



NEPTUNE ORIENT LINES LIMITED  
SUSTAINABILITY REPORT 2013



## **PURPOSE OF REPORT**

This report shares the activities and performance of the NOL Group's environmental, safety, security and social programmes with customers, shareholders and communities at large. This report is available online at [www.nol.com.sg](http://www.nol.com.sg).

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## LETTER TO OUR STAKEHOLDERS



Welcome to the NOL Group's 2013 Sustainability Report. This report is an opportunity to reaffirm our commitment to sustainable development.

At NOL, we strive to implement high standards of environmental performance, improve supply chain security, ensure safe operations and support the communities to which we are globally connected.

NOL emphasises efficiency in our operations. I am therefore happy to report that NOL's liner business has already reached its carbon dioxide (CO<sub>2</sub>) reduction goal, two years ahead of the 2015 target. In 2013, APL cut CO<sub>2</sub> emissions by 33.8% from the 2009 level. It did this through improvements in operational efficiency, voyage optimisation and technical improvements, as well as the injection of fuel-efficient and environmentally-friendly tonnage into its global fleet.

NOL places strong focus on responsible business practices, security, safety and health. In this report, we present the measures and initiatives implemented that help us ensure ethical business conduct, safeguard our assets and operations, as well as enhance employee wellness both onboard our vessels and within the corporate environment.

We also provide details on community initiatives by our offices around the world, which mainly focus on delivering aid, empowering children and supporting education.

Sustainability is an ongoing journey. We are in it for the long haul, and my team and I will continue to work to live up to our commitments through vigilance, ethical conduct and corporate responsibility, while mitigating risks and strengthening our businesses.

A handwritten signature in black ink, appearing to read 'Ng Yat Chung', with a horizontal line underneath.

**NG YAT CHUNG**

*Group President and CEO*

## CORPORATE PROFILE

OVER  
**110**  
COUNTRIES

MORE THAN  
**13,000**  
EMPLOYEES

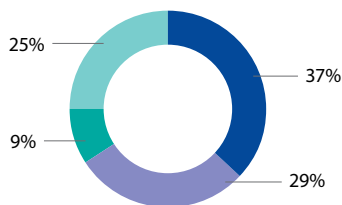
OUR OPERATING BRANDS



### EMPLOYEE DISTRIBUTION

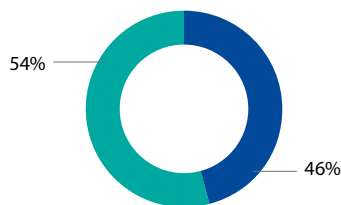
By geography

- Americas
- Asia Pacific
- Europe & Middle East
- Greater China



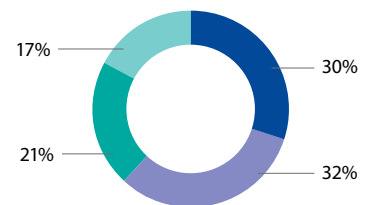
By gender

- Male
- Female



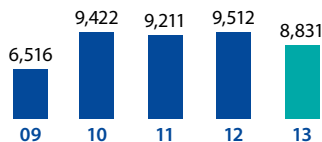
By age

- 29 & below
- 30 - 39
- 40 - 49
- 50 & above

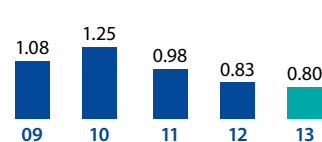


## FINANCIAL PERFORMANCE

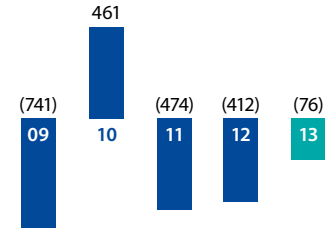
REVENUE  
(US\$M)



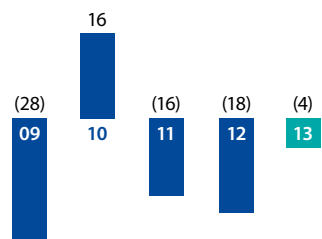
NET ASSET VALUE PER SHARE<sup>1</sup>  
(US\$)



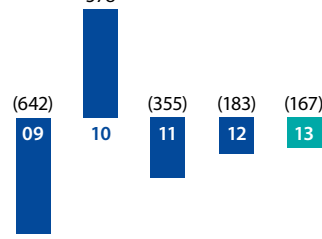
NET (LOSS)/PROFIT<sup>1</sup>  
(US\$M)



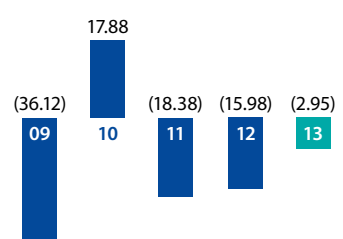
RETURN ON EQUITY<sup>1</sup>  
(%)



CORE EBIT<sup>1,2</sup>  
(US\$M)



BASIC (LOSS) / EARNINGS PER SHARE<sup>1</sup>  
(US¢)



<sup>1</sup> 2011 and 2012 figures have been restated for comparative purposes due to retrospective application of Amendments to FRS 19: Employee Benefits (Revised), which is effective from financial year 2013.

<sup>2</sup> With effect from 2013, in addition to interest expense, the definition of Core EBIT has changed to exclude other finance expense and income. Core EBIT from 2009 to 2012 have been restated accordingly.

## PROMOTING RESPONSIBLE BUSINESS PRACTICES



Integrity and respect underpin the NOL Group's interactions with its stakeholders. The Group believes ethical interactions with shareholders, customers, suppliers, business partners and among employees must always be upheld. Employees at all levels are expected to contribute towards providing a safe and healthy work environment.

As the Group navigates through a difficult business environment, it remains committed to a corporate culture of compliance. Achieving high standards of ethics, integrity and business practices in accordance with all applicable laws is the responsibility of every employee.

### CORPORATE CODE OF CONDUCT

NOL's Corporate Code of Conduct covers property, people and conduct, and finance. The Code is available on the NOL website at: <http://www.nol.com.sg/wps/portal/nol/gcoc>.

Employees are required to uphold the Group's standards of ethics and integrity in all their business activities and interactions. Access to the Corporate Code of Conduct is readily available in three languages – English, Simplified Chinese and Spanish. Acknowledgment of compliance is required every year. In 2013, the Group attained near 100% compliance.

### ETHICS COMPLIANCE

The Ethics Committee, which comprises senior executives of the NOL Group,

oversees the development, adoption and compliance with the Company's ethical framework, policies and procedures. The Committee also designs the framework to investigate ethics matters, and recommends disciplinary actions.

An ethics hotline, managed by an independent third party provider, is accessible to NOL Group employees round the clock. Any ethics concern or incident may be reported through the hotline, which complements other available channels for reporting ethics matters, including the Group President and Chief Executive Officer, or the Chairman of the Audit Committee of the NOL Board. An online tool is used by the Group to track and monitor reported incidents or concerns for informed decisions to be made in areas of ethics compliance.

### VENDOR CODE OF CONDUCT

Vendors and suppliers to the NOL Group are also expected to conduct their business activities in full compliance with applicable laws of the country and location of their operations as well as international regulations. NOL's Vendor Code of Conduct (VCOC) articulates legal, ethical and moral standards expected of its vendors and external partners.

In 2013, the first phase of the Group's VCOC was launched. Over the rest of the year, NOL, APL and APL Logistics notified their main vendors worldwide of the VCOC.

New and renewal contracts with vendors contain a contractual clause which places an obligation on vendors to comply with the VCOC.

The Group's VCOC is available on <http://www.nol.com.sg/wps/portal/nol/vcoc> in English, Simplified Chinese and Spanish.

### PROCUREMENT PRACTICES

Forging long-term procurement partnerships, developing cooperation beyond vendor relationships and aligning objectives with stakeholders are vital in the pursuit of procurement excellence in NOL.

Global sourcing, purchase of equipment and fuel as well as managing the expenditure for vessel and landside operations are important factors towards achieving business competitiveness and meeting customer expectations.

The Group strives to implement procurement best practices and achieve cost leadership in the industry. It evaluates suppliers and contracts, and reviews purchasing processes on bunkers, equipment, terminals, vessel spares, vessel slot costs and land. Vendors are reviewed on an ongoing basis to ensure compliance towards company practices.



## FOSTERING A SAFE AND HEALTHY WORKPLACE

### APL's Lost Time Injury Frequency continues to decrease as a result of its efforts in ensuring safety

The NOL Group's employees are its greatest assets, and ensuring their safety and health remains a top priority.

The Group's businesses, APL and APL Logistics, maintain strict operational standards to prevent accidents and injuries. Policies and programmes are also in place to maintain and enhance the physical and mental well-being of employees.

#### SAFETY AT WORK

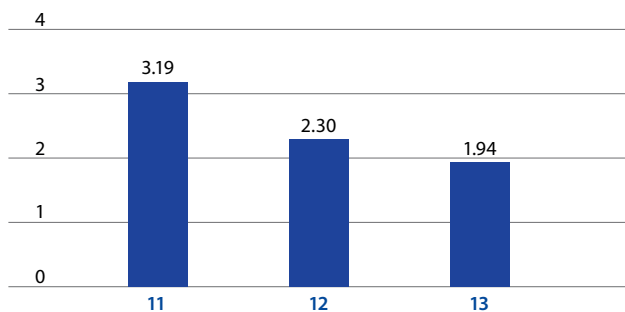
APL's Lost Time Injury Frequency continues to decrease as a result of its efforts in ensuring safety. APL is especially committed to meeting local and international safety

requirements for all its vessels and terminals. This includes the Pacific Coast Marine Safety Code (PCMSC), which covers employee and supervisor responsibilities, shipboard and terminal safety rules, as well as equipment handling rules.

For its exceptional safety record, APL's Kaohsiung terminal currently holds dual certification from the Taiwan Occupational Safety & Health Management System and Occupational Health & Safety Assessment System (OHSAS) 18001: 2007.

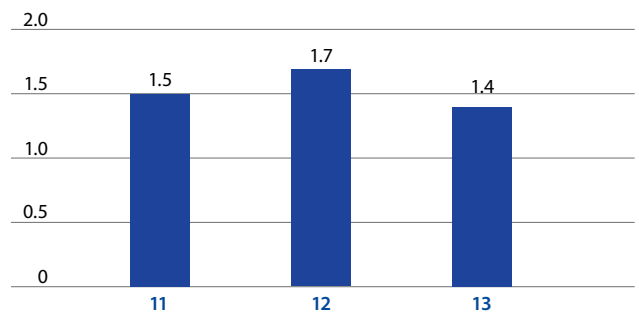
At APL Logistics, as a result of the company's relentless focus on safety, its Occupational Safety & Health

**APL LOST TIME INJURY FREQUENCY<sup>1</sup>**  
(per one million manhours)



<sup>1</sup> 2011 and 2012 figures have been restated to include both U.S. and Singapore-flagged ships.

**APL LOGISTICS OSHA FREQUENCY**  
(North America)





Administration (OSHA) frequency rating in North America continued to outperform the national average recorded by the U.S. Bureau of Labor Statistics, scoring 1.4 in the ratio of recordable injuries to the number of hours worked in 2013.

The Group adopts safety programmes and initiatives to maintain a high safety standard at work for its employees.

#### Safety and Environmental Management System (SEMS)

APL developed the Safety and Environmental Management System (SEMS), which is a set of response measures that enables shore based and shipboard personnel to react promptly to any emergency situation, including one that may impact the environment. These measures are carried in contingency plans and checklists in each ship's Vessel Emergency Manual.

Every year, the crew undergo training, drills, and response preparation under the SEMS training program, which is certified by the American Bureau of Shipping. APL regularly reviews and improves on the SEMS training for it to remain relevant in a continuously evolving operating environment.

Since late 2013, a Safety Mentoring program has also been introduced to enhance safety awareness. Senior Captains are deployed on board as safety mentors

to conduct safety related training during voyages, and determine areas where improvements could be pursued to ensure safe and smooth ship operation.

At the corporate level, a Crisis Management procedure is firmly in place. Ship masters receive immediate support from relevant departments and functions in any situation.

#### Bridge Team Management (BTM)

Modern equipment, organisation and management on the bridge are important in preventing marine casualties. Effective Bridge Team Management (BTM) requires the Master, pilot(s) and other bridge team members to fulfil their responsibilities and work seamlessly as a team to anticipate and respond to their ship's changing situation to protect themselves from such risks. An essential component of APL's Safety at Sea (SAS) program, which establishes sound navigational procedures and policies, BTM includes:

- Making full use of every member's competencies and ensuring that all members are aware of and carrying out their responsibilities;
- Having a detailed passage plan and maintaining it throughout the ship's course;
- Having contingency plans in high risk areas;

- Recognising safety threats and taking actions to mitigate or avoid them;
- Communicating effectively throughout all types of situations.

All Deck Officers are required to undergo mandatory BTM training, which includes the use of a simulator. In 2013, SAS auditors sailed on board eight vessels for a minimum of three port calls each to ensure every bridge team operated safely and effectively during actual port arrivals, departures and passages.

With increased vessel size and complexity, more collaboration is required among the teams on board to ensure safe and efficient ship operation. Bridge Resource Management, Engine Resource Management and Marine Resource Management have been introduced to the fleet to share the same concept with all shipboard officers involved.

To prevent marine incidents from human error, APL will continue to monitor, evaluate and improve on its team and resource management practices – including adoption of best industry practices – to ensure all its ships and crew return to the ports safely.

#### Behaviour-Based Safety (BBS)

The Behaviour-Based Safety (BBS) programme empowers all employees to take personal responsibility for safety,

## FOSTERING A SAFE AND HEALTHY WORKPLACE

and to proactively provide feedback from workplace observations. Employees also use a Risk Assessment (RA) methodology to categorise risk by level or degree of seriousness and its probability, as well as list the corresponding preventive and control measures, which they apply when the need arises.

To encourage employees to participate actively in safety discussions, tool box meetings – which are short, informal discussions that emphasise a certain aspect of safety – among ship staff have been introduced. This is on top of the monthly meetings conducted by a Vessel Safety Committee (VSC) on every ship to provide updates and discuss issues concerning safety. The ultimate purpose is for safety precautions to become an intuitive part of daily operations for all employees.

At APL Logistics, monthly topical safety meetings are conducted by frontline supervisors to reinforce the message that the frontline has ownership of their own safety. Frontline supervisors are also encouraged to form their own teams to tackle localised safety concerns, and this has proven to be very successful.

### Monitoring and analysing performance

APL uses a comprehensive incident reporting system to monitor and measure safety and environmental performance, tracking Key Performance

Indicators such as Lost Time Injury (LTI) frequency, incidents and near misses, audit findings, inspection deficiencies, and port state interventions. Incidents and near misses are investigated for the appropriate corrective and preventative actions to be taken. Any lessons to be learned are extracted and communicated with the fleet. This system enables setting of performance targets that drive continuous improvement. Illnesses aboard ships are monitored by the fleet's Safety Department.

Data is used by APL Logistics to prioritise and drive safety programmes. Each month, statistics are drawn with the purpose of analysing the frequency and severity of safety incidents by location and cause. This is followed by a Pareto analysis, which identifies the top causes for the majority of the incidents, and thus the area APL Logistics needs to focus on to determine the most effective solutions. This may take the form of custom training, management intervention, site reviews or work re-engineering. Implementation is then scheduled, drawing on both internal and external resources.

Once a top area of concern has been addressed, it falls from the Pareto analysis. Another issue that calls for attention rises to the top, so resources can be channeled to resolve it. The improvement cycle continues in this manner indefinitely.

### EMPLOYEE WELLNESS

Across the Group, employee wellness programmes are implemented to foster healthy lifestyle choices, with the aim to reduce health risk factors and maintain a productive and active workforce.

In 2012, NOL received the biennial Singapore Health Award (Silver) from the Singapore Health Promotion Board for its efforts in keeping employees healthy. These include regular lunchtime health talks, leisure activities and health screenings.

All APL vessels comply with the Maritime Labour Convention (MLC), which sets requirements for crew health such as necessary nutrition, noise abatement and more. Recreational facilities are also provided to support a healthy work life balance.

In addition, the vessels are equipped with WIFI and broadband internet access for crew members to stay in touch with their family members. Also, with Voice Over Internet Protocol (VOIP) technology, the crew can make phone calls at affordable rates while at sea and when off duty. These are but some of APL's efforts to take care of its crew and their physical and mental well-being while at sea.



## SECURING SUPPLY CHAINS



The NOL Group leaves nothing to chance in ensuring the security of its supply chains worldwide.

The Group's businesses, APL and APL Logistics, have in place policies, processes and procedures that either comply with or exceed industry security regulations, in order to maintain the highest security standards possible at all times. To stay ahead of evolving threats, the Group continues to identify and invest in security enhancements, and participate in initiatives to develop new security technologies. The Group also communicates the importance of security to all its stakeholders through constant education, outreach and collaboration.

### SECURITY COMPLIANCE

In compliance with the International Ship and Port Facility Security (ISPS) code – a set of mandatory and recommended measures to enhance security for ships and port facilities involved in international trade – APL has developed and implemented security plans based on threat assessments, as well as appointed security officers for the company, and all its ships and marine terminals. APL subsequently carries out training, internal audits, drills and annual security exercises to ensure that employees have implemented the security plans

effectively, and they are equipped with the necessary skills in managing risks.

### SECURITY EXERCISES AND TRAINING

Every NOL employee plays a crucial role in the Group's security efforts. As such, all of them undergo a mandatory general security awareness training on basic supply chain security processes and procedures. Training information is updated regularly to keep employees abreast of the most recent relevant security issues and regulations.

In addition, as part of NOL Group's continuing efforts to review and enhance port and vessel security, APL conducts annual maritime security exercises involving APL security personnel, law enforcement agencies and first responders. Exercises have been held in Singapore, Seattle, Oakland, Yokohama, Kaohsiung and Los Angeles.

In December 2013, a joint security exercise was successfully held in Kaohsiung, Taiwan, and involved the Kaohsiung Harbour Police, the Criminal Investigation Bureau, the Kaohsiung Harbour Fire Brigade and the Taiwan International Ports Corporation.

### ANTI-PIRACY MEASURES

APL vessels adopt industry-led Best Management Practices (BMP) against piracy, as it represents a serious threat to the safety of seafarers, and the integrity of global

supply chains. BMP involves carrying out risk assessments, building and maintaining communication channels with naval authorities, implementing self-protective measures, as well as increasing vigilance and enhancing piracy response through training and drills. Additionally, APL regularly reviews and updates these practices to reflect evolving piracy situations, including targets or high risk areas that might have changed with time.

### INFORMATION SECURITY

The NOL Group's information security program is modelled after the ISO 27001 standard, which contains best practices in areas of information security management. To safeguard information and processes concerning the Group's assets, stakeholders and vital businesses, all personnel with access to NOL computer systems and facilities – from employees, commercial agents to external contractors – must comply with the Group's information security policies. Regular internal audits are conducted to help ensure compliance to established policies and standards.

### GLOBAL SUPPLY CHAIN SECURITY PROGRAMMES

APL and APL Logistics are certified under three key global supply chain security

## SECURING SUPPLY CHAINS

programmes for implementing security measures according to the programmes' guidelines. In addition to strengthening supply chain security, voluntary participation in these programmes has come with additional trade facilitation benefits for APL and APL Logistics, including access to customs simplification and greater market competitiveness.

### (I) *Customs-Trade Partnership Against Terrorism*

Since 2003, APL and APL Logistics have been members of U.S. Customs and Border Protection's (CBP) security initiative, Customs-Trade Partnership Against Terrorism (C-TPAT), which recognises many of our security efforts as best practices. APL and APL Logistics also provide support where possible to help their customers in the industry to revalidate their C-TPAT status.

### (II) *Singapore's Secure Trade Partnership*

The Secure Trade Partnership (STP) Programme, administered by Singapore Customs, provides a framework to guide supply chain stakeholders to develop, implement, and improve their supply chain security measures and practices.

An enhanced version of STP, called STP Plus, stipulates more robust security criteria. APL has been STP certified since 2007 and STP Plus certified since 2009, and APL Logistics has been STP certified since 2010.

### (III) *European Union Authorised Economic Operator*

The European Commission (EC) has granted the Authorised Economic Operator (AEO) status to APL and APL Logistics since 2009 in recognition of the companies' reliable operations and security measures in compliance with customs regulations within the European Union. Specifically, the EC is satisfied that APL and APL Logistics have carried out thorough risk assessments in relation to their businesses in the region, and taken steps to mitigate the risks identified through internal procedures and appropriate control measures.

- World Shipping Council's Security Advisory Committee
- BIMCO Maritime Security Committee
- Singapore Shipping Association's Maritime Security Sub-committee
- U.S. Department of State Overseas Security Advisory Council
- U.S. Coast Guard's Area Maritime Security Advisory Committee

In August 2013, APL security officers in the U.S. attended a counter piracy workshop co-sponsored by the Office of Commercial Vessel Compliance, U.S. Coast Guard, and the Office of Security, Maritime Administration. They discussed piracy issues, as well as local and international policies that are changing with the levels of threat in high risk waters.

## INDUSTRY PARTICIPATION

APL participates actively in the following maritime groups to receive updates and provide feedback on government legislation, initiatives and issues affecting the maritime transportation industry.

## PROTECTING THE ENVIRONMENT



### APL reaches 2015 CO<sub>2</sub> reduction target two years early

As a global company with business presence in more than 110 countries and vessels plying major shipping trade lanes, the Group is cognizant of its responsibility in protecting the environment it operates in.

#### ADHERING TO INTERNATIONAL STANDARDS

The NOL Group ensures that all its vessels adhere to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), which is the main international convention covering prevention of marine pollution from ship operations or accidents. The Group also follows closely guidelines and standards set by the International Maritime

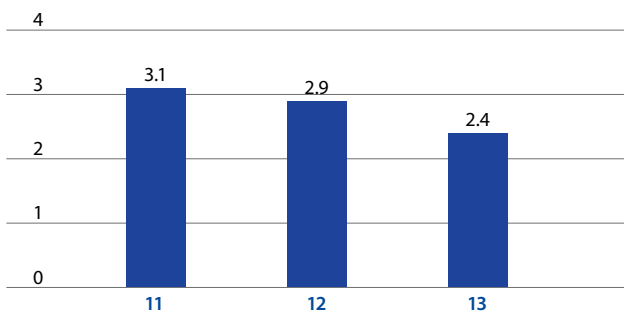
Organisation (IMO), as well as flag states and port states.

In addition, APL makes use of metrics tools provided by ISO 14001 to maintain an effective Environmental Management System (EMS). These tools enable APL to measure and analyse the impact of its business on the environment, in order to identify and work on areas for improvement, from lowering its carbon footprint, using low sulphur fuel, to adopting technologically advanced systems.

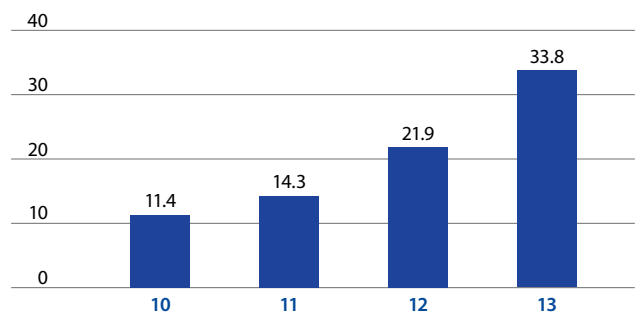
#### REDUCING ITS CARBON FOOTPRINT

In 2013, two years ahead of its 2015 target, APL reduced carbon emissions to 30% below the 2009 level. APL successfully reduced CO<sub>2</sub> emissions associated with

**GROUP FUEL CONSUMPTION**  
(Million Metric Tons)



**APL CO<sub>2</sub> EMISSIONS REDUCTION AGAINST 2009 LEVEL**  
(%)



## PROTECTING THE ENVIRONMENT

### The 10,700-TEU APL Yangshan was named Green Ship of the Year at the Singapore International Maritime Awards, 2013

cargo transportation and handling by 33.8% in 2013.

The following are some of the measures adopted by the NOL Group and its businesses to reduce its carbon footprint.

#### Calculating its carbon footprint

To identify areas of improvement, the Group measures and analyses data collected from as many aspects of its operations as possible. APL's carbon reduction initiative began with a review conducted in 2010 on APL's corporate-wide fuel consumption from 2009, covering any fossil fuel directly purchased for and consumed by ships, terminal cargo handling equipment, and warehouse material handling equipment.

To ensure the accuracy of its calculations, APL's 2013 carbon data was independently verified by Lloyd's Register Group, a third-party class society verifier. CO<sub>2</sub> and CO<sub>2</sub>e emissions were reported in accordance with ISO 14064-1:2006 and the World Business Council for Sustainable Development/World Resources Institute GHG Protocol, and the World Ports Climate Initiative "Carbon Foot Printing for Ports" Guidance Document, June 2010.

APL also provides CO<sub>2</sub> emission numbers for cargo movement over a particular trade lane upon customer request. Calculated using the Clean Cargo Working Group (CCWG) methodology, customers can use these numbers to determine the most

environmentally-friendly way of moving their shipments, and make environmentally-conscious choices.

APL Logistics has developed carbon calculators to measure CO<sub>2</sub> emissions in the warehouse, as well as compare various modes of transport for the most environmentally-friendly logistics solutions to be made. This contributes data to a carbon footprint dashboard introduced by the company to measure and manage its carbon footprint and that of its customers.

#### Improving its Energy Efficiency Design Index (EEDI)

From 2012 to 2013, APL received delivery of 24 out of 34 new ships ordered under the Group's fleet renewal programme, which injects technologically-advanced, fuel-efficient and environmentally-friendly tonnage into the Group's global container fleet. Energy efficient and cold-iron capable, they produce lower carbon and criteria pollutant emissions than previous designs. In fact, the improved Energy Efficiency Design Index (EEDI) of these ships is 33.4% below the International Maritime Organization's (IMO) required base line for the same type and size of container vessels.

The Group's efforts were recognised when APL clinched the inaugural Green Ship of the Year award at the 2013 International Maritime Awards organised by the Maritime



and Port Authority (MPA) of Singapore. The APL Yangshan, a 10,700-TEU ship built in 2012, was singled out for its outstanding energy efficiency and performance.

All APL newbuildings have received certification under the MPA's Green Ship Programme, which recognises Singapore-flagged vessels that adopt energy-efficient ship designs in order to reduce fuel consumption and CO<sub>2</sub> emissions.

**Improving vessel operations**

APL has been implementing operational measures to improve its ships' environmental performance, of which, slow steaming has made the largest contribution to reducing its carbon

footprint per TEU. This is made possible by its advanced route optimisation systems, which aid in planning the most fuel efficient and on-time voyages.

APL also improves its vessel operations through the following:

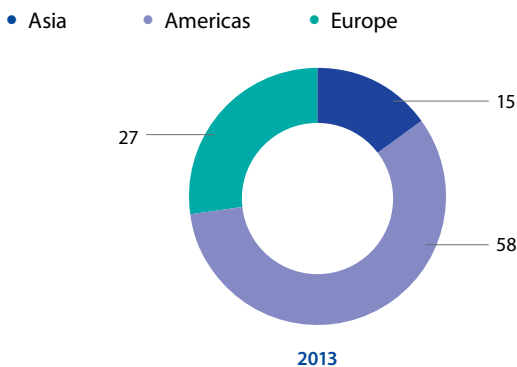
- Hull and propeller polishing
- Application of environmentally-friendly hull coatings
- Weather routing and real time vessel controls
- Trim optimisation
- Optimisation of vessel utilisation
- Optimisation of vessel load through consolidation and alliances
- Electronic engine controls

Following these measures, it has been recording a steady decrease in fuel consumption, which translates to lower carbon emissions. The Group will continue these efforts and identify more ways to make operations more fuel efficient.

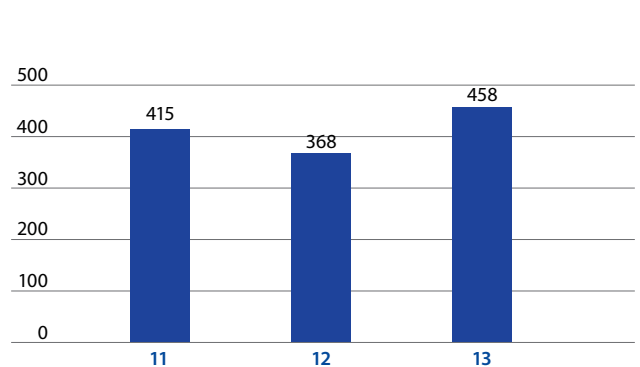
**Greening terminal facilities**

All APL terminals worldwide employ electric gantry cranes to load and discharge cargo from vessels. This reduces diesel emissions by eliminating emissions per crane. Also, all U.S. based tractors used by APL since 1997 meet all on-road emission specifications stipulated by the U.S. Environmental Protection Agency and the California Air Resources Board (CARB),

**APL LOGISTICS CARBON EMISSION (BY REGION)**  
(%)



**APL LOGISTICS CO<sub>2</sub> EMISSIONS SAVINGS (FOR CUSTOMERS)**  
('000 Tons)





## PROTECTING THE ENVIRONMENT

### APL Logistics identified more than 1.2 million tons in carbon emissions savings from 2011 to 2013

and exceed standards for operation in terminals.

In Los Angeles, APL's terminal was the first in the U.S. to have a full-service on-dock rail facility, which ensures greater service reliability and reduced carbon emissions compared to trucking. It is also the only one installed with electric rail-mounted cranes for loading rail cars. There are eight loading and nine storage rail tracks, which hold the equivalent of nearly three trains worth of cargo.

In 2013, APL's Global Gateway South terminal loaded 319,000 containers via on-dock rail lifts. This saved 3.6 million miles of truck transit which would have produced nearly 9,400 metric tons of CO<sub>2</sub>.

At its Seattle terminal, the on-dock rail system has enough room for the equivalent of two complete trains of cargo with an adjacent storage facility of the same size. In 2013, 85,000 containers were moved via on dock rail, which saved 850,000 miles of truck transit and eliminated nearly 2,200 metric tons of CO<sub>2</sub> emission.

#### Offering sustainable logistics solutions

Customers are placing increasing emphasis on logistics solutions that create the least impact on the environment. As an asset-light third party logistics provider, APL Logistics' primary focus is

helping customers manage and "green" their supply chains.

To help customers reduce the carbon footprint in their supply chains, APL Logistics identified more than 1.2 million tons in carbon emissions savings from 2011 to 2013 through various products, services and diagnostic tools.

They are:

- OceanGuaranteed® - the industry's first time-definite less-than-containerload service offering an alternative solution to airfreight for trans-Pacific shipments.
- Indialinx™ - the first dedicated container freight rail service in India as an alternative to truck.
- ShipmentOptimizer™ - a proprietary decision support tool capable of automatically generating the best shipment plan – such as reducing unnecessary air freight and optimising transportation routes – against multiple objectives.

#### Improving warehouse operations

Throughout North America, APL Logistics continues to make use of LEAN and six sigma principles to create value for customers, reduce operational waste and improve processes.

As a result, many LEAN initiatives have been implemented to reduce energy and



water consumption, including the use of more energy-efficient lighting and natural lighting, installing motion sensor light switches, and powering down non-critical office equipment after regular business hours. Cost savings have also been realised in the process.

To reduce waste, offices and facilities worldwide are encouraged to recycle used materials, replace printed documents with digital ones and improve freight packaging.

#### **LOWERING EXHAUST GAS EMISSIONS**

Besides CO<sub>2</sub>, fuel combustion produces criteria pollutants in the exhaust gas emissions – including nitrogen oxide (NO<sub>x</sub>), sulphur oxide (SO<sub>x</sub>), particulate matter (PM), and others – that may be detrimental to the environment and to health. The NOL Group adopts measures to reduce these emissions, and conduct trials on new technologies in our continuous pursuit to minimise our environmental impact.

##### **Practising cold-Ironing**

When APL's cold-iron capable vessels call at terminals that have the ability to provide shore side electrical power, they switch off their diesel-powered generators and "plug in", eliminating the need to burn fuel during their stay in port. This measure has allowed APL to cut more than 50,000 pounds of NO<sub>x</sub> emissions, 1,500 pounds of

PM, and 153,000 pounds of SO<sub>x</sub> emissions annually from ships berthed in Oakland since 2011.

In 2013, APL finished the installation of its cold iron system at its terminal in Los Angeles and began preparing for the cold ironing of over 50% of its vessels each year for the next three years.

##### **Installing seawater scrubber**

The APL England was the first vessel to install and test the "seawater scrubber" technology, which uses seawater to filter pollutants from the ship's auxiliary engines and boilers.

The seawater scrubber successfully reduced NO<sub>x</sub> emissions by 10%, PM emissions by approximately 80%, volatile organic compounds (VOC) by more than 90% and SO<sub>x</sub> pollutants by almost 100%.

The black carbon testing partnership began in August 2013, and ran until to June 2014 after an extension.

For its contribution to cleaner air in the greater Los Angeles area, in October 2013, at the 25th Annual Clean Air Awards hosted by the South Coast Air Quality Management District (SCAQMD), APL won the Advancement of Air Pollution Technology Award for installing and testing an innovative seawater scrubber exhaust-gas cleaning system on the APL England.

#### **MINIMISING ENVIRONMENTAL IMPACT**

Many aspects of a ship can adversely affect the environment, ranging from its construction material, container performance, operational discharge, to recycling process. It is imperative to consider all possible environmental impacts a vessel could create and implement preventive or mitigative measures to ensure sustainability.

##### **Managing ballast water**

Ballast water discharged by ships can contain invasive species that have the potential to cause extensive damage to aquatic ecosystems.

Each of APL's new vessels is equipped with the latest ballast water treatment technology to protect ocean biodiversity from the introduction of such invasive species. This is in line with the framework provided in the IMO Ballast Water Management Convention. APL is also a member of the Global Industry Alliance for the GloBallast Programme, a joint initiative of IMO, United Nations Development Programme (UNDP) and Global Environment Facility (GEF) that aims to assist developing countries to reduce marine bioinvasions.

For older vessels without the treatment technology, APL actively performs mid-ocean ballast water exchanges.

## PROTECTING THE ENVIRONMENT

### In 2013, APL registered

**zero**  
ballast water incidents  
&  
**zero**  
accidental sewage  
discharge

From 1992 until 2011, APL's fleet achieved its goal of zero ballast water incidents. In 2012, APL received two citations for Ballast Water Management non-compliance. It has since undertaken comprehensive corrective action and achieved the annual goal of zero ballast water incidents in 2013.

#### Keeping Green Passports updated

All APL line-haul vessels have a Green Passport, which documents the hazardous materials used in construction of the ships. The Passport accompanies the ships throughout their operating lives and is updated during equipment changes. Its ultimate owner will then deliver the Green Passport with the vessel to the recycling facility to allow for proper processing of the materials, in order to minimise any unnecessary risks to the environment and human health during the recycling process.

#### Regulating sewage discharge

With limited capacity to store sewage in holding tanks, proper planning is critical to reduce the risk of untreated sewage discharge into the sea. Environmental impact resulting from sewage discharge from ships includes the introduction of nutrients, which causes algal blooms and reduced oxygen levels, in addition to

potential health risks for people who come into contact with polluted water during recreational activities or who consume contaminated seafood.

APL complies with MARPOL Annex IV through our Safety Management System that is audited by classification societies for compliance. Due to stringent controls, quality management, and training, APL has eliminated this risk of incidental sewage discharge and achieved its annual goal of zero accidental discharge in 2013.

#### Improving container performance

APL requires all container floorboard suppliers to be accredited by the Forest Stewardship Council and to use only renewable sources of wood supplies. In addition, new containers use water-based sealants that do not contain any volatile organic compounds, as well as eco-friendly water-based paint which does not release harmful vapours during the drying process.

To maintain refrigerated cargo at the necessary temperature, APL has 2,248 electrical plugs in all of its container yards on the U.S. West Coast. This results in the reduction of about 20 million tons of carbon per year and a corresponding reduction in generator fuel, compared to when diesel generators were used in port to supply power to refrigerated containers.



## ENGAGING STAKEHOLDERS

Communication, education and involvement are key to gaining the understanding, support and participation of our stakeholders on our journey towards environmental sustainability.

### Providing information and training

The NOL Group keeps our employees worldwide informed on global environmental issues and developments, as well as the Group's environmental efforts. This is done through the intranet, emails and direct communication from department heads.

In addition, APL conducts environmental seminars for staff worldwide on a regular basis, as part of a systematic series of outreach initiatives since 2009 to engage employees on a more personal level. By helping employees understand the significance of operational impact on the environment, the Group motivates them to proactively contribute to the Group's continuous efforts in ensuring environmental sustainability.

APL also conducts mandatory practical training for its crew members aboard ships, covering a wide array of subjects that range from company policies and procedures, flag state requirements, Vessel General Permit inspections to

hazardous materials handling. There is also a computer-based training programme aboard every vessel that all crew members must complete.

### Initiating green activities

APL encourages employees to "go green" by volunteering in environmentally-friendly initiatives. Two notable initiatives in 2013 are projects in Indonesia and Chile.

To reduce air pollution, the government of Semarang, Indonesia, launched a campaign in 2013 to encourage all citizens to leave their cars home when they go to the city centre on Sunday mornings. In support of the government programme, APL Semarang organised a bicycle event involving employees and customers. The 20km journey started from Semarang's city centre and passed through several villages, before culminating at a sports field in downtown Semarang.

Over in Chile, APL Logistics launched a recycling campaign in June 2013 called "APLícate con el Reciclaje", or "Get on board with Recycling". For two months, the team collected more than 78 tons of operational waste – plastic film, paper, carton and aluminium cans – and sent them for recycling. This equates to a reduction of 50 tons of CO<sub>2</sub> and saved approximately a thousand trees from logging.

To mark the event, a tree planting was also held, bringing together local management, customers, local partners, employees and their children. Funds collected through the sale of waste for recycling was used to purchase school materials for children.

## SUSTAINING PARTNERSHIPS

In this interconnected world, it is impossible to do anything alone. Forming partnerships with industry groups allow all members within the groups to combine their attributes and efforts in order to achieve more.

### Clean Cargo Working Group (CCWG)

The CCWG is a global, business-to-business initiative dedicated to improving the environmental performance of marine container transport. APL has been a member of CCWG since 2004. APL makes use of practical tools developed by the group to measure, evaluate, and report the environmental impacts of our global goods transportation. APL uses the tools to track and benchmark its performance, and report to customers using consistent, industry-approved methodology and tools.

CCWG is made up of 40 member companies, including the top 15 world liner fleet operators and around a dozen

## PROTECTING THE ENVIRONMENT

### APL's newbuilds have an Energy Efficiency Design Index that is 33.4% below IMO's required base line

global shippers. As an active member of the group and a Steering Committee member, APL helps to oversee the CCWG's approach in driving improvements in global goods transport, namely performance measurement and reporting, as well as promotion of environmentally responsible practices.

#### Coalition for Responsible Transportation (CRT)

The CRT is a coalition of importers, exporters, trucking companies, clean truck manufacturers, and ocean carriers formed to facilitate the implementation of practical and sustainable solutions to reduce port truck pollution at U.S. ports, in a manner that balances the environmental needs of port communities with the efficient flow of commerce. APL has been a member since 2011 and was elected to CRT's Board of Directors in 2012.

#### North American Marine Environment Protection Association (NAMEPA)

As a board member since 2008, APL supports NAMEPA in its efforts to increase environmental awareness and educate the wider public and school communities on

the importance of the world's oceans and the maritime industry's role and actions to preserve it.

#### RECEIVING RECOGNITION

The Group's environmental commitment has garnered significant attention. In 2012, APL became the first container shipping company to receive the biennial Osprey Award – the U.S. Coast Guard's highest environmental accolade. Its environmental performance in 2013 continued to be recognised through the following awards:

- Air Quality Leadership Award – Port of Los Angeles
- Advancement of Air Pollution Technology Award - South Coast Air Quality Management District
- Blue Circle Award - Port Metro Vancouver
- Green Gateway Partner Award – Port of Seattle
- Earth Day Award – U.S. Federal Maritime Commission
- Green Ship Award – Maritime and Port Authority of Singapore
- Clean Air Action Plan – Port of Los Angeles and Long Beach



## SUPPORTING COMMUNITIES



### APL shipped containers with over US\$5.9 million of medical aid to Bangladesh, Cambodia and the Philippines

NOL Group employees have been participating in a wide range of community initiatives and the Group continued its support to provide aid and improve lives around the world.

#### DELIVERING AID

In May 2013, following the collapse of garment factories in Bangladesh, APL provided logistics support by delivering medical supplies and other humanitarian aid from U.S.-based nonprofit organisation AmeriCares to the National Institute for Trauma and Orthopedic Rehabilitation in Dhaka. Later in June 2013, APL extended its community partnership with AmeriCares to Cambodia and the Philippines.

From October 2013 to June 2014, the APL-AmeriCares partnership brought more than US\$5.9 million worth of medication and supplies to Bangladesh, Cambodia and the Philippines. The medical aid is used by AmeriCares' qualified health care partners to address the needs of local patients.

For instance, Arimidex, an anti-hormonal therapy, was delivered to the Sihanouk Hospital Center of Hope in Cambodia to support a breast cancer initiative; Vitamins were sent to Bangladesh and Cambodia to prevent and treat potentially life-threatening Vitamin A deficiency; and emergency relief aid was delivered to the Philippines in the wake of

Typhoon Haiyan, one of the worst storms on record in the country.

APL also helped MedShare, a nonprofit organisation, ship disaster relief containers to help Typhoon Haiyan victims. From December 2013 through March 2014, within weeks after the typhoon hit, APL provided free port-to-port shipping from the U.S., for Medshare to deliver medical supplies to the Provincial Government of Cebu and Missionaries of the Poor, as well as healthcare facilities such as the Iloilo Provincial Hospital and ORMOC District Hospital.

This is in addition to more than S\$100,000 in donation contributed by NOL employees worldwide to Typhoon Haiyan relief efforts by the Red Cross, realised through a global donation drive and a dollar-for-dollar staff matching grant by the Group.

#### CONTRIBUTING TO SOCIAL CAUSES

In Europe, APL Sweden employees participated in the annual Blodomloppet race to raise awareness on regular blood donation; employees from the UK and Estonia participated in "Movember" and raised funds in support of men's health issues; and employees in Germany contributed towards local hospices, the International Seamen's Club and organisations that support the disabled.

## SUPPORTING COMMUNITIES

Donation of  
**US\$20,000**  
to the Eisenhower  
Fellowships

APL was a sponsor for the Eisenhower Fellowships, a non-government organisation that identifies, empowers and links outstanding leaders from around the world, helping them to achieve consequential outcomes across sectors and borders. In 2013, APL donated US\$20,000 to the Fellowship.

In Sydney, the NOL Group was the official logistics partner of Singapore Day 2013, organised by the Prime Minister's Office of Singapore to engage its overseas citizens. APL's on-time delivery of containers from Singapore to Sydney and the meticulous coordination by APL Logistics' customer service and operations teams in Sydney and Singapore made the event involving more than 6,000 participants possible. The Group also sponsored containers for the Republic of Singapore's national day celebrations.

Endowment of  
**S\$400,000**  
to set up the  
NOL Lua Cheng Eng Memorial  
Scholarship at the Singapore  
Management University

In Scottsdale, Arizona, employees participated in community projects such as volunteering at St Mary's Food Bank to fill and assemble boxes for the hungry; cleaning and painting the exterior of a house for a low income, elderly or disabled person; and a holiday charitable programme that ensured needy families had food and gifts over the year-end holiday season.

### EMPOWERING CHILDREN

In China, the NOL Group helped improve the learning and living conditions of underprivileged children. Contributions include:

APL also donated cargo containers to the Boy Scouts of America, Marin Council for use at their camp in the Sierra Nevada Mountains in California, to help prevent equipment damage during winter.

In Vietnam, about 1,000 high school and university students participated in a road safety awareness programme spearheaded by APL, in collaboration with Vietnam's Ministry of Education and TAG International, a non-government organisation dedicated to public health education. Classes were held at schools with assistance from student volunteers and employees.

- Thirty sets of used desktop computers with LED monitors to Jinlei Primary School in Lipu County of Guangxi Province.
- Basic necessities – rice, oil, stationery, cotton quilts and winter wear – to 163 children of two primary schools from impoverished families in Liannan Yao County, Guangdong Province. These were purchased with donations from Hong Kong and South China employees, who have been

Donation of  
**more than  
S\$100,000**  
to Typhoon Haiyan  
relief efforts



supporting this community project for three years. With a dollar-for-dollar match from the Group, the total contribution amounted to US\$7,400 in 2013.

- School bags with stationery to 48 underprivileged students at Ming De Primary School located in Xing Long town, Feng Jie district near Chongqing. The Group's Global Shared Service Centre (GSSC) in the city has been sponsoring the school since 2010. The GSSC team also conducted English lessons for the students.
- Cash donations and daily necessities to Tongxin Orphanage located in the coastal city of Xiamen, from employees of the Xiamen and Fuzhou branch offices. The orphanage is a safe shelter for orphans and children whose parents or next-of-kin are unable to fulfill their guardianship.

In the Philippines, APL donated refurbished computers to Ateneo Casa Famiglia, a nonprofit organisation, established to care for abandoned, orphaned and underprivileged children.

In the U.S., the APL Logistics service excellence team assembled bicycles for

underprivileged children from the Boys and Girls Club in Scottsdale, Arizona. Bicycles were selected because they are a symbol of independence and empowerment.

#### **SUPPORTING EDUCATION**

The NOL Group provides scholarships and internship opportunities to motivate promising students to join the maritime industry.

In Singapore, the NOL Lua Cheng Eng Memorial Scholarship – which includes a S\$12,000 grant and internship opportunity at NOL – is given to two outstanding business students at the Singapore Management University (SMU) every year. The S\$400,000 scholarship programme was endowed at SMU in February 2011 in the name of the late Lua Cheng Eng, former Chairman and CEO of the NOL Group.

NOL also gives out the NOL Best Final Year Business Student Award – which includes a certificate and cash prize of S\$2,000 – to business students who have excelled academically and participated actively in community service. A total of 11 SMU students have received this award since its launch in 2000.

In the U.S., APL provides internship opportunities throughout the year for students from the American Merchant

Marine Academies, which produce future ship officers and international maritime business graduates. For three months, the interns participate in every aspect of fleet operations under the mentorship of individually assigned senior managers. Some of them have joined APL upon graduation and have become valuable employees of the company.

APL is also working with a group of high school students from the Montgomery County School District in the U.S. to create an interactive software that will be available free of charge to area elementary schools. While a partner vendor provides free software programming and graphic art, APL employees provide project management and subject matter expertise.

Slated to be completed in 2015, the software is designed to teach school children between the ages of eight and 12 about the ocean environment as they play computer games with embedded learning objectives and activities.



**Neptune Orient Lines Limited**

9 North Buona Vista Drive

#14-01 The Metropolis Tower 1

Singapore 138588

Tel: +65 6278 9000 Fax: +65 6278 4900

[www.nol.com.sg](http://www.nol.com.sg)

Co. Reg. No.: 196800632D