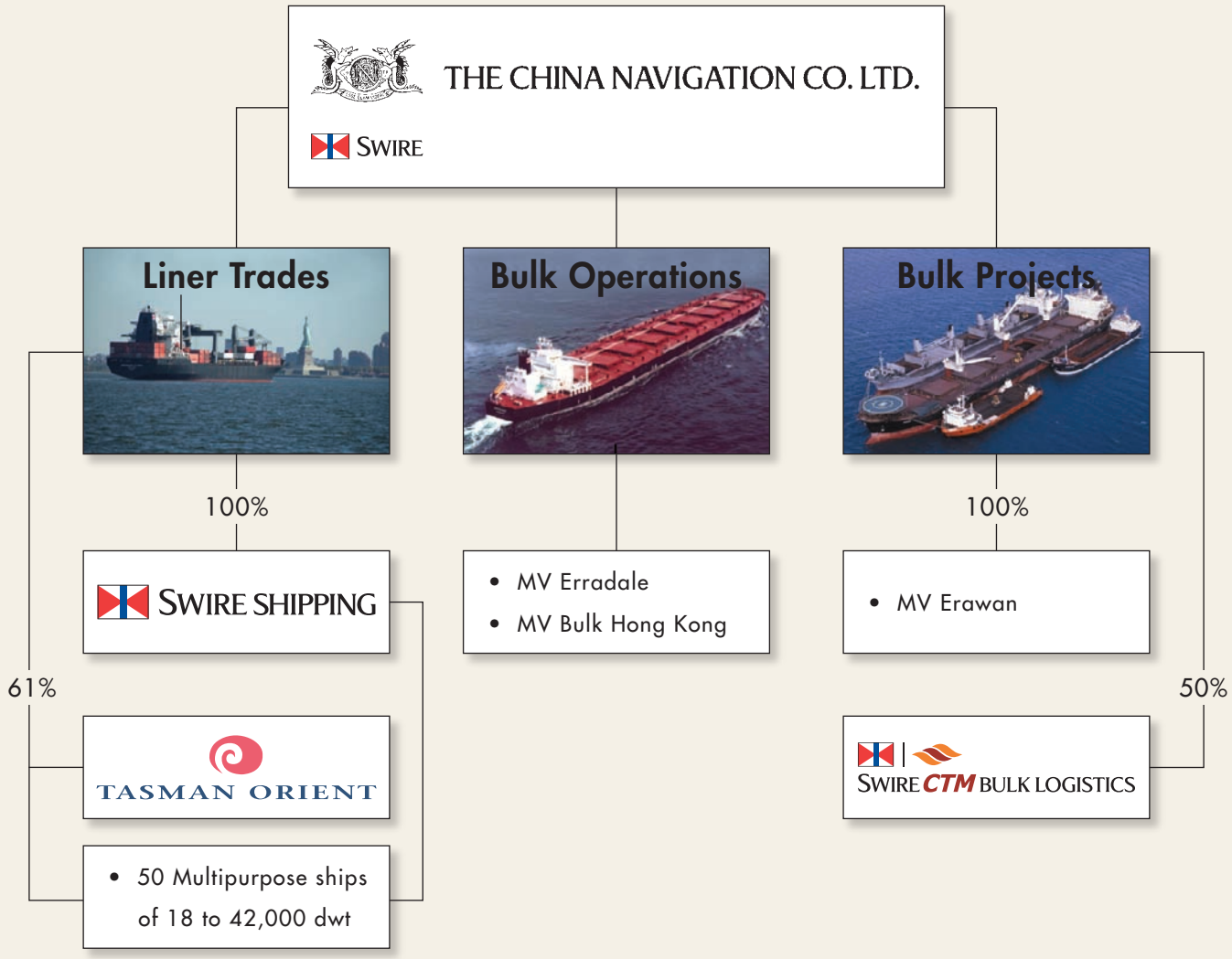
- All companies in which the Swire group has a controlling interest will have action plans for applying this policy in a way which is relevant to their business. We will encourage other companies in which we have an interest as a shareholder or through our supply chain to implement similar policies.
- We will encourage and empower our staff to be proactive on sustainable development matters both at work and in the community.
- We will monitor our performance. Operating companies in the Swire group should monitor their performance and report it externally regularly.
- We will review this policy periodically, having regard in particular to stakeholder dialogues.

James Hughes-Hallett
Chairman

[1] Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs - *Our Common Future, 1987- World Commission on Environment and Development.*
Sustainable development covers environment, health and safety, employment, business partnerships and community matters.

3 Scope of Report

CNCo's Activities

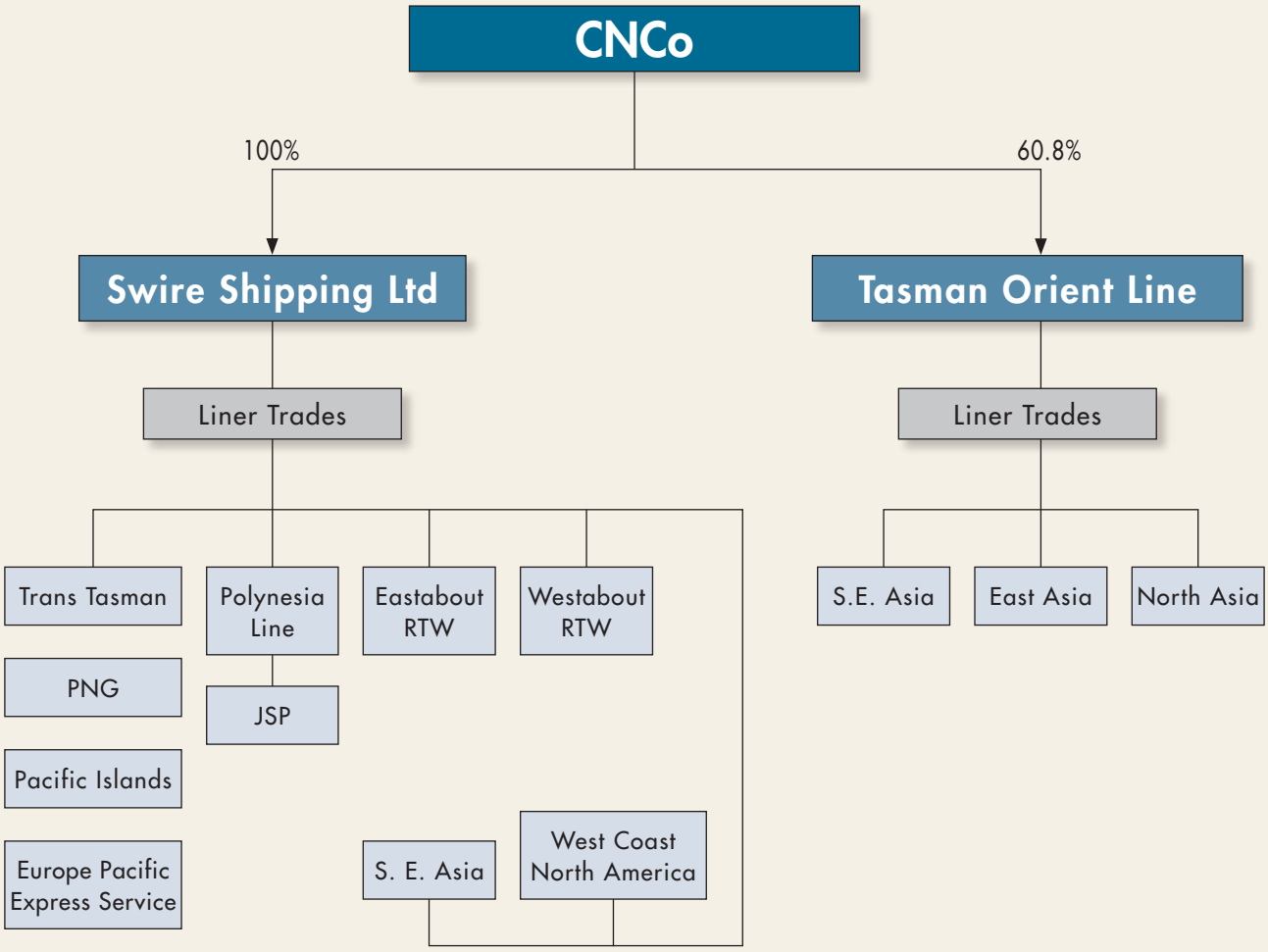


The China Navigation Co. Ltd. (CNCo) is the deep-sea shipping arm of John Swire & Sons Ltd. The company is UK-registered and has established owner's representative offices in Hong Kong, China, Australia, New Zealand, Japan, Singapore, Indonesia, Papua New Guinea, India and the United States.

CNCo's liner services are managed by Swire Shipping Limited (SSL) and Tasman Orient Line (TOL). They serve over 130 ports worldwide employing a mix of owned and chartered vessels. CNCo also operates a global network of shipping agencies. In addition, CNCo has developed diversified drybulk interests involving the long term time-charter of the M.V. Bulk Hong Kong and the bare-boat charter of the M.V. Erradale which CNCo mans and manages.

3 Scope of Report

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



Fleet covered in CNCo's 2007 Environmental Report

- 1 x 64,643 dwt Panamax – owned and operated by CNCo
- 1 x 163,554 dwt Capsize – operated by CNCo[2]
- 2 x container vessels
- 44 x multipurpose vessels

The scope of this Environmental Report covers all vessels owned, chartered or sublet by CNCo and its liner trade subsidiaries, in addition to shore-based activities in the respective offices worldwide, excluding CNCo's third-party agency network.

[2] The capsize reported on is the MV Erradale. The MV Bulk Hong Kong is not under CNCo management and is not included in this report.

4 Marine Environmental Protection

Introduction

Over the course of 2007, shipping's impact upon the environment has come under ever increasing media scrutiny. Prominent reports positing the number of deaths directly attributable to emissions from ships, the horrendous oil spill in Korea and other stories have made headlines and stirred debate. All responsible ship owners will recognise the part that they can play in improving the performance of their vessels and the way they are operated to lessen emissions. This year we have demonstrated our commitment to the reduction of emissions through initiatives large and small, from painting our ship, Pacific Voyager, with a silicon-based super slippery anti-fouling coating to switching to low energy lighting in our offices across the world.

The most significant way to reduce emissions, by far, is to reduce the amount of fuel burnt, this therefore is the key aim of the majority of the initiatives which we are putting into practice. Investments in silicon paints, fuel efficiency management systems, weather routing software, boss cap fins, wake ducts and rudder bulbs (both shown in this photo), 100% grit-blasting of ships' hulls and speed reduction programmes that have been implemented over the past two years, all target a reduction in the amount of fuel that we burn.

It should also be stated that although shipping can improve its environmental record in many ways, it is still, by far, the most efficient way to transport cargo. This is demonstrated by the fact that a 9,000-23,000 dwt general cargo ship will produce an average of 5 grams of CO^2 per tonne-kilometre, a truck 71 and an aircraft 665 grams of CO^2 [3]. However, since 90% of world trade is shipped at sea, the industry is estimated to be responsible for producing 3 - 4% of the world's

[3] Knorr and Reuter (2005) EcoTransIt Ecological Transport Information Tool, http://www.portal-c.info/fileadmin/ecotransit/Daten/Grundlagenbericht.pdf

4 Marine Environmental Protection

CO^2, 2 - 5% of the world's SOx and around 13% of the world's NOx. The fuel that ships generally burn is amongst the dirtiest available as it is the residuals from the refining process which means that it has a very high sulphur content. This topic is further discussed in the *Emissions* section on page 13.

Along with the wider Swire Group, CNCo prides itself on proactively pursuing a best in class position on environmental issues. To this end, CNCo has engaged with other ship owners in Hong Kong and outside on environmental issues by sharing information, ideas and experiences in an informal environmental peer group. In this way we hope to share with each other the results of trials of various fuel saving and environmental initiatives, so that we all may benefit from implementing those measures shown to have proven themselves worthwhile.

CNCo is committed to the idea of reducing emissions given off in port areas where they most affect the people's health. To this end it complies with the Voluntary Vessel Speed Reduction Program for which the company won a Green Flag Award from the Port of Long Beach.

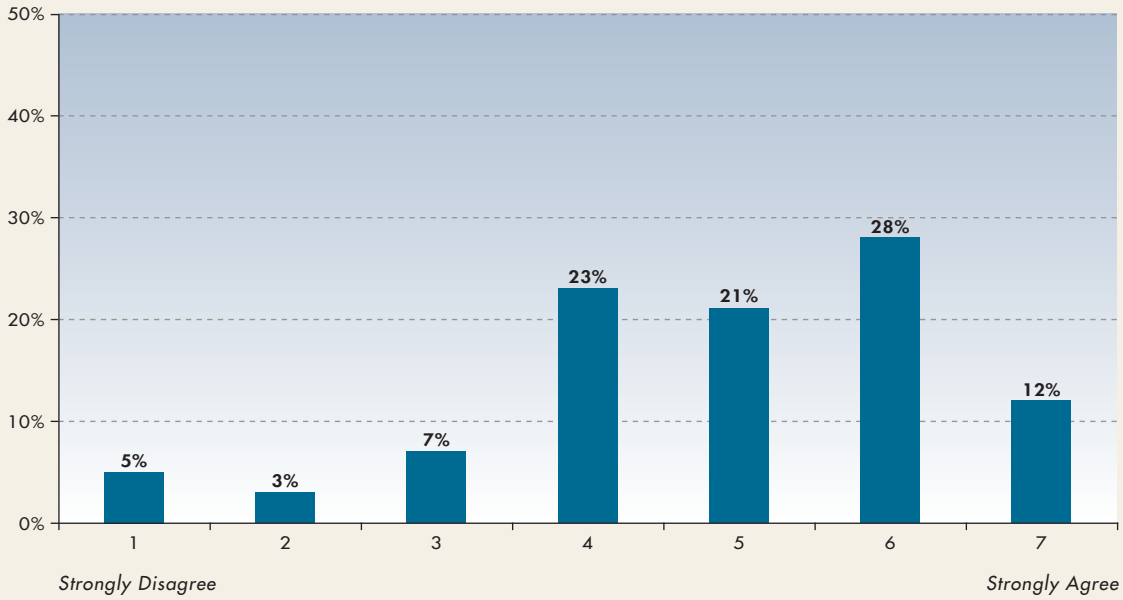
CNCo is based in Hong Kong and is a signatory of the Hong Kong General Chamber of Commerce's Clean Air Charter. CNCo is committing itself to the aims of this charter by implementing a policy whereby CNCo ships calling in Hong Kong and other ports in the Pearl River Delta, will only burn ultra low sulphur fuel whilst in the area. The extra financial cost for this fuel will be borne by CNCo rather than our charterers. Whilst this is in itself a relatively small contribution, it is hoped that this action will motivate other members of Hong Kong's maritime community to make similar efforts to improve Hong Kong's low air quality; researchers state that ship emissions are the primary contributor to the territory's poor air quality one-third of the time[4]. It is also hoped that this action will encourage cooperation between the industry and the government to find collective solutions to this problem.

[4] Alexis K. H. Lau, Andrew Lo, Joe Gray, Zibing Yuan and Christine Loh, Relative Significance of Local Vs Regional Sources: Hong Kong's Air Pollution, Hong Kong: Civic Exchange, 2007, http://www.civic-exchange.org/publications/2007/airmarch.pdf.

4 Marine Environmental Protection

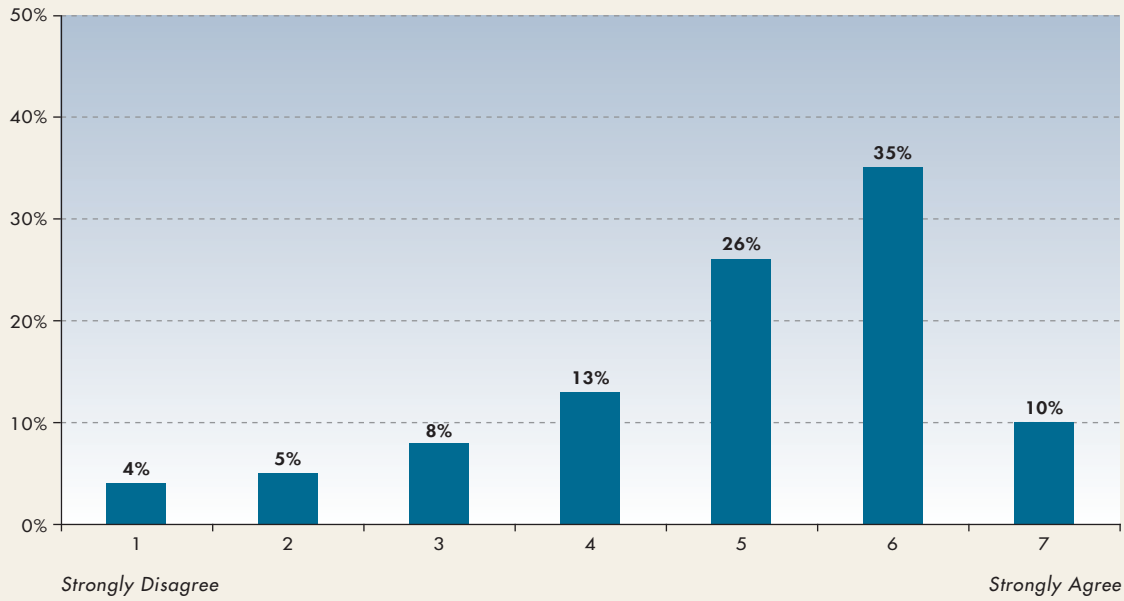
CNCo subsidiary, Swire Shipping Limited (SSL), has recently conducted a comprehensive customer survey, covering Australasia, Asia, North America, Europe and the Pacific Islands. This survey included a section gauging people's view on environmental issues which brought some interesting answers, the findings of the report are summarised in the following charts:

1 Environmental concerns are directly affecting your business



- 61% of respondents indicated agreement that environmental concerns are directly affecting their business (i.e., selected a rating if 5, 6 or 7)

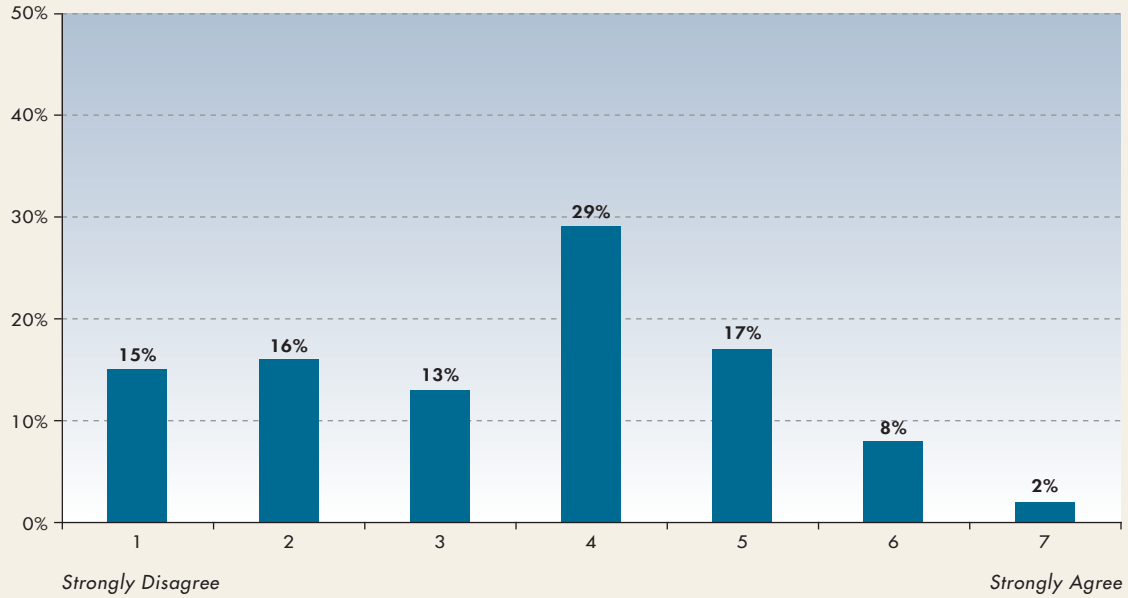
2 Environmental concerns will have a financial implication on your business



- 71% of respondents indicated agreement that environmental concerns will have financial implications for their business (i.e., selected a rating if 5, 6 or 7)

4 Marine Environmental Protection

4 Your company will be happy to pay premiums for service provider compliance



- Only 27% of respondents indicated that their organisation would pay premiums for service providers to comply with environmental policies and standards (i.e., selected a rating of 5, 6 or 7)

From the graphs on page 8 and 9 it is clear that our customers are concerned about the effects environmental issues are going to have as they move forwards, and they are expecting to face financial implications. However, this has not yet transpired into businesses being willing to pay for service providers who said they would comply to environmental standards and policies; only 27% of respondents said they would.

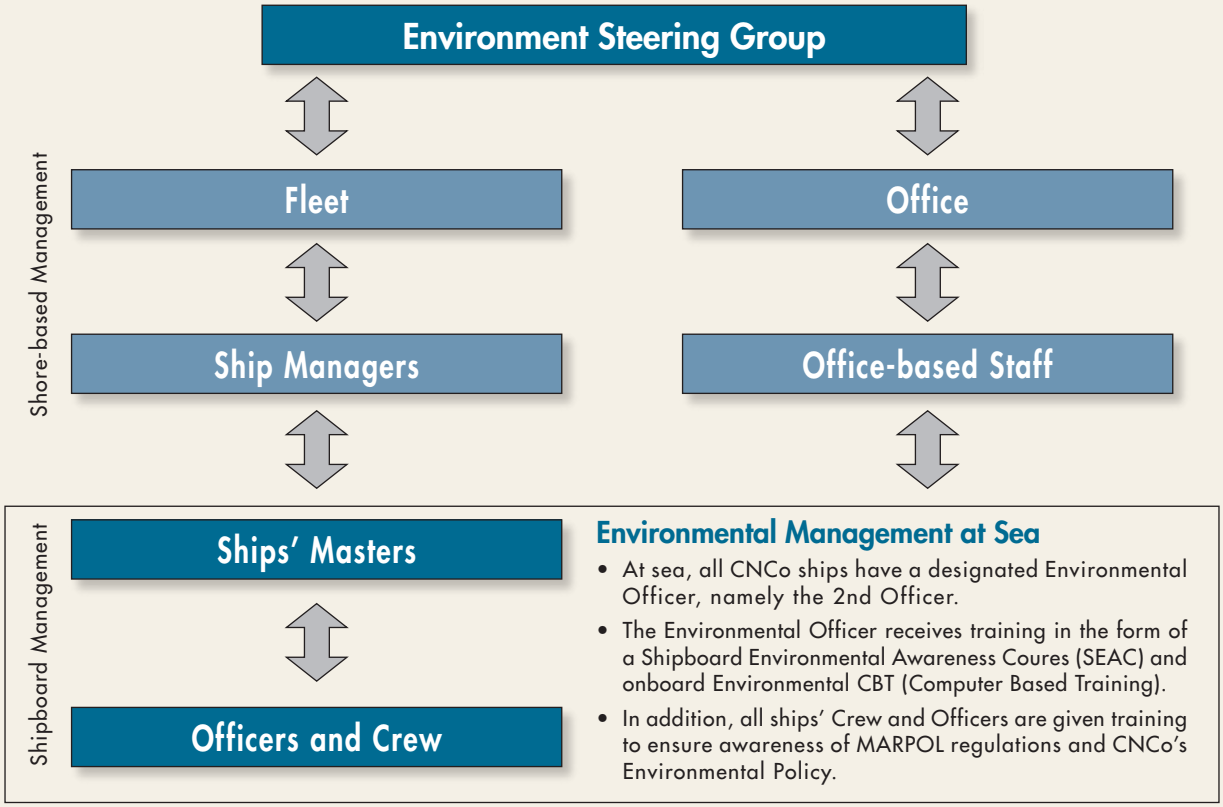
2007 is the first year in which CNCo has been recording the environmental impact of its landside activities. This will provide a benchmark for improvement over 2008 and hopefully allow CNCo to reduce the environmental impact of the entire range of its land and sea based activities. [5]

[5] Information was collected anonymously online in March and April 2008; 168 customers participated in the survey. The geographical spread of the survey covered Australasia, Pacific Islands, Asia, Europe and North America.

4 Marine Environmental Protection

CNCo's Environmental Management Structure

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



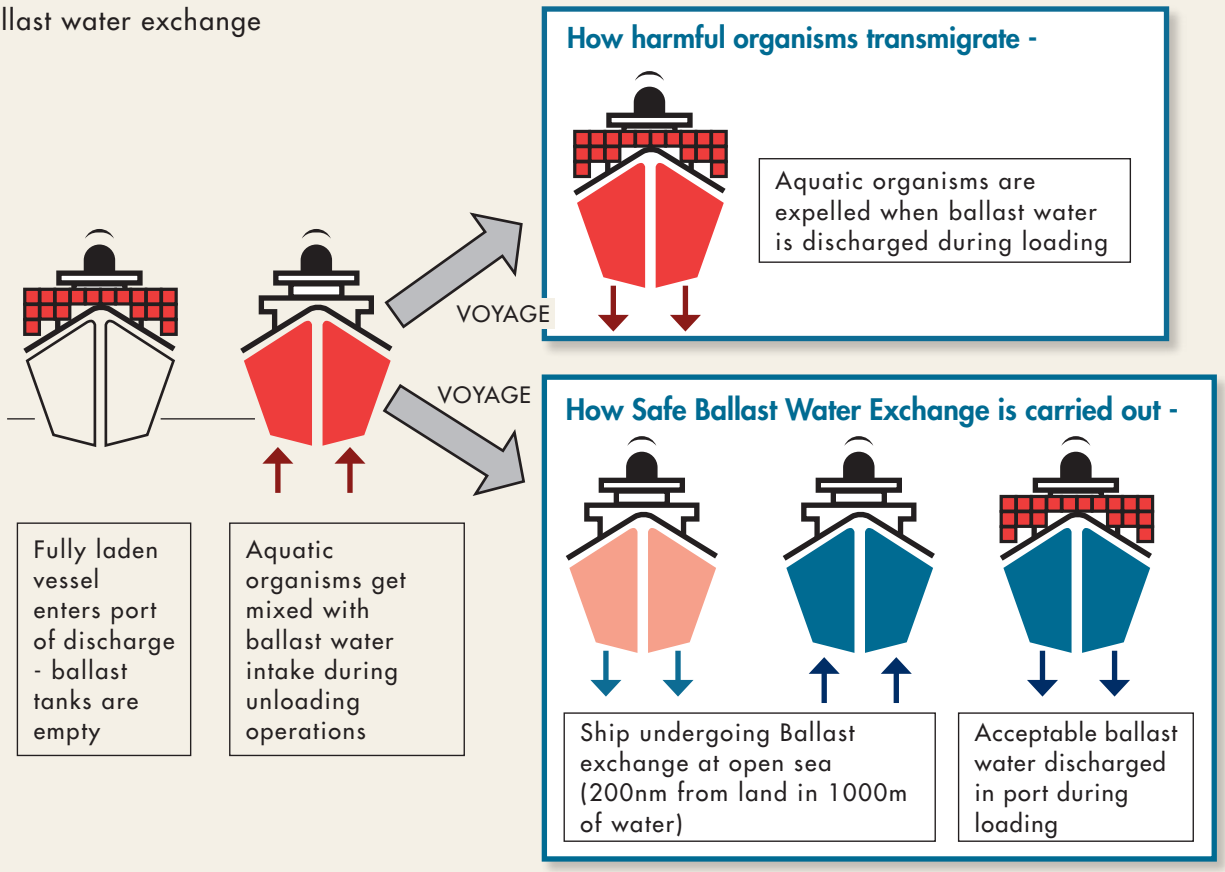
Environmental Management at Sea

- At sea, all CNCo ships have a designated Environmental Officer, namely the 2nd Officer.
- The Environmental Officer receives training in the form of a Shipboard Environmental Awareness Coures (SEAC) and onboard Environmental CBT (Computer Based Training).
- In addition, all ships' Crew and Officers are given training to ensure awareness of MARPOL regulations and CNCo's Environmental Policy.

5 Environmental Legislation

Ballast Water Management

Ballast water exchange



To ensure safe operation of a vessel, 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 organisms 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.

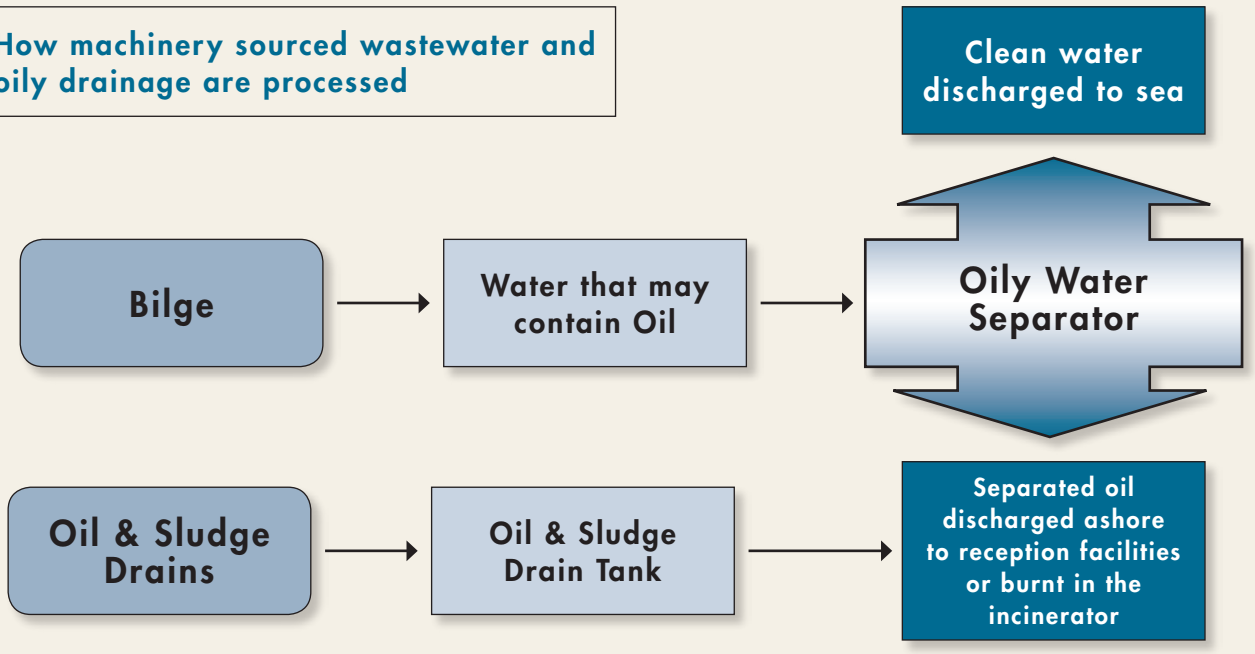
CNCo has adopted a policy where ballast water is only exchanged at deep-sea to prevent transmigration of species; this is in accordance with the guidelines mentioned above. In addition, all CNCo vessels are provided with a ballast plan, which lays out the sequence for loading and discharge of ballast to ensure that the stability, draft, trim and hull forces always remain within safe limits. This measure is aimed at ensuring that CNCo is ahead of expected mandatory regulations.

5 Environmental Legislation

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 then only the water may be discharged from the vessel (in designated waste water disposal areas).

How machinery sourced wastewater and oily drainage are processed



All CNCo vessels are fitted with oily water separators, including spare monitor alarms, to ensure no oil is discharged over the side. The four ships on SSL's Eastabout Round the World service have this year been equipped with the latest high grade, high capacity separators for processing bilge water. All ships carry sufficient spares, including a spare oil content monitor, to ensure full redundancy of the system. Furthermore, it is company policy to dismiss any crewmember found to be disobeying IMO regulations regarding the processing of wastewater.

5 Environmental Legislation

Shipboard Waste

Ships produce significant amounts of waste due to the fact that they are constant living areas for the people working on board. There are strict rules governing what can be done with this waste detailed under Annex V of MARPOL. The methods of disposal are largely based upon the length of time it takes a particular material to degrade.

Time taken for objects to dissolve at sea

Paper bus ticket	2-4 weeks
Cotton cloth	1-5 months
Rope	3-14 months
Woollen cloth	1 year
Painted wood	13 years
Tin can	100 years
Aluminium can	200-500 years
Plastic bottle	450 years

Source: Hellenic Marine Environment Protection Association (HELMEPA)

In accordance with Annex V 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 non-harmful 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 disposal and incineration of waste is recorded in a "Garbage Record Book" and entered into the ships' monthly data reporting system (see Environmental Data Reporting 2007 section). In order to create better handling and storage, garbage compactors are being considered.

Emissions

Amendments to MARPOL Annex VI, which governs emissions, were made at the 57th session of the IMO's Marine Environment Protection Committee (MEPC) which was held between the 31st of March and the 4th of April 2008. It was agreed that there would be progressive reductions in permissible SOx emissions from ships. The global sulphur cap would first be reduced to 3.5% effective from the 1st of January 2012 and would reach 0.5% by the 1st of January 2020. This has huge implications for the shipping industry as it is currently difficult and costly to reduce the sulphur content of HFO to less than 1%. The industry will most likely have to change to the use of distillate fuel.

The rules applying to Sulphur Emission Control Areas (SECAs) have also been changed. The sulphur cap within SECAs will be reduced to 1% from the 1st of March 2010 and then further reduced to 0.1% effective 1st of January 2015. Currently there are two SECAs covering the Baltic sea area and the North Sea area including the English Channel.

Scrapping

If CNCo were to scrap any vessels, it would follow the draft IMO ship recycling rules.

6 Environmental Data Reporting 2007

Definitions

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

Term	Abbreviation	Definition
Metric Tonne	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	The total carrying capacity of a ship expressed in long tons (1 long ton = 2,240 pounds); displacement of a fully loaded ship, less the weight of the ship itself (plus fuel and stores)
Kilograms	kg	Measurement of weight
Revenue-Tonne	RT	If cargo is rated as weight or measure (W/M), whichever produces the highest revenue is be considered the revenue ton
Tonne-Mile	-	Nautical Miles travelled multiplied by Metric Tons of cargo carried
Heavy Fuel Oil	HFO	Used by ships' main and auxiliary engines and boilers for propulsion power and heating
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 *Erawan*

6 Environmental Data Reporting 2007

CNCo Environmental Reporting Metrics

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
- Bilge Water – m^3 – Sea/Shore
- Waste oil – m^3 – Shore/Incinerated
- Lead Acid Batteries – Numbers sent ashore
- Drums – Numbers sent ashore

Fuel and Oils
- Fuel
  - Heavy Fuel Oil Consumed – Tonnes
  - Marine Diesel Oil Consumed – Tonnes
  - Sulphur Content of HFO – %
  - Sulphur Content of MDO – %
- Oil
  - Cylinder Lubes
  - System Lubes

Office Metrics
- Electricity
  - KwH consumed
  - % Energy saving lighting
  - KwH per person
- Paper
  - % Paper packs from recycled source
  - % Paper packs chlorine free
  - Paper recycled – KGs
  - Number of paper packs consumed per person
- Travel
  - Air-miles travelled by management
  - Air-miles travelled by seafarers

Voyage Data
- Trades Data
  - Cargo Carried – Tonnes
  - Distance travelled (berth to berth) – nm
- Ballast
  - Ballast Exchanged – m^3
- Efficiency
  - HFO consumed per tonne mile
  - MDO consumed per tonne mile

Emissions
- CFCs
  - Total amount of R22 supplied to reefers – kg
  - Total amount of R134a supplied to reefers – kg
- GHGs
  - Total amount of CO^2 emitted – tonnes
  - Total amount of SO^2 emitted – tonnes
  - CO^2 – grams per tonne mile
  - SO^2 – grams per tonne mile

Over the past three years considerable time and effort has been spent creating and recording metrics which we think are important in measuring CNCo's impact on the environment as well as being consistent with the metrics being recorded in other shipping companies. It is essential that there is consistency across the industry so accurate comparisons can be made and sensible expectations set.

6 Environmental Data Reporting 2007

Fuel Consumption 2005-2007 – CNCo-owned Fleet only

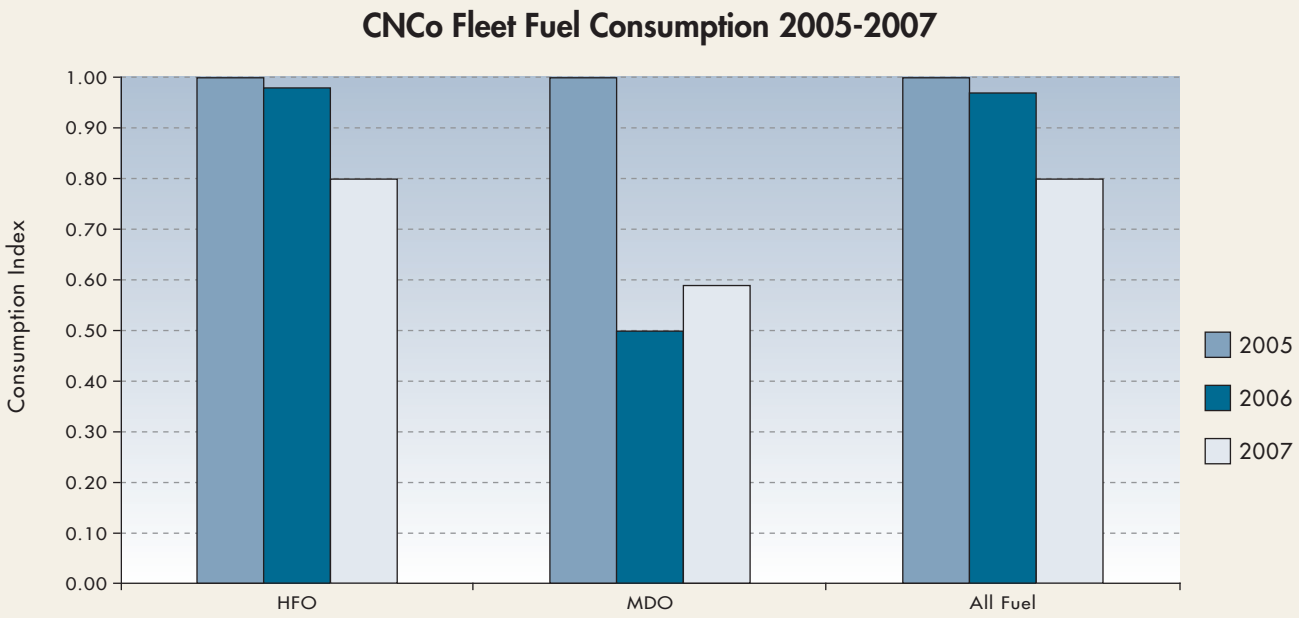
		2005		2006		2007	
Type	**Unit**	Total Amount	Fuel Efficiency Index[6]	Total Amount	Fuel Efficiency Index	Total Amount	Fuel Efficiency Index
HFO	tonnes	132,508	1.00	143,005	0.98	138,733	0.80
MDO	tonnes	3,374[7]	1.00	1,847	0.50	2,589	0.59
All Fuel	tonnes	135,882	1.00	144,853	0.97	141,322	0.80
Cargo Loaded	tonnes	4,656,632	—	4,715,392	—	5,891,386	—
Distance Travelled	nautical miles	1,295,452	—	1,403,354	—	1,331,297	—
HFO		2.93%	—	2.91%	—	2.77%	—
Number of Ships		19		19		19	

This chart shows a significant improvement in efficiency as fuel burnt is significantly down, as is distance travelled, whilst the amount of cargo loaded has increased significantly. The cargo loaded by CNCo increased dramatically in 2007 in part due to changes in the operations of the liner trades that saw some CNCo ships being switched to shorter trading routes, which allowed them to turnover more cargo in the same amount of time, the volume of heavy steel coils being carried also increased. Also only one dry docking was carried out in 2007, whilst in 2006 both the CNCo capesize bulk carrier, Erradale and panamax silo vessel, Erawan, were docked which would also have lowered cargo loaded figures for 2006. The quality of the fuel being burnt has also improved, with the average sulphur content of HFO falling to 2.77 %.

[6] 2005 is the base year for the index.

[7] In 2005, the quantity of MDO consumed per tonne mile was significantly higher than in 2006 and 2007 due to a boiler failure on one of CNCo's ships which caused her to have to burn MDO rather than HFO.

6 Environmental Data Reporting 2007



Fuel Consumption 2007 – Entire Fleet (CNCo owned and Chartered) [8]

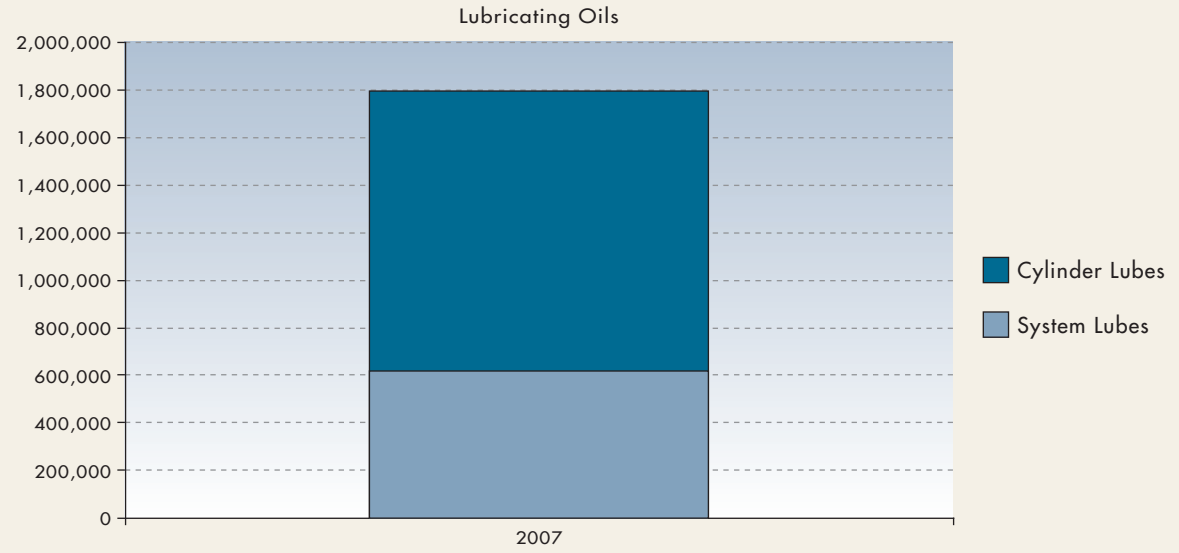
Total HFO consumed	348,465	tonnes
Total MDO consumed	12,065	tonnes
Fuel burn/tonne mile	5.98	g/tonne mile
Total mass of CO^2 produced	1,123,804	tonnes
Total mass of SO^2 produced	24,157	tonnes
CO^2/ tonne mile	18.64	g/tonne mile
SO^2/ tonne mile	0.40	g/tonne mile
Total cargo carried	9,392,860	tonnes
Total distance travelled	3,329,364	nm

[8] 2007 is the first year in which CNCo has collected information on chartered-in vessels.

6 Environmental Data Reporting 2007

Lubricating Oils (CNCo owned fleet only) [9]

	2007
System Lubes	618,244
Cylinder Lubes	1,175,240



A new lubrication system has been fitted to the Pacific Voyager at her recent dry docking. The installation has been very successful and will create a 30% saving on lube oil consumed. This technology will be installed across CNCo's Challenger types as they have their dry dockings giving a payback period of under four years at current lube oil prices.

[9] CNCo has begun to collect information on lube oil consumption in 2007 but hasn't been able to obtain information from 3rd party vessel operators.

6 Environmental Data Reporting 2007

Refrigerant Consumption 2005-2007 – CNCo-owned Fleet only

	Living Area Refrigerant	Cargo Refrigerant	
	R22 - kg	R134a - kg	Total - kg
2005	897	102	999
2006	1639	21	1660
2007	1671	113	1783

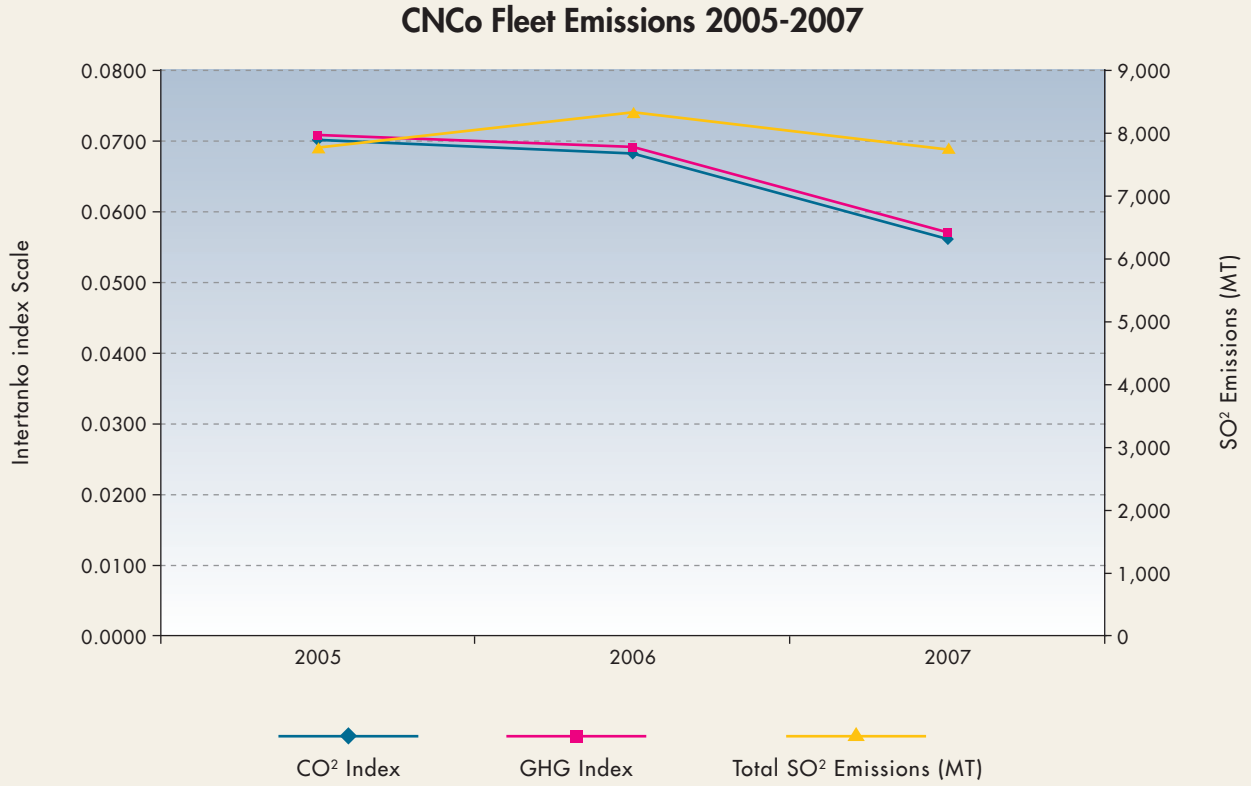
Consumption of living area refrigerant is a problem on the CNCo D-class vessels; this is due to the less than efficient design of the air-conditioning system on those ships as well as their increasing age. CNCo is seeking a solution to this area of weakness. The amount of cargo refrigerant used reflects the varying amount of refrigerated cargo carried on board CNCo ships.

Summary of CNCo-owned Fleet Emissions

	MFO	MDO/MGO	Distance	Cargo	CO^2 Index	GHG Index	Total SO^2
	Consumed - mt	Consumed - mt	nm	dwt			Emissions - MT
2005	132,508	3,374	1,295,452.00	4,656,632	0.07	0.07	7,777
2006	143,005	1,847	1,403,354.00	4,715,392	0.07	0.07	8,323
2007	132,400	2,598	1,248,145.00	5,891,386	0.06	0.06	7,358

This chart shows that total SO^2 emissions reduced by 11.6% for the CNCo fleet as HFO consumption was reduced drastically due to the shorter distance travelled by the fleet. The parallel increase in cargo carried demonstrates the increasingly efficient management of the liner trades.

6 Environmental Data Reporting 2007



Due to better availability of information, 2007 will be the last year in which CNCo separates the emissions figures into those for owned and chartered vessels. Future years will have a consolidated figure that combines the CNCo owned fleet as well as the SSL and TOL chartered in fleet. Information collection this year has significantly improved and we can now obtain a much more accurate tonne-mile figure based on port-to-port legs rather than monthly loading and distance travelled figures that we had previously been using in accordance with ISO standards.

6 Environmental Data Reporting 2007

Waste Management 2005-2007 – CNCo Fleet Only [10]

		Total Amount Discharged (m^3) 2005			Total Amount Discharged (m^3) 2006			Total Amount Discharged (m^3) 2007		
Classification	Items	To Sea	To Shore	Incinerated	To Sea	To Shore	Incinerated	To Sea	To Shore	Incinerated
Category 1	Plastic	–	447	–	–	452	–	–	525	–
Category 2	Biodegradable paper and timber packing materials	56	199	56	82	375	30	125	245	29
Category 3	Ground biodegradable paper goods, rags, glass, metal etc	56	104	38	46	99	39	38	143	47
Category 4	Paper products, rags, glass, metal, bottles etc	172	226	359	152	287	177	189	319	155
Category 5	Food waste	312	72	90	297	119	17	308	108	6
Category 6	Incinerator ash (excl. plastic which may contain toxic / heavy metal residues)	19	23	–	23	23	–	8	33	–
	Bilge water	6,659	89	–	5,147	48	–	5,392	78	–
	Waste Oil & Water	–	1,726	1,190	–	3,164	4,001	–	1,300	1,060
	Lead Acid Batteries	–	61	–	–	78	–	–	14	–
	Drums (Oil/paint chemical)	–	100	–	–	259	–	–	2140	–
COST	**Cost of landing waste products**	**US$19,765.2**			**US$35,090**			**US$9,996.00**		

[10] Unfortunately CNCo doesn't have information on waste from chartered in ships due to difficulty in obtaining the information from 3rd party operators.

6 Environmental Data Reporting 2007

Waste Management 2005-2007 Analysis

		Total Amount Discharged (m^3) 2005			Total Amount Discharged (m^3) 2006			Total Amount Discharged (m^3) 2007		
Classification	**Items**	**Total**	Amount to Shore as % of Total	Amount to incinerated as % of Total	**Total**	Amount to Shore as % of Total	Amount to incinerated as % of Total	**Total**	Amount to Shore as % of Total	Amount to incinerated as % of Total
Category 1	Plastic	447	100	0	452	100	0	525	100	0
Category 2	Biodegradable paper and timber packing materials	311	64	18	487	77	6	399	61	7
Category 3	Ground biodegradable paper goods, rags, glass, metal etc	198	52	19	184	54	21	228	63	21
Category 4	Paper products, rags, glass, metal, bottles etc	758	30	47	616	47	29	663	48	23
Category 5	Food waste	474	15	19	433	27	4	422	26	1
Category 6	Incinerator ash (excl. plastic which may contain toxic / heavy metal residues)	42	55	0	46	50	0	41	80	0
All Categories		2,230	48	24	2,217	61	12	2,278	60	10
	Bilge water	6,748	1	–	5,195	1	–	5,470	1	–
	Waste Oil & Water	2,916	59	41	7,165	44	56	2,360	55	45
	Lead Acid Batteries	61	100	–	78	100	–	14	100	–
	Drums (Oil/paint chemical)	100	100	–	259	100	–	2,140	100	–

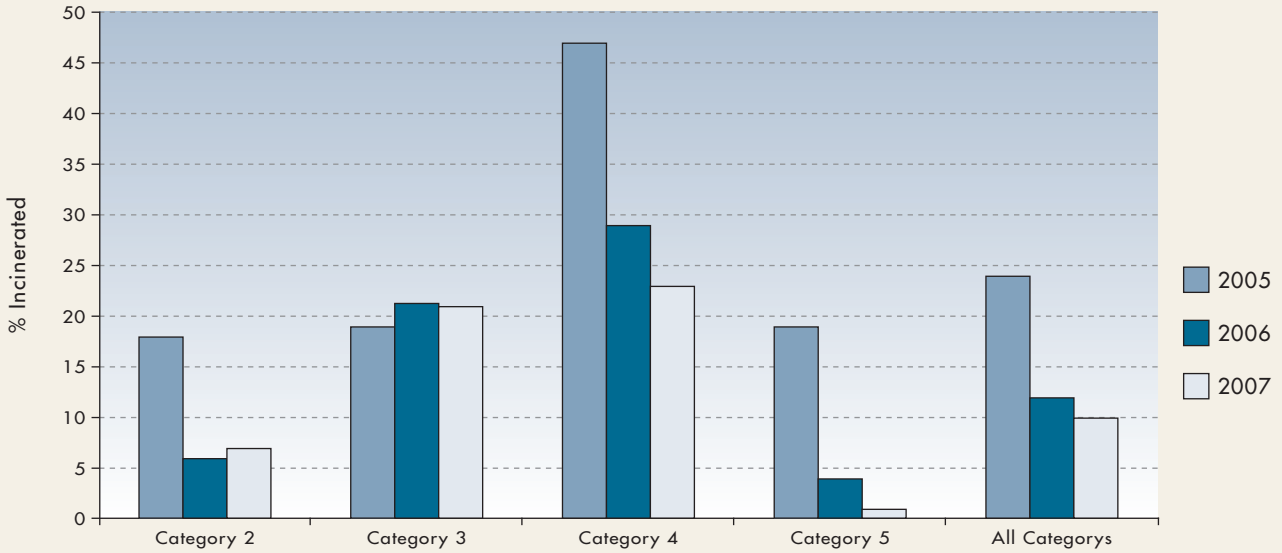
6 Environmental Data Reporting 2007

In 2006 there was a far higher total amount of waste oil and water compared with both 2005 and 2007. This is due to the very high number of dockings that occurred during 2006. CNCo is working hard to improve its waste management and aims to cooperate with suppliers to reduce waste associated with packaging and with disposal contractors to ensure they have high environmental standards.

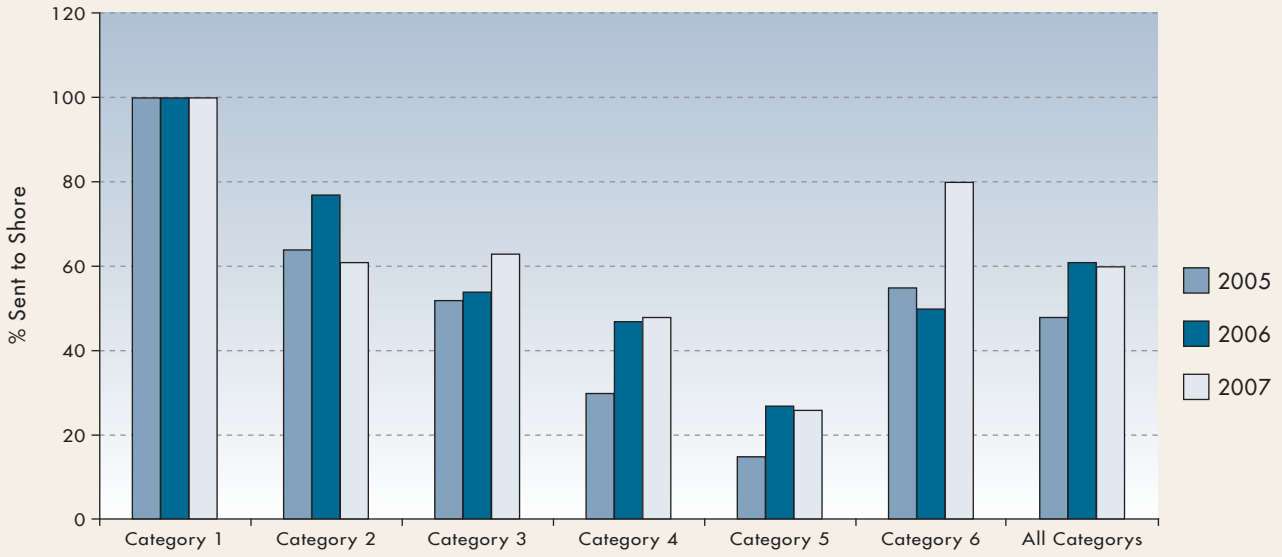
	Sum of Categories	Total	Waste Produced
	1, 3, 4 and 5 - m^3	Mandays	Per 100 Mandays
2005	1,877	167,175	1.12
2006	1,684.5	161,454	1.04
2007	1,768	161,225	1.10

6 Environmental Data Reporting 2007

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



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



6 Environmental Data Reporting 2007

Office Environmental Reporting

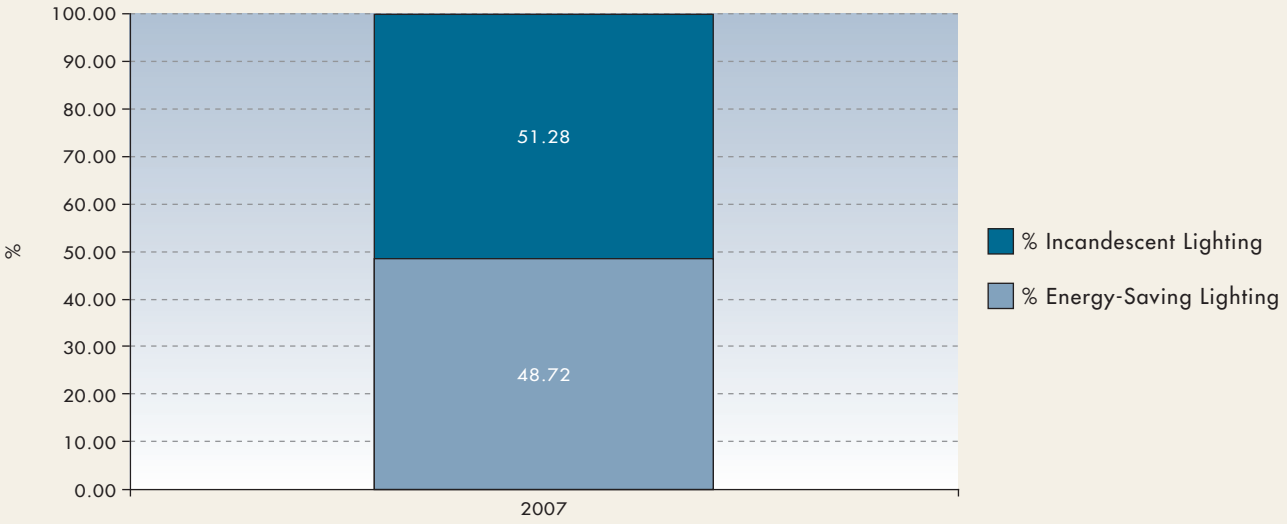
This is the first year in which we have recorded the effects of our offices on the environment. We have focussed on what we consider to be the primary indicators of efficiency and good practice. The data collected will be used not just to measure our impact but also to create future good practice targets.

Electricity	2007
kwH consumed (units)	1,436,832.99
% Energy-Saving Lighting	51.28
Paper	
% Paper Packs from Recycled Source	23.49
% Paper Packs Chlorine-Free	74.87
Amount of paper recycled - KGs	1,517.61
Staff Travel	
Airmiles travelled by management	4,929,011.51
Airmiles / person	7,762.22
Airmiles travelled by seafarers	6,647,880.00
Airmiles / person	9,310.76
Per Person	
Headcount	635
kwH / person	2,262.28
Paper packs used / person	3.07

CNCo is currently discussing how to appropriately offset air-miles travelled by management for 2008. CNCo plans to reduce the need for air travel by introducing video conferencing equipment into its largest offices.

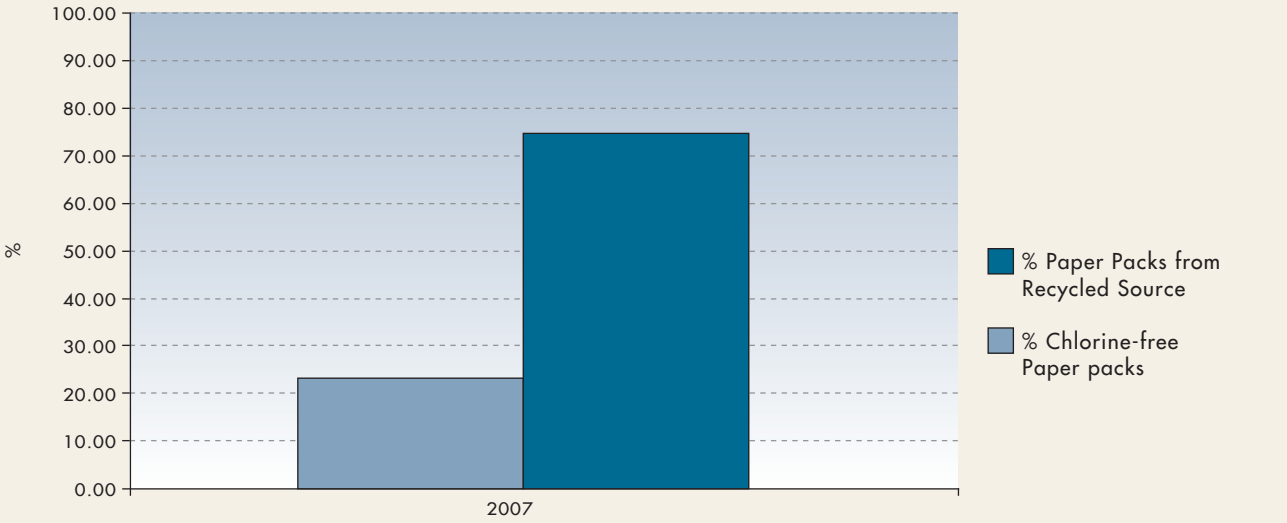
6 Environmental Data Reporting 2007

% Use of Incandescent and Energy Saving Lighting



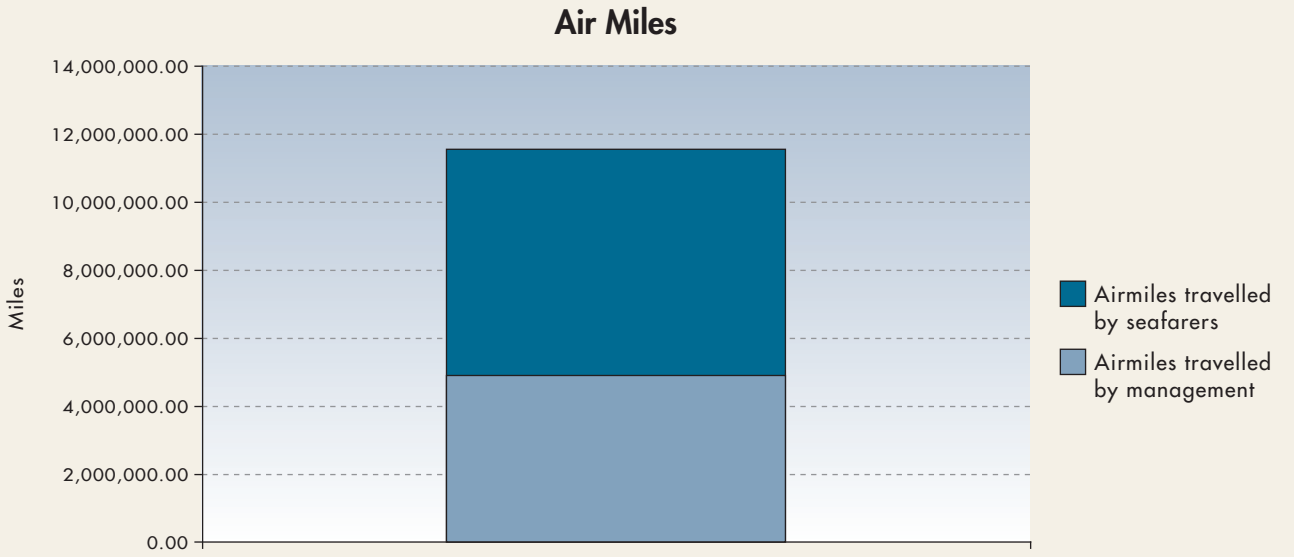
Energy saving lighting uses around a quarter of the energy used by incandescent lighting. This kind of light bulb also lasts six times longer than normal light bulbs. Therefore for a small extra cost at purchase, an energy saving light bulbs produces a significant reduction in lighting-associated emissions as well as financial savings over the life of the lamp, which make the use of energy saving lighting an environmental and financial imperative. Currently, across the thirty three offices associated with CNCo's activities, just over 50% of the lighting used is energy saving. We feel that this figure should be significantly improved over the course of 2008.

Paper Consumption



The companies within the CNCo group have significant room for improvement when it comes to the use of recycled paper the current usage rate is just 24%. CNCo aims to reduce overall paper consumption by making sure that double sided printing is set as default and by implementing the 'Alchemy' electronic filing system.

6 Environmental Data Reporting 2007



SPSM is Swire Pacific Ship Management who provides manning for CNCo ships. An effort is always made to ensure that, where possible and practical, seafarers join and leave ships as close as possible to their homes.

It is acknowledged that the management of CNCo and its subsidiary companies travel a great deal. In an effort to mitigate this we are hoping to make some amount of travel unnecessary by installing video conferencing equipment in our Hong Kong head office as well as our regional offices in Sydney, Auckland and Singapore. We are currently assessing which technology is most suitable for our situation.

Breakdown of CNCo Carbon Footprint

Year	CO^2 from ships (tonnes)	% of Total	CO^2 from electricity consumption (tonnes)	% of Total	CO^2 from airmiles (tonnes)	% of Total
2007	1,123,804.00	99.72%	812.33	0.07%	2,353.58	0.21%

The table above shows that the overwhelming majority of CNCo's carbon footprint is generated by the operation of its ships, and demonstrates clearly that our efforts and resources should be primarily focused on reducing our carbon footprint by reducing the fuel burn from ships.

6 Environmental Data Reporting 2007

Successes in 2007

- Decrease in fuel burnt per tonne mile for the CNCo managed fleet from 2.19 to 1.80
- Average sulphur content of fuel burnt on CNCo managed ships reduced from 2.91% to 2.77%.
- More effective waste management as evidenced by the reduction in waste oil and water discharged.
- 2007 is the first full year for which there has been reporting on emissions produced by chartered in ships.
- 2007 is the first year for which there has been sea and landside reporting.
- CNCo has begun discussions with other owners to improve its performance on environmental matters in its environmental peer group.
- Swire Shipping Limited has carried out a customer survey to accurately gauge the mood of its customers towards environmental issues.
- Intersleek 900 super slippy silicon paint has been applied to the Pacific Voyager with encouraging preliminary results.

Failures in 2007

- CNCo was unable to collect information on lube oil consumption, refrigerant gas consumption and waste produced from third party vessels.
- Offices across the group only use 50% energy saving lighting.
- Refrigerant consumption on CNCo owned ships increased during 2007 despite this being a problem identified during the 2006 report.

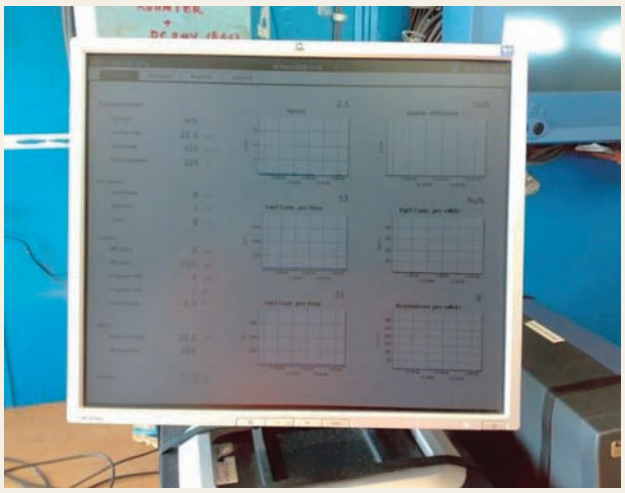
Environmental Data Reporting

The 2007 report is a broader, deeper report than has previously been produced. In some areas it is the first year in which we have reported our performance, whilst in others we are reporting for the third year. Deepening the extent of this report by including new areas of reporting will allow us to benchmark our performance in those areas and push for improvement where we are weak. Widening the report to include chartered-in ships will give us a clearer picture of the overall impact of our operations on the environment. In the 2008 report, with trends appearing in particular areas, we hope to be get an idea of how successful some of our efforts at reducing emissions and waste have been. Hopefully, the environmental initiatives outlined in this report over the last three years will be visible. It is also hoped that the process of environmental reporting will improve and the reliability of the data we receive steadily increase.

7 Environmental Initiatives 2007

Fuel Efficiency Management System

A fuel efficiency management system, provided by Aqua Metro Systems, has now been fitted to two ships, the Pacific Voyager and the Pacific Java. This system combines extremely accurate fuel flow meters with other readings such as shaft power, speed, rudder movement and wind, and through the use of software which is analysing this information in real time, can thereby measure the effect of these factors on fuel consumption. This system is thereby able to provide both an instant snapshot of the effect of a particular action on fuel consumption, as well as showing over the longer term the most efficient trim and other conditions for the operation of the ship. The "snapshot" enables the master to give accurate and immediate feedback on the cost implication of a particular speed order to the charterer.



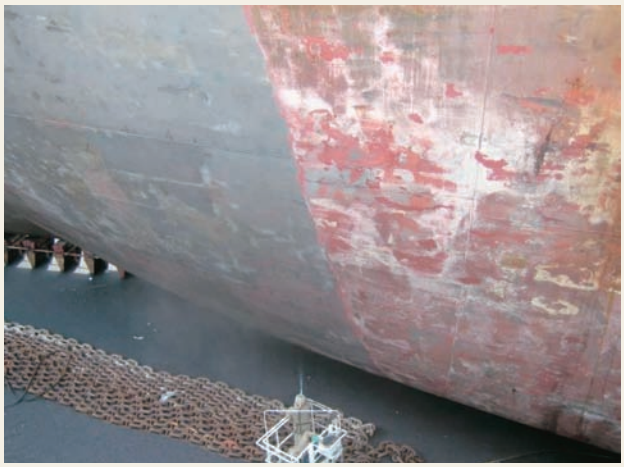
Anti-fouling

A super slippery silicon based anti-fouling system, Intersleek, has been applied to the Pacific Voyager at its recent dry docking. This system has so far produced a 3.5% fuel saving and an increase in speed of .7 knots at an equivalent engine load. This gives potential for further fuel savings through speed reduction when schedule allows. The expected capital payback period is under two years at current fuel prices and the system is hoped to save 1,500 tonnes of CO^2 a year through reduced fuel consumption.

7 Environmental Initiatives 2007

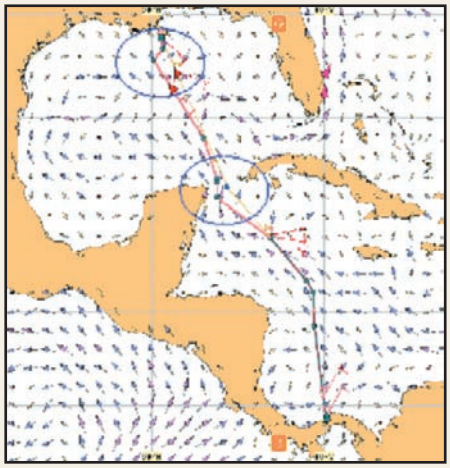
Full Grit Blasting

Fully grit blasting the hulls of ships down to bare steel during dry-docking creates a much better surface for the application of paint than a partial grit blast. This leads to much improved in-water performance of vessels and significant fuel savings.



Weather Routing

Several weather routing programmes have been trialled on CNCo ships over the last year. One in particular from 'Applied Weather Technology' has been shown to give very detailed information on the location of particular currents. On one particular voyage undertaken by the Pacific Flores between Panama and New Orleans, the Master deviated from the shortest route by 56nm, but by doing so he was able to find favourable currents that allowed the Flores to cover the distance 8.8 hours faster than she had done on her last voyage, consume 12 tonnes less fuel and increase her average speed by 1 knot.



- BAsed on Navy Coastal Ocean Model (NCOM)
- 56 nm longer distance
- Stayed closer to Yucatan to capture strong favourable N-ly flow
- Detour off New Orleans avoided counter current
- 8.8 hours eariler arrival!
- 12 tonnes HFO saved!

Lubrication System

Lube oil consumption on CNCo's Challenger class ships has been noticeably higher than on other classes of ships which we operate. In order to rectify this problem CNCo has installed a new lubrication system on the Pacific Voyager. This has decreased consumption by 30% and will reduce CO^2 production associated with lube oil by 816 tonnes annually when the system is fitted across all eight Challenger vessels. Payback is under 4 years at current lube oil prices.

7 Environmental Initiatives 2007

Swire National Oceanography Centre Ocean Monitoring System (SNOMS)

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

SWIRE

In 2006 the Swire Group Charitable Trust donated £100,000 to sponsor a research project being carried out by the UK's National Oceanographic Centre, based at Southampton University. CNCo itself supports the project by providing a platform for data collection on board its ship the Pacific Celebes. The Celebes is employed on Swire Shipping Eastabout Round the World service and so covers a broad geographical area, including some unique and sensitive marine environments.

The project involved installing a selection of sensors and monitoring equipment which transmit collected data directly back to Southampton. The range of data recorded includes dissolved carbon dioxide and oxygen, total dissolved gas pressure, temperature and conductivity of sea water as well as humidity, air temperature and atmospheric CO^2 content.

The aim of collecting this information is to better understand the cycle of CO^2 between the atmosphere, living things, the soil and sea. It is then hoped better models predicting future climatic changes can be constructed through the knowledge gained. The information collected through the SNOMS project has already demonstrated its value. In the tropical Pacific an El Nina event was recorded. This showed reduction in surface sea water temperature and an increase in atmospheric CO^2 levels directly above the cold water plume. This finding has helped to prove and demonstrate to the international scientific community a long-held theory of climatology: that the partial pressure of carbon dioxide in the newly up-welled colder water is greater than that of the atmosphere such that CO^2 is released into the air above the plume.

8 Aims for 2008

CNCo will Endeavour to continue improving its record on environmental matters in 2008. Up to date news on the progress of initiatives can be found at http://www.cnco.com.hk/environment. Some of the plans for 2008 are outlined below[11]:

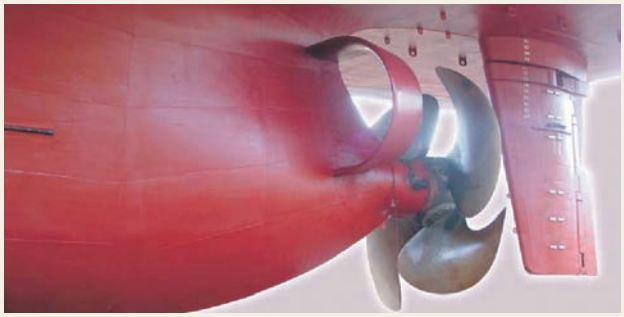
- Implementation of ISO 14001 standards for all of our ships and offices. The target date for full accreditation is May 2009.

- Between September 2008 and January 2009 CNCo's four 40,000dwt, D-class MPPs are due to be docked. During the docking it is planned to fit them with boss cap fins and wake ducts.

- Boss cap fins are modified propeller cones with some small propeller blades which use the propeller wake to impart energy adding to the propeller thrust. The efficiency improvement is expected to be around 4% which will give a capital payback period of 1.4 years and will lessen CO^2 emissions by 870 tonnes per ship per year.

- Wake ducts improve the water flow across the propeller thereby reducing the difference in pressure across the blades as they pass the stern frame. Tank testing on vessels similar to the CNCo D-class have shown improvements of 6 to 7%, but assuming a conservative saving of 5% the wakeducts will have a capital payback of period of 1.15 years and reduce CO^2 emissions by around 1090 tonnes per ship per year.

- The accrued fuel savings over the four D-class vessels following their dockings is estimated to be 2,534 tonnes per year, equivalent to a CO^2 emissions reduction of around 7,890 tonnes.



- CNCo is currently investigating modifications to the turbocharger on the engines of its Challenger class ships. The modifications are hoped to improve the slow running of the engine thereby saving fuel and cylinder oil.

- CNCo is progressing with a recently formed environmental peer group of Hong Kong ship owners to discuss and share information, new technologies and ways of improving environmental performance and efficiency.

[11] All payback calculations are based on current fuel prices.

8 Aims for 2008

- CNCo has recently created a new joint venture company with CTM, Swire CTM Bulk Logistics, to provide shipping solutions to mines and industry situated in areas lacking adequate port infrastructure. Projects will be carefully selected and managed to ensure environmental best practice. Where feasible environmental performance metrics will be collected and incorporated into subsequent versions to this report.

- In this period of high bunker prices and acute awareness of the environmental harm caused by burning heavy fuel oil, our liner trades are regularly analysing their operations to see if there are possibilities of slowing ships down or rearranging their services with the aim of increasing efficiency.

- CNCo's purchasing department is currently liaising with Swire Pacific and other Swire Group companies to benefit from their experience to produce a CNCo Purchasing Policy. The policy will be completed this year along with a CSR Supplier Self-Audit questionnaire which will be sent out to all of CNCo's major suppliers. One area where we are hoping our suppliers will cooperate is packaging. A great deal of non-recyclable waste is created by using poorly chosen materials or using more packaging than is necessary. We hope to encourage our suppliers to find biodegradable or recyclable alternatives. So far, it is proving difficult to find suppliers who are willing to engage on environmental initiatives in South East Asia, but CNCo has found that more and more European suppliers have environmental policies in place.

- One area of concern is the discharge of sludge. Currently CNCo does not audit the companies to whom it discharges this waste to ensure that it is dealt with in an environmentally friendly manner. Over the course of 2008 CNCo aims to formulate a policy on this matter and engage the contractors who carry out this work.

- In CNCo's Hong Kong office action has been taken to ensure that the air conditioning isn't turned down below 25 degrees. Lighting in the office can now also be switched on and off for small individual areas, rather than just the entire office as before, allowing staff to turn on their lights as they arrive and switch them off again as they leave. We are also segregating rubbish so that it can be recycled and cutting down on paper consumption by making use of double sided printing.

- Over the course of 2007 there was a great deal of air travel by management. Although much of this travel is very necessary, it is felt that the figure can and should be reduced. In order to do this it is planned to install video conferencing systems in CNCo's Hong Kong office, as well as the major offices of its liner trades subsidiaries. CNCo is also planning a scheme to off-set the air-miles traveled by management.

- CNCo hopes to improve the reliability and regularity of its environmental reporting. One of the possibilities that is being investigated, is to take part in the Swire Pacific on-line environmental database. Improved reporting will also require closer cooperation with 3rd party owners from whom Swire Shipping charter vessels to obtain a fuller picture of the total impact of our operations.

9 CNCo New Building Programme

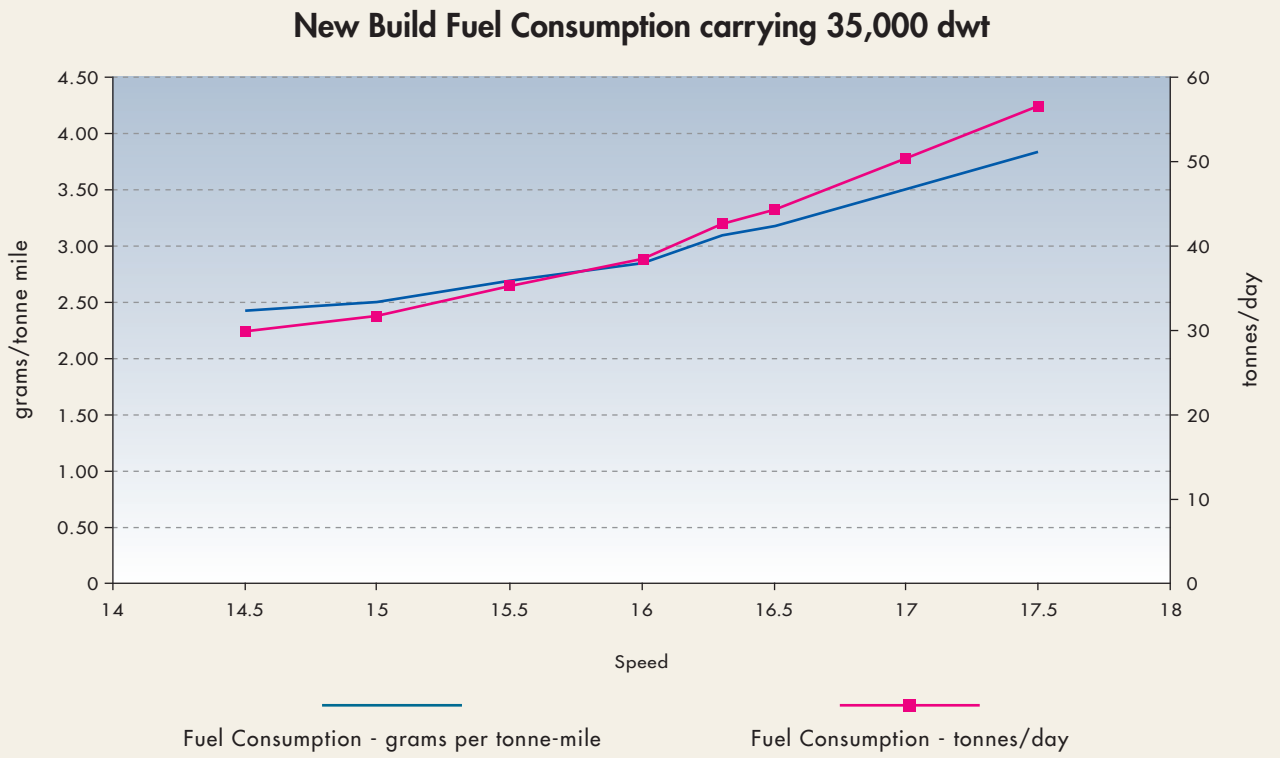
CNCo has designed a new class of multipurpose (MPP) ships, which could potentially enter service from 2011. These 40,000dwt ships will be amongst the largest MPP vessels in operation. Great care has been taken to ensure that these ships are as fuel efficient as possible. The following environmental features have been incorporated in the design:

- Very low main engine fuel consumption per cargo tonne-mile.
- Slow revving de-rated main engine.
  - The engine is a Wartsila 6RT-Flex58T-B which will be de-rated to operate at 80% of its MCR of 13,084KW.
  - It will be capable of 16.3 knots carrying 35,000 tonnes of cargo burning 42.5 tonnes of fuel a day.
- Propulsion enhancers, boss cap fin, ducted propeller.
- Main Engine exhaust gas particulate remover and NOx monitor.
- Waste heat turbo generator for electric power generation at sea.
- Ballast water treatment system.
- Triple service and settling tanks to carry three grades of fuel.
- 5ppm oily water treatment system.

- Ship performance monitoring system.
- Non-toxic, silicon-based antifouling coating.

Speed	Fuel Consumption – tonnes/day (including a 10% sea margin)	Fuel Consumption - grams per tonne-mile
14.5	29.83	2.45
15	31.66	2.51
15.5	35.2	2.70
16	38.44	2.86
16.3	42.53	3.11
16.5	44.26	3.19
17	50.32	3.52
17.5	56.53	3.85

9 CNCo New Building Programme



The new ships will have a design speed of 16.3 knots and operate most efficiently in the speed range 14.5 to 16.3 knots.

CNCo will engage with the shipyard which is chosen to build these ships in order to guarantee the highest environmental standards are maintained. To ensure that this aspiration is met CNCo will provide its own supervision teams.