



# Environmental Management Report



***Fiscal Year 2007***

**Carnival Corporation & plc**  
**Environmental Management Report**  
**Fiscal Year 2007**

## **Executive Summary**

This is the third Carnival Corporation & plc (“Carnival”) Environmental Management Report (EMR) covering fiscal year 2007 (December 2006 through November 2007). It provides an overview of the environmental efforts undertaken by Carnival and its subsidiary operating lines. This report:

- Provides the means for communicating externally about the management of Carnival’s environmental performance;
- Demonstrates Carnival’s transparency in responding to disclosure requests by stakeholders (including regulators, investors and industry groups) with up-to-date and verifiable environmental performance information;
- Describes Carnival’s corporate governance structure and its oversight role;
- Plays a role in providing assurance of full compliance with applicable legal and statutory obligations and stimulating internal accountability;
- Communicates information about Carnival’s environmental training programs;
- Assists in identifying opportunities for improving resource utilization and reducing our overall environmental footprint;
- Supports performance benchmarking programs that will help Carnival to identify best practices; and
- Provides a means for communicating the new environmental initiatives being undertaken by Carnival both in technology innovations and in outreach programs.

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## **A Statement from the Chairman and CEO**

### **OUR CORPORATE RESPONSIBILITY**

*“Hand in hand with our operating performance is a continuing commitment to be responsible corporate citizens, especially when it comes to protecting the environment.*”

*“Our commitment to health, environment, safety and security starts with actively maintaining our ISO14001 Environmental Management System certifications and is demonstrated by a wide range of actions, including deploying the first prototype exhaust gas scrubber system in Alaska in an effort to reduce air emissions.*”

*“We have made great strides in this area and will continue to dedicate our efforts toward even more progress. This year we will publish our third annual Environmental Management Report as we endeavor to improve our transparency in publicly reporting the details of our ongoing commitment to the environment. We have also begun to broaden our scope to include sustainability reporting. As an initial step, the corporate responsibility reports published by two of our brands, Costa and AIDA, will be used over time as models for similar reporting by all of our brands.”*

Micky Arison  
Chairman and CEO  
Carnival Corporation & plc 2007 Annual Report

## **Health, Environmental, Safety and Security Policy**

Carnival's Chairman/ Chief Executive Officer and Vice Chairman/ Chief Operating Officer have formally defined Carnival's overall intentions and direction relative to environmental performance in the following Corporate Health, Environmental, Safety and Security Policy statement.

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**CARNIVAL  
CORPORATION & PLC**

## Health, Environmental, Safety and Security Policy

### **Carnival Corporation & plc and its Operating Lines are committed to:**

- Protecting the health, safety and security of our passengers, guests, employees and all others working on behalf of the Company, thereby promoting an organization that is free of injuries, ill health and loss.
- Protecting the environment, including the marine environment in which our vessels sail and the communities in which we operate, minimizing adverse environmental consequences, and using resources efficiently.
- Fully complying with or exceeding all legal and statutory requirements related to health, environment, safety and security throughout our business activities.
- Assigning health, environment, safety and security matters the same priority as other critical business matters.

### **To implement this Policy, Carnival Corporation & plc and its Operating Lines will:**

- Identify those managers responsible for implementing health, environmental, safety and security performance and ensure that there are clear lines of accountability.
- Develop, implement and monitor effective and verifiable management systems to realize our health, environmental, safety and security commitments.
- Identify the aspects of our business that impact the environment and take appropriate action to minimize that impact.
- Identify, document, assess and conduct periodic reviews of the principal health, environmental, safety and security risks affecting our business.
- Implement practical measures to manage identified risks effectively.
- Provide appropriate health, environmental, safety and security support, training, advice and information to passengers, guests, employees and others working on behalf of the Company
- Perform regular health, environmental, safety and security audits and take prompt action on identified shortcomings.
- Promptly report and properly investigate all health, environmental, safety and security incidents, and take appropriate action to prevent recurrence.
- Establish and act upon goals and objectives to continually improve our health, environmental, safety and security performance.
- Publicly report to and maintain open dialogue and cooperation with key stakeholders on health, environmental, safety and security matters.
- Promote industry best practices regarding health, environmental, safety and security matters.

The head of each Operating Line is responsible for ensuring compliance with this Policy within his/ her respective organization.

Carnival Corporation & plc senior management will review this policy at least annually.

  
Howard S. Frank, Vice Chairman and COO  
15 October 2007

  
Micky Arison, Chairman and CEO  
15 October 2007

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## **Who We Are**

Carnival Corporation & plc (“Carnival”) is the largest cruise company and one of the largest vacation companies in the world. Headquartered in Miami, Florida, U.S.A., Carnival’s shore operations have approximately 10,900 full-time and 4,700 part time/seasonal employees. In addition, there are approximately 65,600 crew, including officers and staff, onboard the 85 ships at any one time.

Carnival’s portfolio includes 11 widely recognized cruise brands and is a leading provider of cruises to major vacation destinations. These brands include:

AIDA Cruises	Ocean Village
Carnival Cruise Lines	P&O Cruises
Costa Cruises	P&O Cruises Australia
Cunard Line	Princess Cruises
Holland America Line	The Yachts of Seabourn (“Seabourn”)
Ibero Cruises	

Together, these brands operate 85 ships providing 158,352 lower berths, with 22 new ships scheduled to enter service between April 2008 and June 2012.

Carnival also owns Holland America Tours and Princess Tours, the leading cruise/tour operators in the State of Alaska and the Yukon Territory of Canada.

Traded on both the New York and the London Stock Exchanges, Carnival Corporation & plc is the only corporation in the world to be included in both the S&P 500 and the FTSE 100 indices.

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Carnival Cruise Lines – Carnival Cruise Lines, the largest brand, provides a unique “Fun Ship” style of cruising and currently operates 22 contemporary ships. Carnival Cruise Lines offers quality cruise vacations at affordable prices and is continually introducing ways to keep its cruise experience fresh and exciting. The Carnival Splendor will join the fleet in July 2008, with an additional ship expected to begin service in each of 2009 and 2011.

Princess Cruises – Princess, whose brand name was made famous by the Love Boat television show, is the world’s third largest cruise line. Princess operates a fleet of 16 modern ships, with an additional ship, Ruby Princess, expected to begin service in November of 2008. Princess is a leading cruise line in exotic regions around the world.

Holland America Line – Holland America Line, with more than 130 years of experience, operates a premium fleet of 13 ships, with an additional ship expected to begin service in each of 2008 and 2010. The brand continues to enjoy one of the highest rates of repeat cruisers in the cruise industry. Holland America Line’s product enhancement initiative “Signature of Excellence” continues with refinements to service and enrichment activities onboard and ashore.

Cunard Line – The Cunard brand has the *Most Famous Ocean Liners In The World*<sup>SM</sup>. The brand operates three premium/luxury ships that evoke a golden era of luxurious cruising with an additional ship, the Queen Elizabeth, expected to enter service in 2010. Cunard’s ships offer cruises to worldwide destinations.

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AIDA Cruises – AIDA, which sources most of its guests from German speaking countries, is a leader in the German cruise segment. AIDA operates four contemporary ships, with one additional ship expected to begin service in each of fiscal 2008, 2009, 2010, 2011 and 2012.

Costa Cruises – Costa is Italy's and Europe's # 1 cruise line based on guests carried and capacity of its ships and boasts 60 years of rich history. Costa operates 12 contemporary ships, with two additional ships expected to begin service in 2009 and one ship in each of 2010, 2011 and 2012.

P&O Cruises – P & O Cruises is the largest operator and best known cruise brand in the UK, with five premium ships, and an additional ship expected to begin service in each of 2008 and 2010. P&O Cruises recently announced their Elevation Initiative, which is their commitment to provide an even more refined and luxurious cruise holidays for their guests.

Ocean Village – Launched in 2003, the Ocean Village brand currently operates two contemporary ships serving the U.K. This brand targets a young and active customer base, and its cruise product emphasizes informality, along with a spirit of adventure. The brand attracts a high proportion of guests new to cruising.

Seabourn – Seabourn delivers personalized service and superb cuisine aboard each of their three all-suite ships. The line offers an ultra-luxury experience to destinations throughout the world. Seabourn has three ships on order, which are expected to begin service in 2009, 2010, and 2011.

P&O Cruises Australia – P&O Cruises Australia caters specifically to Australians and New Zealanders. The brand operates three ships on short itineraries and will introduce longer Asian itineraries in 2008.

Ibero Cruises – In September 2007 Carnival entered into an agreement with Orizonia Corporation, Spain's largest travel company to acquire 75% of Ibero Cruises, a Spanish cruise line. Ibero Cruises operates two contemporary Spanish cruise ships specifically tailored to the Spanish market, offering Spanish style food and entertainment.



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## **The Maritime Legal Environment**

Carnival ships are regulated by various international, national, state and local laws, regulations and treaties in force in the jurisdictions in which the ships operate. The ships are registered in the Bahamas, Bermuda, Italy, the Netherlands, Panama, and the UK and are regulated by these Flag States and by the international conventions that govern the environmental impact of the ships, guests and crew. Each country of registry conducts periodic inspections to verify compliance with these regulations. In addition, the directives and regulations of the European Union (EU) and of ports that our ships visit are applicable to some environmental aspects of our ship operations.

Carnival's operations are distinctly different from those of typical shore-based companies and present unique challenges. The laws, regulations and other legal requirements applicable to our operations do not remain static based on a fixed geographic location, but change regularly, sometimes on a daily basis, depending on the itineraries of our ships and the ports and countries visited.

Carnival ensures that all such legal and other requirements are taken into account when establishing, implementing and maintaining its environmental management systems. A selection of the principal laws, acts, codes, directives, legislation, protocols, statutes, rules and regulations regarding environmental performance with which Carnival must comply on a routine basis is listed below:

1) **The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78):**

MARPOL is the primary international convention covering prevention of pollution of the marine environment by ships from routine operational or accidental causes. MARPOL currently includes six technical Annexes, four of which apply to Carnival's operations:

- a) Annex I, Regulations for the Prevention of Pollution by Oil;
- b) Annex IV, Regulations for the Prevention of Pollution by Sewage from Ships;
- c) Annex V, Regulations for the Prevention of Pollution by Garbage from Ships
- d) Annex VI, Regulations for the Prevention of Air Pollution from Ships.

2) **The International Management Code for the Safe Operation of Ships and for Pollution Prevention (the ISM Code):**

- a) The ISM Code is an international standard for the safe management and operation of ships and for pollution prevention and requires the development, implementation and certification of a Safety Management System that includes environmental protection.
- b) The Safety Management System of each of Carnival's operating line is certified in accordance with the ISM Code.
- c) The shore office is issued a Document of Compliance (DOC) and each vessel in the operating line fleet is issued a Safety Management Certificate (SMC).

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- 3) **Flag State Marine Environmental Rules and Regulations** of the countries where Carnival's ships are registered: United Kingdom, The Netherlands, Italy, Bahamas, Bermuda, and Panama.
- 4) **Port State Marine Environmental Rules and Regulations** of the countries and other geographic areas where Carnival's ships operate.
- 5) **Directive 2000/59/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 November 2000 on port reception facilities for ship-generated waste and cargo residues**, which defines requirements intended to reduce the discharges of ship-generated waste and cargo residues into the sea, especially illegal discharges, from ships using ports in the European Community, by improving the availability and use of port reception facilities for ship-generated waste and cargo residues, thereby enhancing the protection of the marine environment. Specific national regulations implement this directive in all EC member countries, many of which are visited by Carnival's ships. These regulations define requirements for the management of all forms of ship-generated waste.
- 6) **Council Directive of 12 December 1991 on hazardous waste (91/689/EEC) amending Directive 78/319/EEC on hazardous waste**, which defines and provides a precise and uniform definition of hazardous waste. The Directive requires Member States to take the necessary measures to require that on every site where tipping (discharge) of hazardous waste takes place the waste is recorded and identified. Member States shall take the necessary measures to require that establishment and undertaking which dispose of, recover, collect or transport hazardous waste do not mix different categories of hazardous waste or mix hazardous waste with non-hazardous waste. Member States shall take the necessary measures to ensure that, in the course of collection, transport and temporary storage, waste is properly packaged and labeled in accordance with the international and community standards in force. Specific national regulations implement this directive in all EC member countries, many of which are visited by Carnival's ships.
- 7) **The U. S. Act to Prevent Pollution from Ships ("APPS")**, as amended, 1980 (33 U.S.C. §§ 1901-1911), and its implementing regulations.
- 8) **The U.S. Clean Water Act (CWA)** (40 CFR Parts 50-99), the U. S. regulations which set the standards for effluent discharges to bodies of water to protect drinking water sources.
- 9) **The U.S. Resource Conservation & Recovery Act (RCRA)** (40 CFR Parts 240 - 299), the U. S. hazardous waste management regulations.
- 10) **The U.S. Clean Air Act (CAA)** initially issued in 1970 to require development and enforcement of regulations to protect the public from exposure to airborne contaminants hazardous to human health, supplemented in 1990 by additional

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legislation to reduce the generation of smog and other forms of atmospheric pollution.

- 11) **Alaska Cruise Ship Legislation** including:
  - a) U.S. federal law “Title XIV—Certain Alaskan Cruise Ship Operations” which sets effluent standards for blackwater and allows continuous discharge if secondary treatment standards are met and compliance is demonstrated through semi-monthly sampling;
  - b) Alaskan State Law AS 46.03.460 – 46.03.490 which sets effluent limits for both graywater and blackwater, addresses the offloading and/or disposal of non-hazardous solid wastes (besides sewage) and hazardous wastes in Alaska, and requires vessel owners/ operators to annually submit a description of the non-hazardous and hazardous waste handling procedures used on their vessels; and
  - c) Alaska State Regulation 18 AAC 50.070. “Marine Vessel Visible Emission Standards” which states that within three miles of the Alaska coastline, visible emissions, excluding condensed water vapor, may not reduce visibility through the exhaust effluent of a marine vessel by more than 20 percent with certain specified exceptions.
  
- 12) **Memoranda of Understanding** with various U.S. States including Florida and Washington.
  
- 13) **Hawaii Cruise Ship Legislation** “Act 217, Commercial Passenger Vessels Discharges”, enacted on July 12, 2005, establishes standards for the discharge of treated sewage and air emissions from cruise ships and commercial passenger vessels into the marine waters of the State. It prohibits the discharge of untreated sewage from commercial passenger vessels, and includes specific recordkeeping and monitoring requirements.
  
- 14) **Maine Cruise Ship Legislation** requires that from January 1, 2006, the owner or operator of a large commercial passenger vessel not discharge graywater or a mixture of graywater and blackwater to coastal waters unless the discharges are authorized under a general permit and meets certain specific State requirements and associated rules. The requirements and associated rules permit ships with a U.S. Coast Guard-approved advanced wastewater treatment system that meets the same wastewater discharge standards applicable in Alaskan waters to discharge wastewater within Maine’s coastal waters and requires that the ships maintain a log of discharges and file discharge information with the state.
  
- 15) **Ballast Water Management regulations** and guidelines are designed to reduce the threat to the world's oceans and resultant environmental, economic and public health impacts from invasive aquatic species by addressing the transfer of harmful aquatic organisms and pathogens in ships' ballast water. Such regulations and guidelines are issued by (among others):
  - a) The International Maritime Organization (IMO);
  - b) The U.S. Coast Guard (USCG);

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- c) Individual U.S. states, e.g., California, Washington, Oregon;
- d) Individual Port States visited by Carnival vessels, e.g. Antarctica, Australia, Argentina, Brazil, Canada, Chile, Egypt, Israel, New Zealand, Panama, Peru, Russia, United Kingdom, and Ukraine.

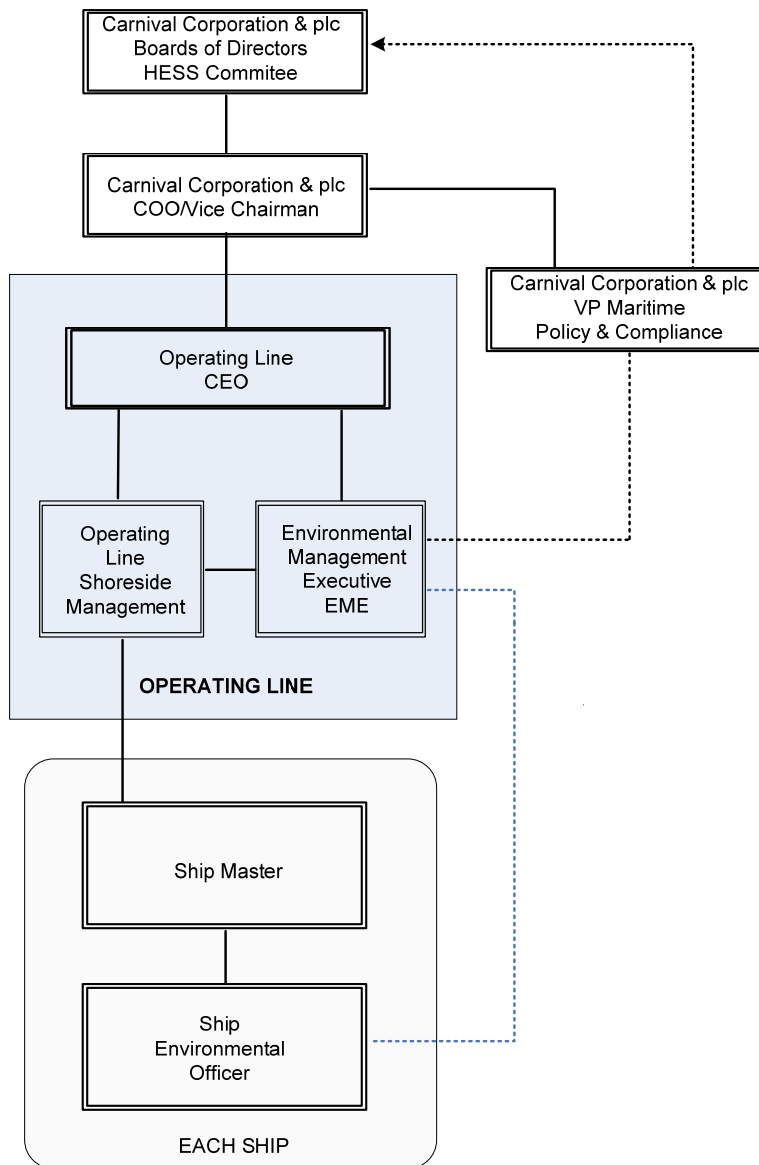
- 16) **The Montreal Protocol** on Substances that Deplete the Ozone Layer, an international treaty designed to protect the ozone layer by phasing out the production and use of a number of substances believed to be responsible for ozone depletion. The 16<sup>th</sup> Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer concluded on November 26, 2004, in Prague, Czech Republic.
- 17) **Deed of Agreement between Environment Southland and New Zealand Cruise Industry** concerning operation of cruise ships in the Internal Waters requires that cruise ship operators, including the master, crew, and pilots adhere to specific requirements for control of emissions to air and water, and a number of other operational aspects with potential environmental impacts.
- 18) **Limits on Fuel Sulphur Content** are part of new regulations approved under MARPOL Annex VI. Annex VI requires ships to carry an International Air Pollution Prevention Certificate issued by its flag state indicating that it is operating in compliance with Annex VI. Annex VI also establishes limits on the sulphur content of fuel oil used on board vessels, and requires that, in special SO<sub>x</sub> (Sulphur Oxide) Emission Control Areas ("SECA's"), the sulphur content of fuel burned cannot exceed 1.5%. There are currently two SECA's - one in the Baltic Sea and the other in the North Sea/ English Channel. In addition a European Union (EU) directive regarding the use of low sulphur (< 1.5%) fuel for passenger ships on regular service to or from EU ports was introduced in 2006. The necessary national legislation enforcing this directive has yet to be introduced in all EU member states. The application of this legislation to cruise ships is still being clarified among EU member states. In January 2010, a 0.1% sulphur limit on all marine fuels used in EU ports enters into force, that will require distillate fuels to be used.

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## Corporate Environmental Governance

Carnival Corporation & Carnival plc operates under a dual listed company structure with single corporate governance. Governance principles are set forth in our Corporate Governance Guidelines and the charters of our Board committees.

Accountability for environmental performance in Carnival extends from the ships, through the Operating Lines and Senior Corporate Management to the Boards of Directors. The organization chart below illustrates Carnival's governance structure.



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**Corporate Responsibility**

**Boards of Directors**

The Health, Environmental, Safety and Security (HESS) Committee of the Boards of Directors is comprised of three independent Directors. The HESS Committee provides increased focus at the Board level on aspects of management and performance in the HESS areas. Specifically, the purpose of the Committee is to assist the Boards in fulfilling their responsibility to supervise and monitor HESS policies, programs, initiatives, and compliance with legal and regulatory requirements. On a quarterly basis, the HESS Committee reports to the full Boards of Directors on issues raised by the quarterly reports prepared by Maritime Policy and Compliance Department (MP&C).

**Vice President – Maritime Policy & Compliance (MP&C)**

Carnival's MP&C Department is headed by a Vice President, with full-time professional and administrative staff. Carnival's MP&C Department is responsible for providing a common, integrated approach to management of health, environmental, safety and security matters. The VP – Maritime Policy & Compliance makes quarterly reports to the HESS Committee concerning Carnival's health, environmental, safety, security and regulatory matters. To achieve this, MP&C develops and issues Corporate Standards, audits Carnival's Operating Lines and ships, and measures and reports on Carnival's HESS-related performance.

**Operating Lines – Shoreside Responsibility:**

**Chief Executive Officer – Operating Lines**

The CEO of each Operating Line is responsible for the day to day management, compliance with the Corporation's policies and standards within the Operating Line and ensuring prompt resolution of HESS issues.

**Environmental Management Executive (EME)**

Each Operating Line EME is responsible for assuring implementation of the Operating Line's Environmental Management Systems, and for monitoring of environmental performance and compliance with the Corporation's environmental policies and standards. The EME has direct access to the Operating Line's CEO, and has a line of communication to the Carnival Corporation's VP – MP&C. The EME is independent of direct, day to day responsibility for managing or performing operational activities, and is supported by professional and administrative staff commensurate with the needs of the Operating Line.

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## **Operating Lines – Shipboard Responsibility:**

### **Ships' Master**

The Master of each Carnival ship is responsible for the safety and care of all persons on board the ship, the ship's seaworthiness, navigation and overall operations, and for pollution prevention. The Master is assisted by three senior officers: the Staff Captain/Chief Officer, the Chief Engineer/Chief Technical Officer, and the Hotel Director who manage the Deck, Engine/Technical, and Hotel Departments, respectively.

### **Environmental Officers (EO)**

The EO is a non-watch standing officer responsible for the oversight and verification of shipboard environmental management and compliance. The EO reports directly to the Master and has a line of communication to the Operating Line EME.

### **Environmental Hotline**

Carnival has also established a hotline telephone number and website to permit reporting of environmental concerns. The hotline can be contacted at:

- 1-888-290-5105 (toll-free in North America)
- 1-305-406-5863 (from all other locations)
- [www.carnivalcompliance.com](http://www.carnivalcompliance.com)

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## **Voluntary Management and Technical Initiatives**

As an indication of its role as an industry leader for environmental excellence, Carnival has dedicated significant resources to the following environmental management and technical initiatives that go considerably beyond the requirements of current laws and regulations.

### **Environmental Management**

#### **Corporate Environmental Standards**

In order to maintain and improve environmental compliance, management, and performance, Carnival has developed and implemented the following Corporate Environmental Standards and Corporate Standards:

- CENVS 001, Refrigeration Technician Training
- CENVS 002, Refrigerant Recovery Units
- CENVS 003, Black and Gray Water Management
- CENVS 004, Bilgewater and Oily Waste Management
- CENVS 005, Under Water Paint Coatings
- CENVS 006, Grease Trap – Grease/Oil/Residue Disposal
- CENVS 007, Waste Management
- CENVS 008, Hazardous Materials Management & Hazard Communications
- CENVS 009, Environmental Management System (EMS) Certification
- CENVS 010, Environmental Organization and Reporting Structure
- CENVS 011, Environmental Awareness and Training
- CENVS 012, Corporate Environmental Auditing and Monitoring
- CENVS 013, Environmental Accountability and Reporting
- CS 001, Reporting of Ship and Shore Facility Incidents

#### **Cruise Line International Association (CLIA) Environmental Standard**

Carnival has adopted and implemented the CLIA Environmental Standard, “Cruise Industry Waste Management Practices And Procedures”, as a Corporate Standard applicable on all of Carnival’s ships. This standard is based on principles that include: designing and constructing cruise ships to be environmentally friendly, embracing new technology, complying fully with international and U.S. environmental laws, minimizing waste production, and maintaining cooperative relationships with the regulatory community.

The CLIA Environmental Standards include requirements related to environmentally responsible handling and disposal of:

- Photo Processing Waste, Including X-Ray Development Fluid;
- Dry-Cleaning Waste Fluids and Contaminated Materials;
- Print Shop Waste Fluids;



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- Photo Copying and Laser Printer Cartridges;
- Unused and Outdated Pharmaceuticals;
- Fluorescent and Mercury Vapor Lamp Bulbs;
- Batteries;
- Bilge and Oily Water Residues;
- Glass, Cardboard, Aluminum and Steel Cans;
- Incinerator Ash;
- Graywater; and
- Blackwater.

CLIA Environmental Standards also include requirements for environmental awareness and training programs for ships' crewmembers and environmental awareness for guests.

These CLIA Environmental Standards are incorporated into the Environmental Management Systems of Carnival's Operating Lines.

## Technical and Environmental Initiatives

**Incinerator Upgrades** – In 2007, Princess Cruises and Carnival Cruise Lines upgraded the incinerators on three and four of their ships, respectively. These upgraded incinerators allow the ships to burn shipboard waste more efficiently using less energy and reducing air emissions. In addition, on the Princess ships, the opacity systems used for monitoring the gases released from the incinerators were upgraded to improve the monitoring and tracking of these air emissions.

For the ships currently being built, AIDA has introduced incinerator design and operational improvements that will result in reduced emissions of nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO).

**Dynamic Trimming Assistant (DTA) System** – In 2007, Carnival Cruise Lines conducted a feasibility study of a "Dynamic Trimming Assistant" (DTA) system to optimize the ship's trim to improve fuel economy. Initial results from preliminary trials on two ships are encouraging. Further testing in 2008 may result in further deployment of the DTA system.

**Installation of Energy Efficient Lighting and Light Emitting Diodes (LEDs)** – Carnival Cruise Lines is replacing existing incandescent light bulbs with more energy efficient bulbs and LEDs to reduce both energy consumption and emissions.

**Optimization of Diesel Generator Use at Sea and in Port** – Carnival Cruise Lines is optimizing the usage of the diesel generators on board the ships to improve efficiency which will result in reduced fuel consumption and air emissions.

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**Itinerary and Arrival/ Departure Changes** – Carnival is evaluating shorter routes and rotation/ changes of destination ports in the itineraries, and collecting and analyzing data on departure and arrival times, to identify opportunities to reduce fuel consumption and air emissions.

**Use of Anti Fouling Release Coating (Marine Coating) Technology** – AIDA Cruises, Carnival Cruise Lines, Ocean Village, P&O Cruises, P&O Cruises Australia, and Princess Cruises have applied silicon based anti-fouling marine hull coating systems to some of their vessels. This paint technology reduces the ship's drag, thus reducing fuel consumption and air emissions. Such coatings are also biocide-free, making them more environmentally acceptable than biocide-releasing technologies.

**Evaporator Management** – Carnival Cruise Lines has implemented an evaporator management project aimed at optimizing the operation of the fresh water evaporators to produce fresh water by utilizing the waste heat generated by its engines. This initiative reduces usage of the ship's boilers to produce fresh water and helps to reduce fuel consumption and air emissions.

**Periodic Cleaning of Propellers and Hulls** – Carnival has implemented routine hull and propeller cleaning programs that reduce hull friction, lowering fuel consumption and reducing air emissions.

**Vessel Shore Power Installations** – Carnival operates two shore power installations, in Juneau, Alaska and in Seattle, Washington, that allow ships that have been configured to use shore power provided by land-based power plants. This allows those Carnival ships to shut down their engines and avoid air emissions while moored in these ports. These land-based power plants use environmental technologies not yet available to ships that enable them to produce power with less environmental impact and take advantage of sustainable resources, such as hydroelectric power.

Princess Cruises has signed an agreement to use shore electrical power when they dock at the Port of Los Angeles when it becomes available. The technology has been installed on all the ships that will call in that port.

**Seawater Scrubber Feasibility Project** – Holland America Line has installed an innovative seawater scrubber feasibility project aboard one of its cruise ships with supporting monetary assistance from the EPA/West Coast Collaborative grant and the Puget Sound Clean Air Agency. The sea water scrubber system uses the natural chemistry of seawater to remove nearly all sulphur oxides (SOx) and particulate matter (PM) from air emissions. The sea water is subsequently treated to remove harmful components prior to being discharged overboard.

The data being collected on this project will be analyzed to determine if this could be a viable technology on new or existing ships. Representatives from government agencies are serving on a technical advisory committee that oversees the development of this project.

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**Heating, Ventilating, and Air Conditioning (HVAC) Control/Automation System** – Princess Cruises and Carnival Cruise Lines evaluated new HVAC Control/ Automation systems for use on board their ships. The systems are designed to control onboard HVAC temperatures more effectively, thus reducing energy consumption and resultant air emissions. In 2007, such HVAC Control/Automation systems were installed on additional Princess Cruises and Carnival Cruise Lines ships.

**Plasma Incinerator Waste Disposal** – Carnival Cruise Line operates the only shipboard plasma incinerator in the cruise industry. The installed system began as a prototype and Carnival is evaluating the use of this plasma incinerator for the disposal of additional shipboard wastes. Plasma technology allows the ship to burn waste very efficiently and produce significantly reduced air emissions and ash byproducts of incineration.

**Biodegradable Oils** – Holland America Line and Carnival Cruise Lines are using biodegradable oils in several oil-to-sea interface systems on their ships. Properly formulated biodegradable oils persist for significantly shorter periods and quickly break down (biodegrade) to harmless inorganic substances.

**Water Lubricated Shaft Bearing Systems** – Several of Princess's larger ships are equipped with water lubricated propeller shaft bearing systems. Traditional systems use oil as a lubricating and cooling medium while these systems use seawater. This technology benefits the environment in the event that a ship experiences a shaft bearing leak. Instead of potentially leaking oil to the marine environment, such leaks from ships with water lubricated systems would only result in seawater reentering the marine environment.

**Bilge Water Processing System "White Box"** – All Carnival ships ensure that all bilge water destined for overboard discharge, including that stored in clean bilge water holding tanks, is routed through a "White Box". The "White Box" is a proprietary system considered to be a tamper resistant fail-safe system for overboard discharge of processed bilge water. Its design incorporates an oil content meter (OCM) and return water functions in a central locked location that also includes a regulating valve, flow switches, solenoid valves, a three-way valve, a flow meter, a control box and a recorder. The "White Box" serves as the final monitoring and control device through which bilge water passes prior to reaching the environment.

**Jets Vacuum System** – Carnival Cruise Lines has retrofitted Jets Vacuum systems on board its Fantasy class ships, replacing the existing EVAC system. This system is designed to improve the management and treatment of black water by using less energy and fewer chemicals, and helping to facilitate the treatment process.

**Advanced Wastewater Purification System (AWPS)** – Over one third of Carnival's ships are fitted with an AWPS to treat the gray and black (sewage) wastewater prior to discharge. Princess Cruises has also installed ultraviolet (UV) treatment systems on

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some of their AWPS's and are evaluating the disinfection efficiency achieved. Holland America Line has UV treatment on all AWPS ships as the final stage of disinfection prior to discharge. Ultraviolet light is one of the leading candidates for water disinfection and has inherent advantages over other water disinfection methods.

**Treated Blackwater Discharge** – Blackwater (sewage) from Carnival's ships is processed through a Marine Sanitation Device (MSD), certified in accordance with US or international regulations, prior to discharge. Discharges take place only when the ship is at a distance of more than 12 nautical miles from the nearest land and only when the ship is travelling at a speed of not less than 6 knots except for those ships equipped with an AWPS.

**Dry Cleaning Chemical Perchloroethylene (PERC)** – PERC is a toxic chemical used as a dry cleaning solvent. Improper exposure to PERC is a significant risk to system operators. The waste generated from dry cleaning operations is a hazardous waste with special disposal requirements. Princess Cruises has eliminated PERC from five of their vessels in 2007. Holland America Line has eliminated PERC on 8 of their ships, and plans to eliminate PERC on their remaining ships by 2009.

**Refrigeration Engineer Training** – At least one Refrigeration Engineer on each Carnival ship that visits US ports is trained and certified in accordance with Section 608 of the US Clean Air Act. While this Act does not apply on board Carnival's ships, it is followed voluntarily as a good environmental practice.

**Refrigerant Recovery Units** – All Carnival ships perform refrigerant gas recovery operations using chlorofluorocarbon (CFC) recovery units that are certified in accordance with Section 608 of the US Clean Air Act. While this Act does not apply on board Carnival's ships, it is followed voluntarily as a good environmental practice.

**Ballast Water Treatment** – Princess Cruises' ship the Coral Princess will soon be accepted into the United States Coast Guard's Shipboard Technology Evaluation Program (STEP). This purpose of STEP is to investigate promising ballast water treatment technologies in real world environments. STEP requires that the vessel and the technology provider prove the efficacy of the treatment process through specific sampling and analytical tools. The ballast water treatment system installed onboard the Coral Princess uses the latest supplied technology of filtration and UV disinfection. Tests have indicated that this system is capable of meeting the IMO Ballast Water Treatment Convention requirements.

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## **External Disclosures**

### **FTSE4Good Inclusion**

The FTSE Group (FTSE) is a world leader in the creation and management of over 100,000 equity, bond and hedge fund indices. The FTSE4Good Index Series has been designed to measure the performance of companies that meet globally recognized corporate responsibility standards, and to facilitate investment in those companies.

The FTSE4Good Indices appeal to a broad range of institutional and retail socially responsible investors who are looking to:

- Only invest in companies that demonstrate good standards in corporate responsibility;
- Minimize the social, ethical and environmental risks within their portfolios;
- Capitalize on the benefits of good corporate responsibility;
- Avoid investing in traditionally excluded SRI sectors such as tobacco, defense and nuclear power; and
- Actively encourage companies to be more responsible.

The FTSE4Good Index Series is a series of benchmark and tradable indices for socially responsible investors (SRI). For inclusion, eligible companies must meet criteria requirements in five areas:

- Working towards environmental sustainability;
- Developing positive relationships with stakeholders;
- Up-holding and supporting universal human rights;
- Ensuring good supply chain labor standards;
- Countering bribery.

In May of 2007, Carnival received an updated certificate of membership certifying that Carnival continues to be a constituent company in the FTSE4Good Index Series. The certificate is valid for the year 2008.

### **Carbon Disclosure Project (CDP)**

The Carbon Disclosure Project (CDP) is an independent not-for-profit organization aiming to create a lasting relationship between shareholders and corporations regarding the implications for shareholder value and commercial operations presented by climate change. Its goal is to facilitate a dialogue, supported by quality information, from which a rational response to climate change will emerge.

CDP provides a coordinating secretariat for institutional investors with combined assets of over \$57 trillion under management. On their behalf, it seeks information on the

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business risks and opportunities presented by climate change and greenhouse gas emissions data from the world's largest companies: 3,000 in 2008. Over 8 years CDP has become the gold standard for carbon disclosure methodology and process. The CDP website is the largest repository of corporate greenhouse gas emissions data in the world.

Carnival has participated in the CDP since 2006 (CDP4). Carnival's response to the CDP5 questionnaire that was launched in 2007 is available at the CDP website ([www.cdproject.net](http://www.cdproject.net)).

## **Governance Metrics International (GMI) Reporting**

GMI ([www.gmiratings.com](http://www.gmiratings.com)) was formed in April 2000 by a small group of people who recognized the need for a new, easy-to-use tool to monitor corporate governance. It is a shareholder advisory rating agency that provides ratings for over 4,100 companies by subscription. GMI's rating system incorporates hundreds of data points across six broad categories of analysis: board accountability, financial disclosure and internal controls, executive compensation, shareholder rights, ownership base and takeover provisions, plus corporate behavior and social responsibility. GMI subscribers can view a company's overall rating, section ratings and several pages of written analysis. GMI clients include leading pension funds, investment managers, regulatory agencies, banks, insurance companies, professional service firms and companies. Carnival's disclosures to GMI regarding Environmental, Health and Safety issues (most recently in 2006) are reflected in GMI's rating reports.

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## **Training and Communication**

Carnival has established a Corporate Environmental Awareness and Training Standard (CENVS 011) that requires, among other things, an environmental training plan and related procedures to ensure that:

- All shipboard and applicable shoreside personnel have environmental awareness training;
- Any person whose job could significantly impact the environment has job-specific training, including comprehensive equipment training, prior to commencing work in that job;
- Any person whose job entails oversight and verification of environmental management, performance or compliance is competent to perform their assigned oversight and verification functions, based on appropriate education, training or experience;
- There are means for sharing knowledge among shipboard and shoreside personnel to communicate best practices, new training requirements, and other information that may enhance environmental awareness and performance.

Based on this standard, Carnival and its Operating Lines have developed and implemented comprehensive environmental training programs. These programs:

- Are designed to help ensure that any shipboard or shoreside personnel performing tasks that have the potential to cause a significant environmental impact are competent to perform such tasks. Personnel competence is based on education, training, and/ or experience;
- Address the knowledge and skills needed to comply with applicable environmental laws, requirements, regulations and Environmental Management System (EMS) requirements;
- Educate personnel on the environmental impact of operations and the processes, procedures and policies that form the basis of the EMS; and
- Ensure that employees understand Carnival's environmental management policies and are able to integrate environmental management objectives with all applicable environmental procedures in the performance of their jobs.

Carnival's environmental training programs for shipboard and shoreside personnel typically use a multi-tiered approach that includes one or more of the following, based on the job duties of the individuals being trained;

- Environmental Familiarization Training;
- Basic Environmental Training;
- Environmental Training for Management and Supervisory Personnel; and
- Environmental Oversight and Verification Training.

To promote effective training, the learning objectives of each training course are clearly explained at the beginning of the course and included in handouts as appropriate. In

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addition, learning objectives for each separate session within multi-session courses are clearly stated at the beginning of that session. The learning objectives typically state what the participants should know or be able to do at the end of each session.

Carnival's training programs include mechanisms for measuring proficiency gained because of the training, based on stated learning objectives. In addition to the training outlined above, certain personnel are subject to continuing education requirements to maintain certification as EMS Auditors.

Carnival and its Operating Lines maintain processes for communicating environmental information, both within and outside the organization, in conjunction with their respective public relations functions. This includes an environmental compliance telephone "Hotline" and a website ([www.carnivalcompliance.com](http://www.carnivalcompliance.com)). Procedures are maintained for:

- Internal communication among the various levels and functions of the organization; and
- Receiving, documenting and responding to relevant communication from external interested parties, especially in regards to significant environmental aspects.

Carnival and its Operating Lines regularly communicate with external parties such as governmental agencies, community stakeholders, tenants, contractors, and other organizations. These communications include subjects associated with the management of significant environmental aspects and are governed by regulatory requirements and the professional judgment of Carnival and Operating Line staff.

For example, Holland America and the U.S. Coast Guard co-produced a training CD-ROM for cruise ships calling in southeast Alaska. The release of the CD marked the first time that a comprehensive resource of this kind has been made available in a repeatable and professional format that a user may access at his/ her own pace. The course is designed to educate Coast Guard personnel about cruise ships.

In addition, many of Carnival's Operating Lines are engaged in the sharing of best practices through scientific and environmental studies aimed at protecting the environment. These research studies include ballast water treatment systems, exhaust gas scrubbers and waste minimization programs that have shown favorable results thus far.



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## **How We Are Doing**

### **Beyond Certification**

ISO 14001 is one of the series of ISO 14000 environmental management standards that was developed to help organizations manage their processes, products and services to minimize environmental impact. ISO 14001 focuses on the processes - the comprehensive outcome - of how services are delivered and products are produced, rather than on the actual service or product itself. ISO 14001 also presents a structured approach to setting environmental objectives and targets and provides a framework for any organization to apply these broad conceptual tools to their own processes.

In September 2006, ISO 14001 certifications were issued to all of Carnival's operating units by four different internationally recognized maritime regulatory agencies. These agencies include RINA from Italy, Germanischer Lloyd from Germany, Lloyd's Register Quality Assurance from North America and the Maritime and Coastguard Agency in the UK.

All operating companies that were then certified continue to maintain their ISO 14001 standard certification status with their respective ISO 14001 Registrars. This is accomplished by undergoing routine environmental management system audits. Internal audits are conducted by qualified company shore-based personnel, while external audits are conducted by the designated Registrars.

New ships and operating units acquired by Carnival are being certified to ISO 14001.

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**Significant Environmental Aspects**

Carnival maintains processes within each of its Operating Lines for identifying and prioritizing the environmental aspects of its activities, products and services that it can control or over which it can expect to have an influence.

Carnival has identified those operations and activities that are associated with the identified significant environmental aspects and plans these activities to ensure that they are carried out under controlled conditions. The following are typical of the significant environmental aspects of Carnival's activities, products and services and its associated potential/actual environmental impact:

<b>Significant Environmental Aspect</b>	<b>Potential/Actual Environmental Impact</b>
Ballast water/ Invasive species - marine	Inappropriate release or discharge to marine environment
Chemicals	Inadvertent release or spill
Dry cleaning – use of perchloroethylene chemical/solvent	Air pollution, volatile organic compounds, Hazardous waste generation
Engine emissions, NO <sub>x</sub> , SO <sub>x</sub> , CO <sub>2</sub> , particulates	Release to air, pollution, acid rain, smog, global warming
Fire fighting – use of extinguishing gases – Halons, CO <sub>2</sub>	Ozone depletion, global warming potential
Food	Natural resource use, spill during loading.
Fuel	Natural resource use, spill during bunkering
Heat	Release to air, water
Hull paint/ coatings (TBT)	Release to water, release of components to sea
Incinerator Emissions	Release to air, smog, global warming
Invasive species - pests (vermin & insects)	Infestation of ship, release to land
Itinerary plan – human traffic (resource and waste issue)	Local congestion, traffic and resources (including cultural)
Itinerary plan – port development	Disturbance of “green fields”, loss of pristine spaces
Lubricants & hydraulic oil	Inadvertent release or spill during loading, release to water
Marine mammals & birds	Marine mammal / bird strike
Noise	Disturbance to local communities
Odor	Release to air, air quality
Oil/Water leaks	Oil pollution
Packaging	Natural resource use, Inadvertent release to sea, waste production
Paint	Natural resource use, Inadvertent release to sea, waste production
Pathogens	Sick guests/ Crew
Printer/copier toner cartridges	Hazardous waste generation, recycling
Reef (striking by grounding; voyage interruption), sediment placed on a reef	Damage to reef
Refrigerant gases - (CFCs / HCFCs / HFCs)	Ozone depletion, global warming

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<b>Significant Environmental Aspect</b>	<b>Potential/Actual Environmental Impact</b>
Waste - biohazardous / medical / sharps / pharmaceuticals	Sharps, disease exposure
Waste - food waste/USDA waste, solid (garbage)	Inappropriate release or disposal to sea and shore
Waste - hazardous & regulated (oily waste, chemicals, incinerator ash) universal (batteries, fluorescent bulbs, electronics)	Inappropriate release or disposal to shore
Waste sludge - hydrocarbon	Inappropriate release or disposal to shore
Wastewater – bilge, black, gray, pool soot laden (boiler wash down)	Inappropriate release or discharge, shore disposal
Water	Natural resource use, energy consumption, lack of

Each of Carnival's Operating Lines sets their own objectives and targets for improvement of their environmental performance. These objectives and targets are reviewed at the Operating Lines' management review meetings. Typical objectives include:

- Reduce fuel consumption;
- Reduce on-board water consumption;
- Minimize hazardous and solid waste generation;
- Enhance recycling programs;
- Reduce invasive species in ballast water discharges;
- Reduce garbage quantity produced per person per day;
- Reduce consumption of perchloroethylene (PERC);
- Reduce leakage of refrigerant gases;
- Optimize itinerary port rotation and ship speed;
- Reduce fuel sample turnaround time;
- Reduce sludge landed to shore facilities;
- Develop fuel management training programs;
- Enhance handling/management of boiler wash down water;
- Reduce offloads of photo processing hazardous waste;
- Reduce landing of aerosol – hazardous wastes;
- Assure adequacy of port reception facilities;
- Reduce paper consumption on board;
- Recycle condensate water to avoid technical water use;
- Reduce dockside air emissions through use of shore power;
- Study feasibility of measuring the level of shipboard electromagnetic fields;
- Reduce amount of packaging coming on board;
- Reduce fleet wide use of x-ray developers and fixers; and
- Reduce generation of oily bilge water.

Carnival monitors performance against these objectives and targets.

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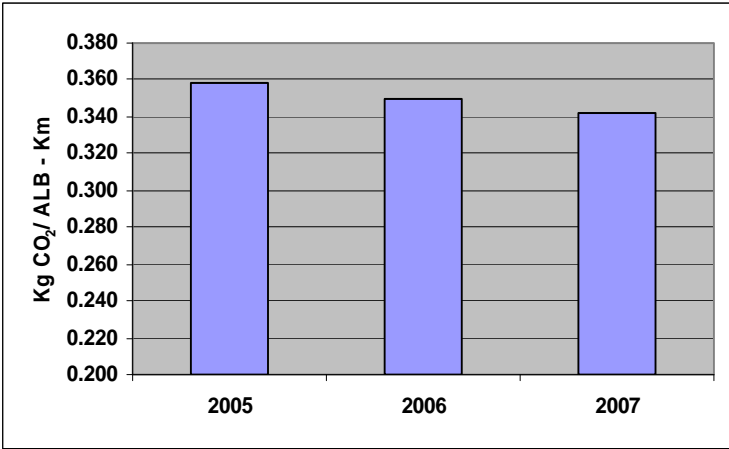
## **Environmental Performance**

Since 2005, Carnival has been measuring and recording metrics regarding resource consumption, waste disposal and other key environmental parameters in a standardized format across all of Carnival's Operating Lines and ships. The data reported below provide the basis for establishing year to year environmental performance objectives and targets. Having collected this data for three years, Carnival will use these data to demonstrate trends and to provide a means for visualizing performance.

These performance data are primarily focused on Carnival Operating Lines' ship operations. The data does not include information about Ibero Cruises Operating Line, which was acquired in September of 2007. Carnival measures its environmental performance in the following areas:

1. Air emissions (Greenhouse Gases (GHG) and Ozone Depleting Substances (ODS))
2. Wastewater discharges
3. Waste disposal (solid and hazardous waste)
4. Energy consumption
5. Water consumption
6. Significant spills
7. Fines and Liabilities
8. Environmental Compliance Expenditures

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DIRECT AIR EMISSIONS – Carbon Dioxide (CO <sub>2</sub> )										
Year	Kg CO <sub>2</sub> /ALB- Km									
2007	0.342	 <table border="1" style="display: none; margin: 10px auto;"> <caption>Bar Chart Data</caption> <thead> <tr> <th>Year</th> <th>Kg CO<sub>2</sub>/ALB - Km</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>0.358</td> </tr> <tr> <td>2006</td> <td>0.349</td> </tr> <tr> <td>2007</td> <td>0.342</td> </tr> </tbody> </table>	Year	Kg CO <sub>2</sub> /ALB - Km	2005	0.358	2006	0.349	2007	0.342
Year	Kg CO <sub>2</sub> /ALB - Km									
2005	0.358									
2006	0.349									
2007	0.342									
2006	0.349									
2005	0.358									

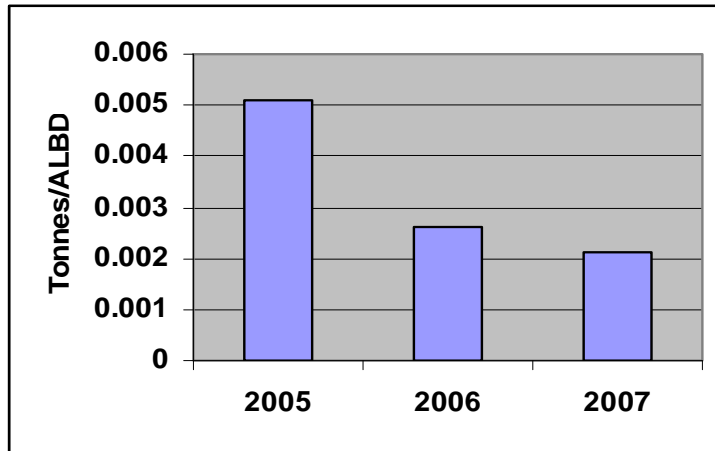
**Notes**

1. The G2 Guidelines of the Global Reporting Initiative (GRI), website: (<http://www.globalreporting.org/>) refers to Environmental Performance Indicator EN8 for reporting Greenhouse gas (GHG) emissions. Carnival's ships emit CO<sub>2</sub> from the combustion of fuels in the ship's engines and boilers. CO<sub>2</sub> emissions are calculated directly from the amount of fuel consumed.
2. ALB is defined as "Available Lower Berth", a commonly referenced cruise industry indicator used to normalize data by passenger capacity.
3. Carnival reports carbon dioxide emissions data in terms of kilograms of CO<sub>2</sub> per ALB-kilometer. These data are normalized by ALB-kilometer so that year-to-year comparisons can be made while taking into account changes in fleet size, itineraries and passenger capacity.
4. This metric was changed from that used in 2005 and 2006 to permit comparison of Carnival's carbon footprint with that being reported for marine and non-marine modes of transportation.
5. CO<sub>2</sub> emissions are calculated from established values of CO<sub>2</sub> emitted per tonne of fuel consumed (HFO = 3117 kg/ tonne; MDO = 3082 kg/ tonne; and MGO = 3127 kg/ tonne).
6. Other GHG gases for example (methane and nitrous oxides) emitted during fuel combustion have not been calculated because they are small in comparison to the amounts of CO<sub>2</sub> emitted.

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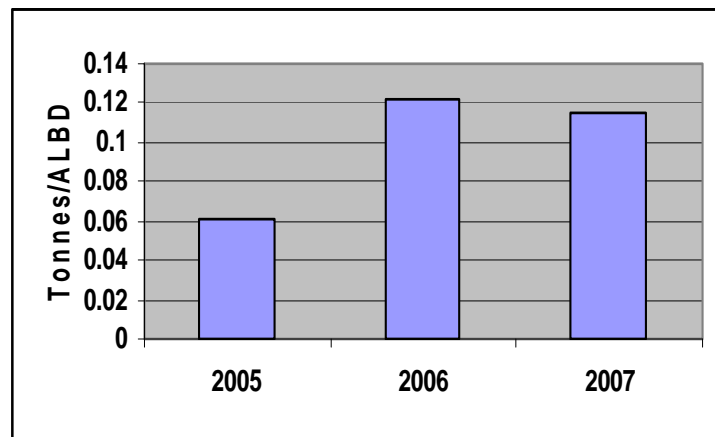
**WASTEWATER EMISSIONS – UNTREATED BLACK WATER**

Year	Tonnes/ALBD
2007	0.0021
2006	0.0026
2005	0.0051



**WASTEWATER EMISSIONS – TREATED BLACK WATER**

Year	Tonnes/ALBD
2007	0.115
2006	0.122
2005	0.062



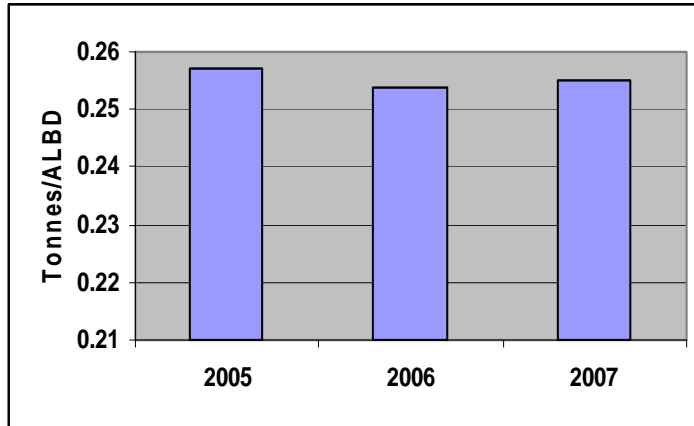
**Notes**

1. ALBD is defined as “Available Lower Berth Day”, a commonly referenced cruise industry indicator used to normalize data by passenger capacity.
2. **1 tonne** = 1 metric ton = 2204.62 lbs =1000 kilograms.
3. The GRI Environmental Performance Indicator **EN12** refers to significant discharges to water by type. Untreated and treated black water discharges are normalized by ALBD. Carnival ships use water for various shipboard processes and discharge the water to the sea. Most significant sea emission is black water (sewage) discharge. Black water is treated and discharged in accordance with MARPOL Annex IV, CLIA and Corporate Standards.

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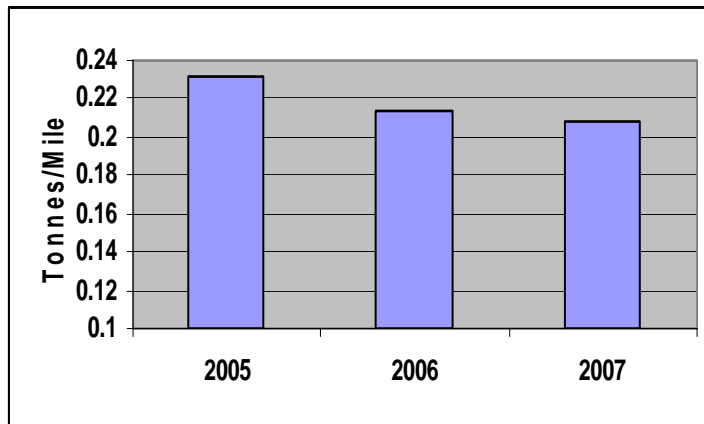
**WASTEWATER EMISSIONS – GREY WATER**

Year	Tonnes/ALBD
2007	0.255
2006	0.254
2005	0.257



**WASTEWATER EMISSIONS – UNTREATED BALLAST WATER**

Year	Tonnes/Mile
2007	0.208
2006	0.214
2005	0.231



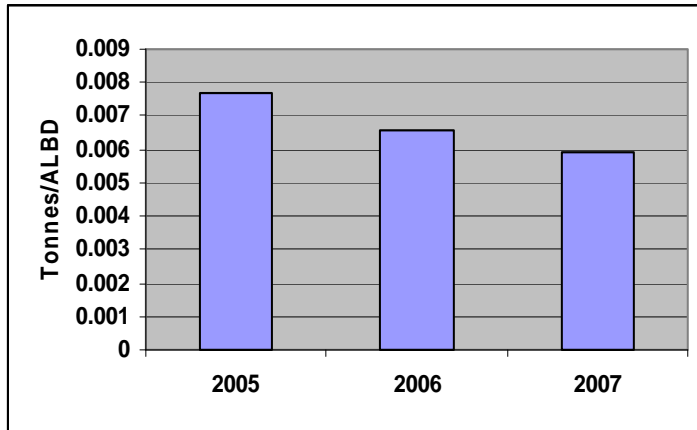
**Notes**

- ALBD is defined as “Available Lower Berth Day”, a commonly referenced cruise industry indicator used to normalize data by passenger capacity
- 1 tonne** = 1 metric ton = 2204.62 lbs =1000 kilograms.
- The GRI Environmental Performance Indicator **EN12** refers to significant discharges to water by type. Grey water discharge is normalized by ALBD. Carnival ships use water for various shipboard processes and discharge the water to the sea. Of the water consumed onboard Carnival ships, approximately 75% is discharged as grey water. This significant sea emission is grey water (showers, sinks, galleys). There are no international regulations for the discharge of grey water, although Carnival ships follow company procedures, CLIA and Corporate Standards for such discharges.
- At times, the ships load or discharge ballast water to maintain proper stability. Ballast water discharged is normalized by miles traveled. The concern for ballast water is the inadvertent transport of non-indigenous species. While International, Federal and State regulations require proper management of ballast water, there are no established standards for ballast water treatment.

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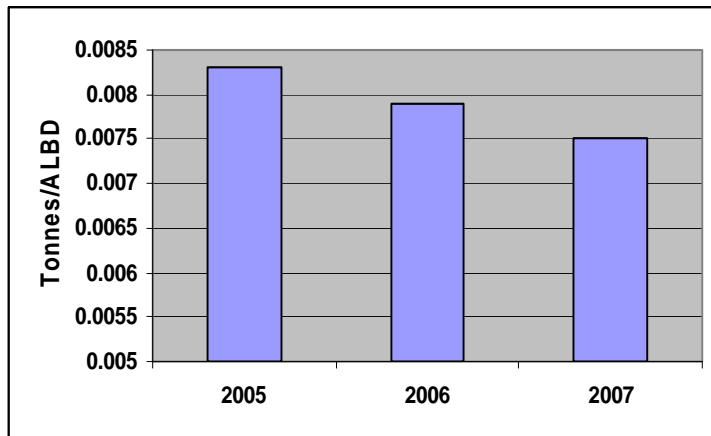
**WASTE EMISSIONS –SOLID AND HAZARDOUS WASTES LANDED**

Year	Tonnes/ALBD
2007	0.0059
2006	0.0066
2005	0.0077



**WASTE EMISSIONS – SOLID WASTES TO SEA OR INCINERATED**

Year	Tonnes/ALBD
2007	0.0075
2006	0.0079
2005	0.0083

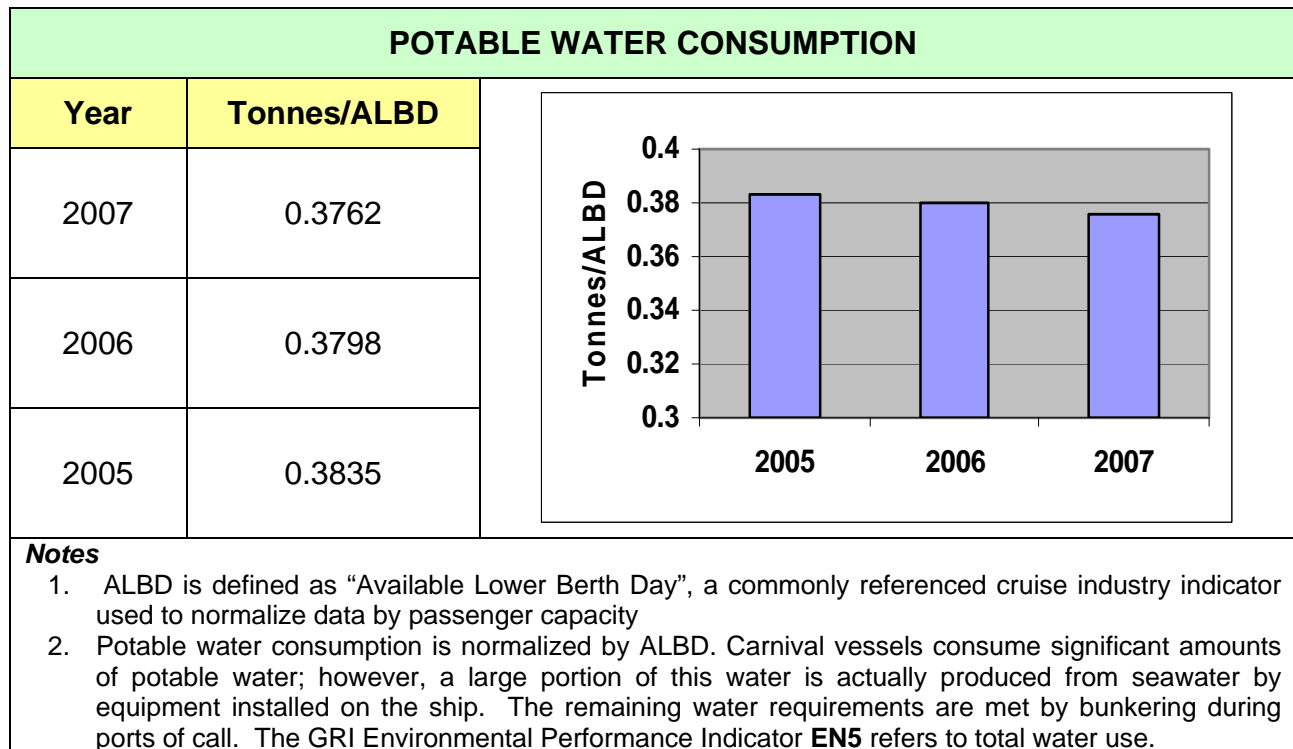
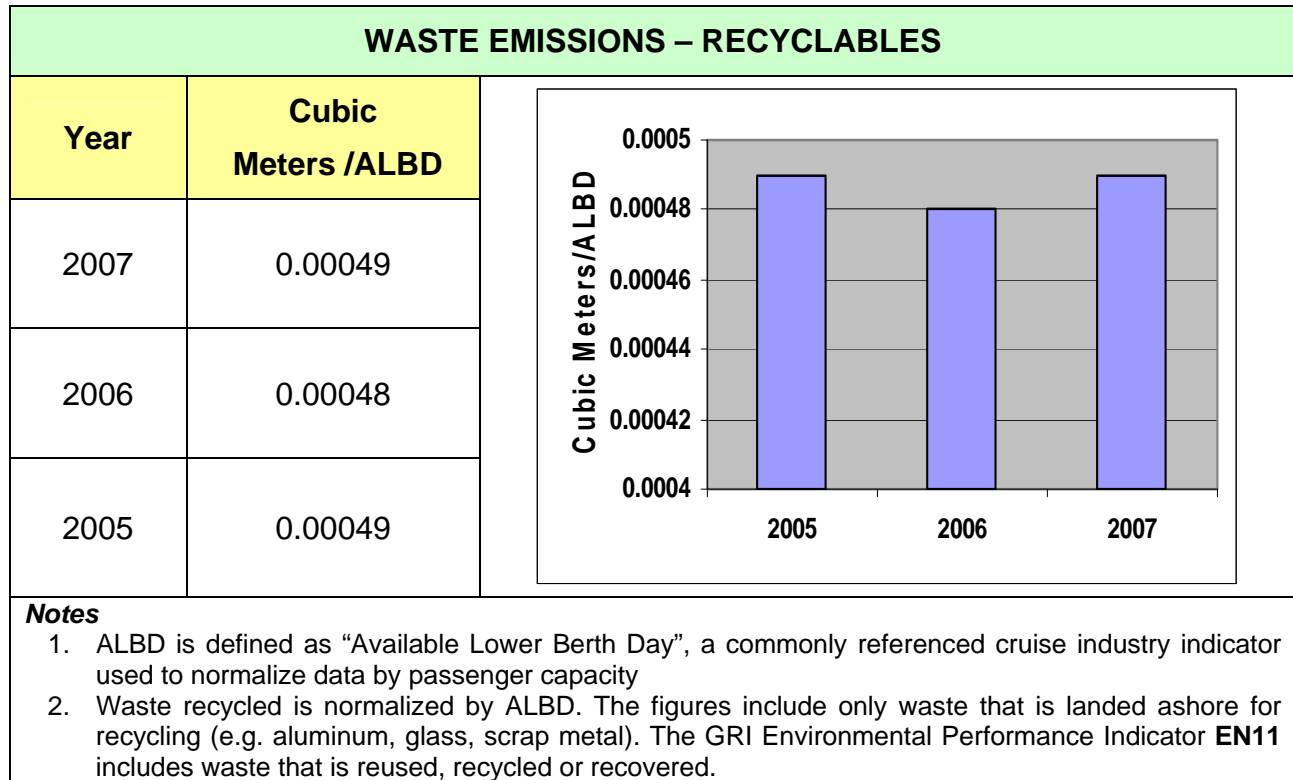


**Notes**

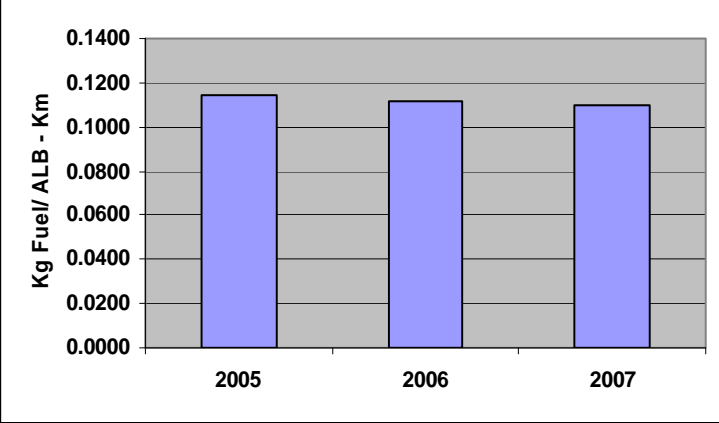
1. ALBD is defined as “Available Lower Berth Day”, a commonly referenced cruise industry indicator used to normalize data by passenger capacity
2. Solid & Hazardous Wastes Landed and Solid Waste to Sea or Incinerated are both normalized by ALBD.
3. Hazardous waste disposal is normally less than 1 % of total waste disposal and is always landed to licensed shore facilities. The three disposal methods for solid waste are disposal ashore, disposal at sea, and incineration. Waste disposal to sea and shipboard incineration of waste is in accordance with MARPOL Annexes V and VI, and applicable laws and regulations. Incinerated waste includes dry garbage, food waste, and at times oil residue/sludge. Plastic is never disposed of at sea.



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<b>ENERGY CONSUMPTION – FUEL OIL</b>										
Year	Kg Fuel/ALB- Km									
2007	0.1098	 <table border="1" style="display: none; margin-top: 10px;"> <caption>Bar Chart Data</caption> <thead> <tr> <th>Year</th> <th>Kg Fuel/ALB - Km</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>0.1148</td> </tr> <tr> <td>2006</td> <td>0.1120</td> </tr> <tr> <td>2007</td> <td>0.1098</td> </tr> </tbody> </table>	Year	Kg Fuel/ALB - Km	2005	0.1148	2006	0.1120	2007	0.1098
Year	Kg Fuel/ALB - Km									
2005	0.1148									
2006	0.1120									
2007	0.1098									
2006	0.1120									
2005	0.1148									

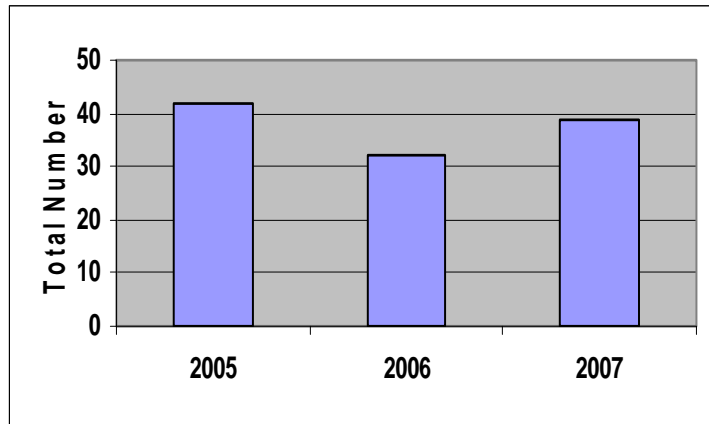
**Notes**

1. The G2 Guidelines of the Global Reporting Initiative (GRI), website: (<http://www.globalreporting.org/>) refers to Environmental Performance Indicator EN3 for reporting direct energy use by primary source.
2. ALB is defined as “Available Lower Berth”, a commonly referenced cruise industry indicator used to normalize data by passenger capacity.
3. Carnival reports data on energy use from fuel oil in terms of kilograms of fuel per ALB-kilometer. These data are normalized by ALB-kilometer so that year-to-year comparisons can be made while taking into account changes in fleet size, itineraries and passenger capacity.
4. This metric was changed from that used in 2005 and 2006 to permit comparison of Carnival’s carbon footprint with that being reported for marine and non-marine modes of transportation (see page 29).
5. Studies have shown that on average, approximately one third of the fuel consumed on board goes towards hotel services.
6. The primary fuel used onboard Carnival’s ships is Heavy Fuel Oil (HFO) which typically has an average sulphur content of less than 2.5%. The ships also use Marine Diesel Oil (MDO) and Marine Gas Oil (MGO) which together amount to approximately 4% of HFO used.

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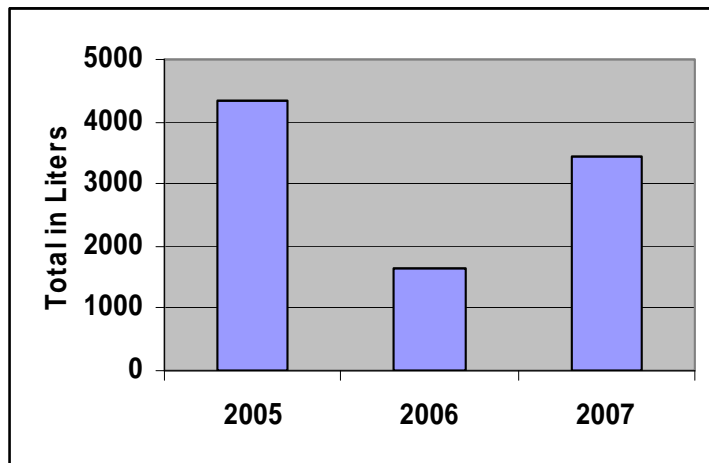
**SIGNIFICANT OIL, FUEL OR CHEMICAL SPILLS**

Year	TOTAL #
2007	39
2006	32
2005	42



**SIGNIFICANT OIL, FUEL OR CHEMICAL SPILLS**

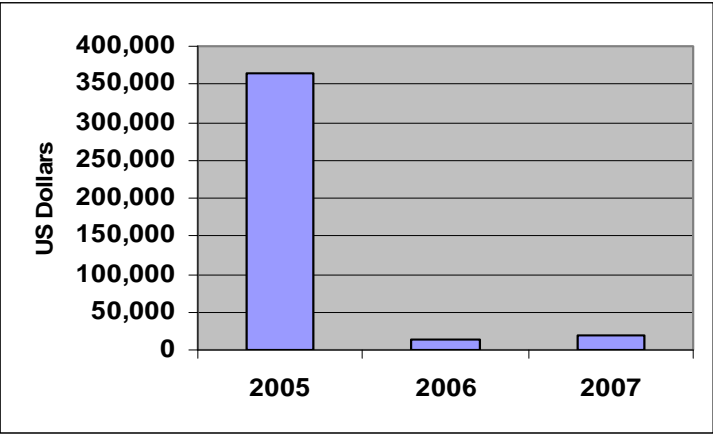
Year	TOTAL VOLUME (liters)
2007	3434
2006	1642
2005	4352



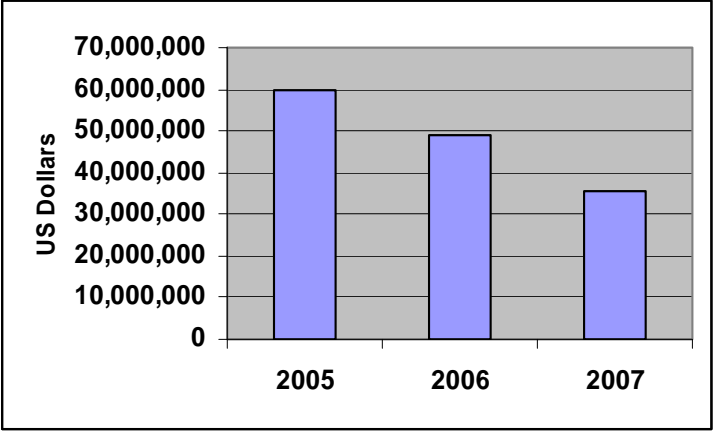
**Notes**

1. The GRI Environmental Performance Indicator **EN13** refers to the reporting of significant spills of chemicals, oils, and fuels in terms of total number and total volume. Carnival has defined "significant spill" as a spill that is in excess of 0.5 liter (500 ml). A typical spill refers to the accidental discharge or operational leak of fuel oil/hydraulic oil, paint, or chemicals.
2. Nine of the 39 spills in FY 2007 occurred due to failure of oily bilge water filtering equipment resulting in spills ranging from 0.5 to 760 liters, totaling 1744 liters.
3. Two of the spills occurred due to leaks in the lifeboat hydraulic systems, totaling 750 liters.

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<b>FINES AND LIABILITIES</b>										
Year	TOTAL US\$									
2007	18,546	 <table border="1" style="display: none; margin-top: 10px;"> <caption>Fines and Liabilities Data</caption> <thead> <tr> <th>Year</th> <th>Total US\$</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>365,100</td> </tr> <tr> <td>2006</td> <td>14,750</td> </tr> <tr> <td>2007</td> <td>18,546</td> </tr> </tbody> </table>	Year	Total US\$	2005	365,100	2006	14,750	2007	18,546
Year	Total US\$									
2005	365,100									
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2007	18,546									
2006	14,750									
2005	365,100									

**Notes**  
GRI Environmental Performance Indicator **EN16** is for the reporting of Annual Fines & Liabilities for Non Compliance

<b>TOTAL ENVIRONMENTAL MANAGEMENT EXPENDITURES AND INVESTMENTS</b>										
Year	TOTAL US\$									
2007	35,711,114	 <table border="1" style="display: none; margin-top: 10px;"> <caption>Total Environmental Management Expenditures and Investments Data</caption> <thead> <tr> <th>Year</th> <th>Total US\$</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>59,580,736</td> </tr> <tr> <td>2006</td> <td>48,895,423</td> </tr> <tr> <td>2007</td> <td>35,711,114</td> </tr> </tbody> </table>	Year	Total US\$	2005	59,580,736	2006	48,895,423	2007	35,711,114
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**Notes**

1. GRI Environmental Performance Indicator **EN35** is for reporting Environmental Compliance Expenditures; Budget, Capital, and Operating Expenses.
2. Environmental management expenditures for FY2005 & FY2006 included significant expenses for:
  - a. Independent external audits of 100% of Carnival's fleet;
  - b. Separate Environmental Compliance (EC) departments in each Operating Line and at Corporate, in accordance with an agreement with the US government. In 2007, these separate EC departments were consolidated into combined HESS departments in several of Carnival's Operating Lines and at Corporate; and
  - c. Achieving initial ISO14001 certification of all Carnival Operating Lines, including consulting services and third-party audit and certification services.

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## **Awards**

**GL Excellence- 5 Stars** – On 24 April 2007 in Hamburg, AIDA Cruises received the highest Quality and Safety Standards Award from the classification society Germanischer Lloyd (GL).

“GL Excellence” certification is obtained by meeting the demands of 13 requirements in the categories Management Systems, Safety, Operation, Environment, Ethics, Security and Comfort. In addition, at least three optional requirements, for example TBT free coating, Ballast Water Management, or practical ISPS-Exercises, must be fulfilled to show excellent standards.

Meeting the demands of five of the seven Management Systems ISO 9001, ISM Code, ISPS Code, ISO 14001, ISO 22000, OHSAS 18001, and Maritime Social Responsibility (MSR), qualifies shipowners to be certified “GL Excellence - 5 Stars”. GL’s certifications provide independent third-party proof of voluntary commitment for continuous improvement of quality, environmental behavior, safety, security and social responsibility. For AIDA the "5 Stars" stand for the compliance with the five management systems ISO 9001, ISO 14001, ISM, ISPS and OHSAS 18001.

**Seatrade Insider Environmental Initiative Award** – Holland America and Krystallon won the 2007 Seatrade Insider Environmental Initiative Award for their innovative emission reduction technology installed on board the Zaandam. Holland America Line launched the technology demonstration project to show the feasibility of using sea water to “scrub,” or reduce, engine emissions on oceangoing vessels. The emission reduction technology on the Zaandam has been installed in cooperation with several United States and Canadian government and regulatory agencies. Each government agency has representatives serving on a technical advisory committee that oversees the development of this project.

**Readers' Choice Most Eco-Friendly Cruise Line Award** – Holland America Line won the Most Eco-Friendly Cruise Line award from Porthole Cruise Magazine for a commitment to responsible environmental practices through a comprehensive, fleet-wide program and innovations. The program emphasizes waste reduction and recycling, use of cleaner-burning propulsion technology in the line’s new ships and cutting-edge technologies such as shore power and an emissions reducing test project on Zaandam. Holland America Line’s ships currently meet or exceed all provisions of the international regulations governing the environmental management of marine operations.

**2006 Voluntary Observing Ship Award** – The Carnival Conquest’s bridge team was presented with the Voluntary Observing Ship Award from the National Ocean and Atmospheric Administration (NOAA) for its efforts in helping to monitor and collect data on Caribbean weather conditions. NOAA is a federal agency that is focused on the conditions of the oceans and atmosphere.

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**Kuoni – Green Planet Award** – The Green Planet Award bestowed by Kuoni Switzerland for outstanding environmental standards was established six years ago to recognize eco-minded hotels and resorts and was extended to cruise ships in 2003. The award recognizes exemplary handling of environmental issues such as energy use, water consumption, waste disposal, plus staff training and guest education regarding environmental concerns. Costa Cruises' entire fleet was awarded the Green Planet Award for the second year in 2006 and three Holland America's Vista class ships were honored with the 2006 Green Planet award in December 2006. For 2007, Kuoni plans to have its requirements profile for cruise ships further expanded, internationally harmonized and extended to include a requirement for "fair" employment terms.

**Green Flag Environmental Award** – The Port of Long Beach introduced a voluntary speed reduction program as part of the clean air initiative, aimed at reducing the smog producing nitrogen oxides (NOx) emitted by ships. Two Carnival Cruise Lines ships and two Holland America ships are recipients of the Green Flag Environmental Award for a 12-month operating period which started in January 2007. Ships participating in the program observe a 12-knot speed limit in a zone that extends 20 nautical miles seaward from Point Fermin. The Green Flag also provides incentives to ship's operators that participate by discounting the dockage rate by 15 percent, in the following 12 months, if 90 percent of their ships comply with the requirements of the program.

**Differential Harbor Dues Program** – Carnival Spirit participates in the Port of Vancouver Differential Harbour Dues Program which recognizes vessels that implement eligible air emissions reductions. Carnival Spirit participates at the silver level by bunkering fuel with sulphur content between 0.5 and 1%.

**Global and Local Community Environmental Stewardship Program** – Throughout the fiscal year, Carnival shipboard and shoreside employees participate in a number of environmental outreach programs and charitable activities. The environmental stewardship programs include activities such as beach clean-ups and habitat restoration of marine eco-systems. Charitable environmental-related activities include donations of shipboard materials that are in usable condition and would have otherwise been discarded. Materials donated in 2007 included:

- 16.5 cubic meters of clothes & shoes
- 2383 bed mattresses
- 1620 pillows
- 1598 blankets and bed spreads
- 3028 chairs
- 687 tables
- 538 bed frames
- 2800 kilograms of aluminium cans
- 15 pieces of toner cartridges
- 200 metal waste bins
- Television sets
- 0.5 cubic meters of lead acid batteries
- 2.25 cubic meters of books and toys
- 9.2 cubic meters of cooking oil

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## **Partners**

Carnival recognizes that achieving progress in improving environmental management and performance requires a combined effort by Carnival, Operating Line personnel, and other members of the business community with whom Carnival has fostered relationships. In particular, Carnival acknowledges and thanks:

### **Five Winds International**

Five Winds International is a management consulting firm that helps organizations to improve the sustainable value and performance of their activities, products and services by integrating environmental and social considerations into their core decision making processes. Recognized as a world leader in implementing health, safety, environmental and sustainability management systems across complex, international business organizations, the firm provides an international perspective through its offices throughout the United States, Canada, Germany and the Netherlands. Five Winds' diverse expertise ranges from business strategy, management systems, project evaluation and analysis, climate impact strategy, corporate social responsibility, industrial design, engineering and material science, environmental science, resource economics and government policy.

Currently, Five Winds is assisting Carnival with full implementation of a requirements tracking database and quality process to capture, validate, and catalog environmental requirements concerning operations in ports of call and operating areas visited by Carnival ships throughout the world.

### **Global Environmental Management Initiative**

Global Environmental Management Initiative (GEMI) is a 501(c)(3) nonprofit organization comprised of 41 leading companies, representing more than 22 business sectors, dedicated to fostering global environmental, health, safety (EHS) excellence through sharing of tools and information to help business achieve EHS excellence ([www.gemi.org](http://www.gemi.org)). Through the collaborative efforts of its members, GEMI also promotes a worldwide business ethic for EHS management and sustainable development through example and leadership. GEMI is unique in that it provides a way for companies in a wide range of industrial sectors to work together in a cost effective manner. Members address strategic and tactical issues impacting progressive corporate environmental, health and safety activities in their companies around the world.

Since 1990, the Global Environmental Management Initiative (GEMI) has created tools and provided strategies to help business foster global environmental, health and safety excellence and economic success. GEMI provides a forum for corporate environmental leaders throughout the world to work together, learn from each other through activities

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of work groups, benchmark with peers, and create tools that can be used by GEMI members and others.

GEMI's vision is to be globally recognized as a leader in providing strategies for businesses to achieve EHS excellence, economic success, and corporate citizenship.

Carnival Corporation & plc has been a member and active participant of GEMI for four years. Specifically, Carnival representatives have participated in the development of:

- Collecting the Drops: A Water Sustainability Planner, a tool designed to guide the user through the process of taking a corporate sustainability strategy and converting it into a unit strategy for water;
- The Metrics Navigator, a tool to help organizations develop and implement metrics that provide insight into complex issues, support business strategy, and contribute to business success scheduled for completion in 2007;
- A tool for identifying and understanding future trends that will affect the Environment, Health, Safety (EHS) and sustainability landscape to enhance strategic planning.
- A tool for Climate Change that has a unique focus of addressing climate change issues with an emphasis on business planning and strategy development.

## **Ship Emission Abatement and Trading (SEaT)**

Carnival is a sponsoring member of SEaT ([www.seaat.org](http://www.seaat.org)), a cross-industry, unique, pro-active and self funding group, whose mission is to encourage and facilitate efficient reduction of harmful emissions to air from shipping. Formed in 2002, SEaT raises awareness and promotes acceptance of solutions for emissions reductions that are sustainable, cost effective and achievable. Founding sponsors include shipping and oil companies committed to exploring and implementing cost effective methods of reducing emissions. SEaT membership represents the broader shipping community, and includes ship owners, brokers, technology companies and fuel suppliers.



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## **For More Information**

For answers to questions about this report, or for more information regarding Carnival's environmental performance, please contact:

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