

Environmental Management Report

Fiscal Year 2008

























Executive Summary

This is the fourth annual Carnival Corporation & plc ("Carnival") Environmental Management Report (EMR) covering fiscal year 2008 (December 2007 through November 2008). It provides an overview of the efforts undertaken by Carnival and its subsidiary operating lines to protect the environment, to minimize adverse environmental consequences, and to use resources efficiently. 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;
- Provides a means for communicating with Carnival's partners, with non-governmental organizations (NGOs), and with other industry organizations;
- Supports performance benchmarking programs that will help Carnival to identify best practices; and
- Provides a means for communicating new operational, ship building, and port development environmental initiatives being undertaken by Carnival both in technology innovations and in community outreach programs.



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A Statement from the Chairman and CEO

Sustainability Commitment

"We continue to strengthen our commitment to become better stewards of the environment. By applying the principles of sustainability, we are stimulating technological innovation and improving our competitiveness.

"We actively contribute to the role of the cruise industry in addressing climate change. By increasing our ships' fuel efficiency, we can reduce our carbon emissions while reducing fuel consumption and cost. In addition, we publicly disclosed our carbon footprint via the Carbon Disclosure Project and we were named to the Carbon Disclosure Leadership Index. We will continue to be proactive in further reducing our footprint.

"We continue to improve our transparency in sustainability reporting to our stakeholders and the public. As such, we are now publishing our fourth annual Environmental Management Report. Two of our operating companies, Costa and AIDA, have published Sustainability Reports. Following their example, we are expanding sustainability reporting to the entire organization and implementing plans for each operating company to produce a public Sustainability Report in 2010."

Micky Arison Chairman and CEO Carnival Corporation & plc 2008 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.



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



Who We Are

Carnival Corporation & plc ("Carnival") is the largest cruise company and one of the largest vacation companies in the world. 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 ("AIDA")
Carnival Cruise Lines ("CCL")
Costa Cruises ("Costa")
Cunard Line ("Cunard")*
Holland America Line ("HAL")
Ibero Cruises ("Ibero")

Ocean Village*
P&O Cruises*
P&O Cruises Australia*
Princess Cruises ("Princess")
The Yachts of Seabourn ("Seabourn")

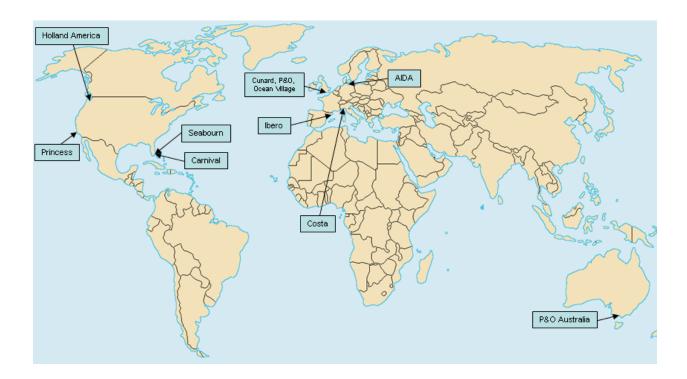
As of January 28, 2009, these brands operated 88 ships providing 169,040 lower berths, with 17 new ships scheduled to enter service between March 2009 and June 2012. Headquartered in Miami, Florida, U.S.A., Carnival's shore operations have approximately 10,700 full-time and 4,700 part time/seasonal employees. In addition, there are approximately 70,500 crew members, including officers and staff, onboard the 88 ships at any one time.

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.

* These brands are managed as "Carnival UK" (CUK).





<u>Carnival Cruise Lines</u> – Carnival Cruise Lines, our largest brand, has been providing its fun and casual style of cruising for over 36 years and currently operates 22 contemporary ships, with an additional ship contracted for delivery in each of 2009 and 2011. Carnival Cruise Lines offers quality cruise vacations at affordable prices, and its "FUN FOR ALL. ALL FOR FUN." service mark captures the authentic spontaneous fun of a Carnival Cruise Lines vacation experience.

<u>Princess Cruises</u> – Princess, whose brand name was made famous by the Love Boat television show, recently celebrated its 43rd anniversary. Princess, the world's third largest cruise line, operates a fleet of 17 modern ships. Princess is a leading cruise line in international and exotic regions all over the world, including Alaska, Asia, Europe, the South Pacific, including Australia, and South America. Some of Princess's Caribbean cruise offerings feature a private island destination, known as Princess Cays, which Princess leases and operates, that is located on the island of Eleuthera in the Bahamas.

<u>Holland America Line</u> – Holland America Line, with 135 years of cruising experience, operates a premium fleet of 14 ships, with an additional ship, Nieuw Amsterdam, contracted for delivery in 2010. Holland America Line cruises call at more than 320 destinations in more than 100 countries and territories on all seven continents. Most sailings in the Caribbean visit Holland America Line's private island, Half Moon Cay.



<u>Cunard Line</u> – Cunard, which was launched in 1839 and has the Most *Famous Ocean Liners In The World*SM, operates two premium/luxury ships that evoke a golden era of luxurious cruising, with an additional ship, Queen Elizabeth, contracted for delivery in 2010. Cunard's flagship, the Queen Mary 2, is the largest ocean liner in the world and operates the northern transatlantic crossing route as well as other world-wide itineraries.

<u>AIDA Cruises</u> – AIDA, which began operating in 1996, sources substantially all of its guests from Germany and German speaking Austria and Switzerland. AIDA is the leader in the German cruise market, operating five contemporary ships, with one additional ship contracted for delivery in each of fiscal years 2009, 2010, 2011 and 2012.

<u>Costa Cruises</u> – Costa is Italy's and Europe's #1 cruise line based on guests carried and capacity of its ships and boasts over 60 years of cruising history. Costa operates 12 contemporary ships, with two additional ships contracted for delivery in 2009 and one ship in each of 2010, 2011 and 2012.

<u>P&O Cruises</u> – P&O Cruises, with over 170 years of cruising experience, is the largest cruise operator and best known cruise brand in the UK, with six premium ships and an additional ship contracted for delivery in 2010.

Ocean Village – The Ocean Village brand will be phased-out with the transfer of both its ships to P&O Cruises Australia. The first ship will be transferred in November 2009. The second ship will be transferred in November 2010.

<u>Seabourn</u> – Seabourn provides ultra luxury cruising vacations in a unique, small-ship style that focuses on personalized services, all-suite accommodations, superb cuisine and unique experiences. Seabourn currently operates three 208-guest yachts and will begin a fleet expansion that is contracted to add three 450-guest sister ships, one in each of 2009, 2010 and 2011.

<u>P&O Cruises Australia</u> – P&O Cruises Australia, with over 75 years of cruising experience, caters specifically to Australians and New Zealanders. In response to growing demand, in October 2008, P&O Cruises Australia announced the doubling of its fleet with the transfer of the two Ocean Village ships. The first ship will be transferred in November 2009 and will be renamed Pacific Jewel. The second ship will be transferred in November 2010.

<u>Ibero Cruises</u> – In September 2007, Carnival entered into a joint venture agreement with Orizonia Corporation, Spain's largest travel company, to form Ibero Cruises, a Spanish cruise line. Ibero Cruises currently operates three contemporary cruise ships.



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, Netherlands, Panama, Portugal and 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) <u>The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78):</u>

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) <u>The International Management Code for the Safe Operation of Ships and for Pollution Prevention (the ISM Code):</u>

- 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 Lines 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).



- 3) Flag State Marine Environmental Rules and Regulations of the countries where Carnival's ships are registered: Bahamas, Bermuda, Italy, Netherlands, Panama, Portugal and United Kingdom.
- 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 to 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 it's 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



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

11) Alaska Cruise Ship Legislation including:

- 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 semimonthly 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) <u>Ballast Water Management regulations</u> 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);



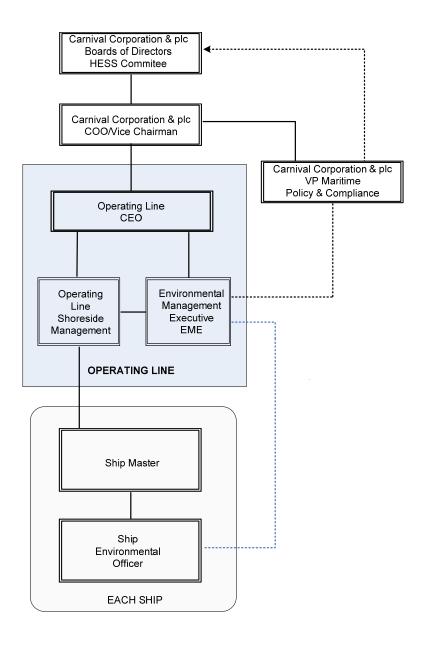
- c) Individual U.S. states, e.g. California, Washington, Oregon;
- d) Individual Port States visited by Carnival vessels, e.g. Antarctica, Australia, Argentina, Brazil, Canada, Chile, Egypt, Israel, New Zealand, Panama, Peru, Russia, United Kingdom, and Ukraine.
- 16) <u>The Montreal Protocol</u> on 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 16th 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) <u>Deed of Agreement between Environment Southland and New Zealand Cruise Industry</u> 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 Sulphur 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.
- 19) The 2008 Vessel General Permit (VGP), issued by the U. S. Environmental Protection Agency, regulates discharges incidental to the normal operation of vessels operating in U. S. waters. Each vessel is required to apply for an authorization to discharge in accordance with VGP requirements. The VGP includes general effluent limits applicable to all discharges; general effluent limits applicable to 26 specific discharge streams; narrative water-quality based effluent limits; inspection, monitoring, recordkeeping, and reporting requirements; and additional requirements applicable to certain vessel types.



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.





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).

<u>Vice President – Maritime Policy & Compliance (MP&C)</u>

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 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.

Operating Lines – Shipboard Responsibility

Ships' Masters

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.

Compliance Reporting Hotline and Website

Carnival has established a hotline telephone number and, in addition, a website to permit reporting of environmental concerns. The hotline numbers are:

- 1-888-290-5105 (toll-free in North America)
- 1-305-406-5863 (from all other locations)

The website can be accessed at www.carnivalcompliance.com.

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, revised, implemented and maintains 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 Lines 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 Standard includes 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;
- 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.

The CLIA Environmental Standard also includes requirements for environmental awareness and training programs for ships' crewmembers and environmental awareness for guests. This Standard is incorporated into the Environmental Management Systems of Carnival's Operating Lines.

Technical and Environmental Initiatives

Energy Efficiency and Fuel Conservation

Heating, Ventilating, and Air Conditioning (HVAC) Control/Automation System – Princess Cruises, Holland America Line (HAL) and Carnival Cruise Lines have installed new HVAC Control/Automation systems on board their ships. AIDA has installed similar equipment on one ship. The systems are designed to control onboard HVAC temperatures more effectively, thus reducing energy consumption and resultant air emissions. In 2008, HAL installed these controls on 11 ships and has a plan to install the controls on the rest of the fleet in 2009. Seabourn plans to install HVAC automation systems on their ships in 2009 and to fit a special Alaska type of heat exchanger for chilled water/sea cooling for ships trading in colder waters.

Costa has installed three-way valve systems to optimize the HVAC plant on their new ships and will install them on ships being built. Costa has installed frequency converters to reduce the power required by engine fans while in port on three ships and will be installing similar equipment on their remaining ships during the up-coming dry docks.

Princess Cruises Grand Class ships have installed a HVAC energy savings system that controls chilled water and fan speed of air handling units.

Dynamic Trimming Assistant (DTA) System – Carnival Cruise Lines and Holland America Line (HAL) have installed the "Dynamic Trimming Assistant" (DTA) system on a number of their ships. The system is designed to gather ship's data and analyze it to provide ship's staff information on optimizing the ship's trim to improve fuel economy and thus reduce air emissions. HAL is planning to install this system on one more vessel in 2009. Carnival Cruise Lines will install this system on all their Spirit Class of ships. Costa has completed a feasibility study to install DTA systems and will install this system on board two of their vessels in 2010.



Installation of Energy Efficient Lighting and Light Emitting Diodes (LEDs) – Carnival Cruise Lines, Carnival UK, Holland America Line and AIDA are replacing existing incandescent light bulbs with more energy efficient bulbs and LEDs to reduce energy consumption. Costa Cruises and Princess Cruises are planning to test this technology on one of their ships in the earlier period of 2009. Seabourn is testing various setups on existing ships and will fit the new ships with the energy efficient light bulbs.

Optimization of Diesel Generator Use at Sea and in Port – Carnival Cruise Lines, Holland America Line (HAL), Princess Cruises, AIDA and Costa Cruises are optimizing the usage of diesel generators on board the ships to improve efficiency, which will result in reduced fuel consumption and air emissions. HAL has also provided guidance to its fleet to use one diesel generator in port and is investigating propulsion control software changes to allow the use of two generators when at anchor in cooler climate.

Itinerary and Arrival/Departure Changes – Carnival is routinely evaluating and implementing shorter routes and rotation/changes of destination ports in the itineraries to reduce fuel consumption and air emissions. In addition, Carnival is optimizing departure and arrival times to identify opportunities for further reductions in fuel consumption.

Use of Anti Fouling Release Coating (Marine Coating) Technology – AIDA Cruises, Holland America Line, Costa Cruises, Carnival Cruise Lines, Carnival UK and Princess Cruises have applied silicone 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, Seabourn, and Holland America Line (HAL) have implemented evaporator management programs aimed at optimizing the operation of the fresh water evaporators to produce fresh water by utilizing the waste heat generated by the ships' engines. This initiative reduces use of the ships' boilers to produce fresh water and helps to reduce fuel consumption and air emissions. HAL uses waste heat to preheat potable water and HVAC surge water.

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.

Auxiliary Engine Heat Recovery – Seabourn is evaluating a current project that will recover heat energy from the auxiliary engines and use that energy to heat accommodation hot water and Jacuzzi heaters. The new system will allow for operating a dedicated heat recovery unit during dry-dock periods when the auxiliary engine is being used.



Window Film – Princess Cruises has tested a window film application on one of their ships to reduce energy consumption by the HVAC system and thus reduce air emissions. The results of this test are being analyzed.

Fluorescent Lighting Electronic Ballasts— Holland America Line is working on a project that will replace inductive fluorescent light ballasts with electronic ballasts on various light fixtures. The electronic ballasts use less power, which will reduce energy consumption and hence air emissions.

Ship Displacement Management – Costa Cruises has provided instructions and target values to ships' staff, to manage the ships' draft more effectively by using liquid weights, primarily fuel and fresh water. The objective is to reduce ship displacement, which will reduce fuel consumption and subsequent air emissions.

Shipbuilding Energy Saving Initiatives and Management Tools – Carnival Corporate Shipbuilding (CCS) Support Team in cooperation with the Fincantieri Yards is implementing cost-effective energy saving technologies for the new ships being built. Some of the efforts are in areas of management tools that will permit shipboard staff to understand better the energy consumed by the ship's major users. The technologies selected will reduce fuel consumption and will result in lower air emissions. Brief summaries of these technologies are provided below:

- a) Low Emissivity (Low-E) Glazing (HVAC Plants) Reduce the power used by the HVAC systems by installation of Heat Reflective Glazing for Public Areas, Cabin Balcony Doors and Cabin Windows. The Low-E Glazing will reduce heat transmission during summer and heat loss during winter.
- b) Heat Recovery (Machinery) Install automation for economizer circulating pumps to reduce power consumed by pumps and heat loss by economizers when the diesel generator is not running.
- c) Energy Management (Machinery Automation) Provide a management tool to let operators better understanding energy consumed in real time by the major shipboard users. The tool will help operators to optimize power usage and thus to reduce fuel consumption.
- d) Fuel Temperature Management (Storage tanks) Install automatic temperature control systems in all fuel tanks to reduce the amount of steam used for heating.
- e) Power Consumption (HVAC Plants) Modifications in Air Handling Units to improve energy efficiency of the HVAC Plant. HVAC plant is one of the big power users.
- f) Hydrodynamics/Trim-Draft Optimization Determine the optimum trim that will provide fuel consumption reduction at different operating speeds obtained via ship-specific tank tests.

Currently the following initiative is being evaluated for a planned next phase:

Energy Efficient Lighting Solution – Analysis of Low-E cost-effective lights in cabins and other public areas using mock-up cabins as test facilities and Low-E cost-effective lights for technical areas.



Air Emissions

Vessel Shore Power Installations – Carnival operates two shore 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.

Holland America Line's and Princess Cruises' ships that dock in Seattle have been switching to shore power to reduce their environmental impact. Holland America Line has fitted five vessels with equipment that will enable these ships to connect to shore power when it becomes available in the other ports visited.

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. Princess Cruises is scheduled to use shore power in Vancouver (BC) in the summer of 2009.

Incinerator Upgrades – In 2008, Carnival Cruise Lines upgraded the incinerators on some of their ships. These upgraded incinerators allow the ships to burn shipboard waste more efficiently by using less energy and thus reducing air emissions. For the ships currently being built, AIDA has introduced an incinerator design and operational improvements that will result in reduced emissions of nitrogen oxides (NO_x) and carbon monoxide (CO). Seabourn has planned for a new technology marine incinerators to be fitted on their new build ships.

Seawater Scrubber Feasibility Project – Holland America Line has installed seawater scrubber equipment aboard one of its cruise ships. The sea water scrubber system uses the natural chemistry of seawater to remove nearly all sulphur oxides (SO_x) and particulate matter (PM) from air emissions. The sea water is subsequently treated to remove harmful components prior to being discharged overboard.

Low Sulphur Heavy Fuel Oil – Carnival is committed to using low sulphur Heavy Fuel Oil (HFO) in environmentally sensitive areas.

Low Sulphur Fuel Storage tank – Seabourn is evaluating building a dedicated tank to store low sulphur fuel that will be used in a low sulphur emissions areas.

CCL participates in the voluntary fuel incentive program for the Port of Long Beach and the Port of San Pedro. The program covers the cost differential for lower sulfur fuel used when the ships are within certain distance limits from the port (but not while in port). The program requires the ships to use low sulfur fuel and to reduce speed when approaching the ports. CCL also uses low sulfur fuel on a voluntary basis for the ships docked in the above ports and in the Port of San Diego.



Water Conservation

Reverse Osmosis Units – Seabourn has installed Reverse Osmosis (RO) units for water production to avoid using boiler fuel for its water production, thus reducing fuel consumption and air emissions.

Technical Water – Holland America Line and Carnival Cruise Lines ships collect the condensate produced by HVAC chillers and use it as technical water, reducing the need to generate water for services that require technical water.

Flow Restrictors – Carnival UK and Carnival Cruise Lines have fitted flow restrictors on taps and bath shower outlets to restrict the flow of water and hence reduce water consumption.

Potable Water Production & Distribution (Evaporator Management) – CCS plans to increase the amount of recovered heat taken from the High Temperature Jacket Cooling Water system that is used to fuel the evaporators. CCL plans to install energy efficient Reverse Osmosis plants that are used to produce potable water on new ships.

Waste Water Management

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 some of their AWPS's. 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. Princess Cruises will fit a new type of UV system on one vessel in 2009.

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.

Ballast Water Treatment – Princess Cruises' ship the Coral Princess has been accepted into the United States Coast Guard's Shipboard Technology Evaluation Program (STEP). The 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. Princess Cruises has completed the onboard



STEP testing required by the United Sates Coast Guard (USCG) and the International Maritime Organization (IMO).

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 centrally 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 (CCL) is continuing to install Jets Vacuum systems on board its ships, replacing the existing EVAC system. This system is designed to improve the management and treatment of black water by using less water and fewer chemicals and helping to facilitate the treatment process. Holland America Line is in the process of fitting its entire fleet with this system; the project will be completed in 2009.

Waste Management

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. Holland America Line has eliminated PERC on 11 ships, and plans to eliminate PERC on their remaining ships by 2009. Princess Cruises have removed or deactivated similar systems on 11 of 17 ships and plans to do the same on three more ships in 2009.

CCL has installed wet cleaning machines which uses non-toxic chemical that eliminates the need to use PERC for dry cleaning.

Recycling

All of Carnival's Operating Lines carry out recycling activities involving primarily glass, aluminum, scrap metal, and cooking oil. The specifics of some of these activities are:

- Voluntary initiative involving used cooking oil which is being added to Heavy Fuel Oil (HFO) and subsequently consumed as fuel (CCL and Seabourn).
- Cooking oil that is offloaded from Costa ships (in Savona, Italy) and Carnival UK ships is used for the production of biodiesel. Carnival UK recycled approximately 50,000 liters of cooking oil to produce approximately 35,000 liters of biodiesel.



Other Environmental Initiatives and Practices

Environmental Management Practices – Several of our brands have implemented a number of additional environmental management practices as follows:

- Cabin stewards are instructed to turn off passenger televisions when no one is in cabins.
- Cabin stewards are directed to ensure drapes are drawn and to set air conditioning (AC) controls in mid-position to reduce AC demand during the day.
- Galley management is directed to switch off galley ovens when not needed, where possible.
- Shipboard management is instructed to switch off AC in passenger public areas when these areas are not being used.
- Shipboard management issued an instructional letter to sail the ship between two ports at constant engine speed and power.

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.

Biodegradable Oils – Holland America Line, Princess Cruises (Sun and Coral Class – stern tube only), and Carnival Cruise Lines are using biodegradable oils in several oilto-sea interface systems on their ships. Properly formulated biodegradable oils persist for significantly shorter periods and quickly break down (biodegrade) to harmless inorganic substances.

External Disclosures

FTSE4Good Inclusion

In June of 2008, 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 2009, and is expected to be renewed in June 2009.

The FTSE4Good Index Series is a series of benchmark and tradable indices for responsible investors. The index series is derived from the globally recognized FTSE Global Equity Index Series, offering FTSE's world-famous hallmark of cutting-edge index design and calculation technology. The FTSE4Good criteria are applied to the FTSE Developed Index Series, which covers 23 markets and over 2,000 potential constituents. In the UK, the universe of eligible constituents is drawn from the FTSE All-Share Index. The series consists of five benchmark indices covering the Global and European regions, the US, Japan and the UK.

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

- Invest only in companies that demonstrate good standards in corporate responsibility;
- Minimize the social and environmental risks within their portfolios;
- Capitalize on the benefits of good corporate responsibility (e.g. eco-efficiencies, improved brand image etc);
- Avoid investing in traditionally excluded sectors such as tobacco and defense;
 and
- Actively encourage companies to be more responsible.

To be included in the indices, companies need to demonstrate that they are working toward:

- Environmental Management;
- Climate Change Mitigation and Adaptation;
- Countering Bribery;
- Upholding Human and Labor Rights; and
- Supply Chain Labor Standards.

Carbon Disclosure Project (CDP)

The Carbon Disclosure Project (CDP) is an independent not-for-profit organization. CDP plays a vital role in encouraging private and public sector organizations to measure, manage, and reduce emissions through the annual climate change information requests issued on behalf of institutional investors, purchasing organizations and government bodies to more than 3000 corporations across the globe.



The data collected by CDP provides valuable insight into the strategies deployed by many of the largest companies in the world in relation to climate change. It also provides a better understanding of how companies are positioned in relation to the risks and commercial opportunities associated with the transition to a low carbon economy. CDP has assembled the largest corporate greenhouse gas emissions database in the world, and its analyst reports, published annually, provide a detailed analysis of how the largest companies around the globe are responding to climate change.

Carnival has participated in the CDP since 2006 (CDP4). Carnival's response to the CDP6 questionnaire that was launched in 2008 is available at the CDP website (www.cdproject.net).

Carnival Corporation & plc received a score of 93 on the 2008 (CDP6) report, named an industry leader for Carbon Disclosure, and listed on the Carbon Disclosure Leadership Index (CDLI). The CDLI includes the companies that received the highest scores in each sector for the Global 500, United Kingdom UK 350, and the S&P 500. Carnival ranked second in the Hospitality, Leisure & Business Services sector in both the Global 500 and the S&P 500 and third in the FTSE 350.

Training and Communication

Training

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 Awareness and Familiarization Training;
- Job Specific Basic and Advanced 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 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 and to aid in professional development.

Communication

Carnival and its Operating Lines maintain processes for communicating environmental and other important information to those within and outside the organization, in conjunction with their respective public relations functions. This includes a hotline telephone number and, in addition, a compliance website (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 and impacts.

In addition, Carnival and its Operating Lines regularly communicate with external parties such as governmental agencies, community stakeholders, tenants, contractors, NGO's, socially responsible investment (SRI) rating organizations, and other organizations. These communications include subjects associated with the management of significant environmental aspects that are governed by regulatory requirements under 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 that visit ports in southeast Alaska. The release of the CD marked the first time that a comprehensive resource has been made available in a repeatable and professional format for each user to access at his/ her own pace. The course is also designed to educate and train Coast Guard personnel about cruise ships in general.

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 prototype ballast water treatment systems, exhaust gas scrubbers, advanced hull coatings and waste minimization programs that have shown enormous environmental and economic benefits thus far.

How We Are Doing

ISO 14001 Environmental Management Systems Certifications

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 included RINA from Italy, Germanischer Lloyd from Germany, Lloyd's Register Quality Assurance (LRQA) from North America and the Maritime and Coastguard Agency (MCA) in the UK. In 2008, Princess Cruises and Carnival UK changed their ISO 14001 Registrars from MCA to LRQA.

All of Carnival's Operating Lines continue to maintain their ISO 14001 standard certification status with their respective Registrars by undergoing routine environmental management system audits. Internal audits are conducted by qualified company shore-based personnel; external audits are conducted by the designated Registrars.

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

Sustainability Reporting

Carnival senior management maintains a continuing commitment to be responsible corporate citizens, especially when it comes to protecting the environment. We have made great strides in this area and will continue to dedicate our efforts toward even more progress.

In 2008, we published our third annual Environmental Management Report. This action continues the expansion of our transparency in publicly reporting the details of our ongoing commitment to the environment with the issuance of similar reports in 2006 and 2007. These reports are available on the corporate website (www.carnivalcorp.com) under the "Corporate Governance" tab.

We have also begun to broaden the scope of our transparency to include sustainability reporting. Sustainability reports have been published by two of our brands, Costa and AIDA: Costa Cruises for fiscal years 2005, 2006 and 2007, and AIDA Cruises for FY2007. We are planning to use these reports as models for similar sustainability reports by all of our brands.



This annual Corporate Environmental Management Report, for FY2008, will be the last separate Environmental Management Report. Beginning in 2010, each of Carnival's subsidiary Operating Lines will issue sustainability reports which will address environmental and other sustainability-related issues and performance indicators. Carnival's website will include a sustainability report summary page with links to each of the Operating Lines' individual reports.

To achieve our Sustainability Reporting (SR) commitments, Carnival:

- Has appointed specific individuals at both Corporate and Operating Line levels to manage the SR initiative;
- Has developed and issued a SR guideline/ template document for Corporate and Operating Line use;
- Has identified specific sustainability performance indicators for which data are being collected and reported;
- Is holding meetings with both Operating Line CEO's and SR managers to drive the SR process; and
- Is holding SR training and planning workshops for those involved in the SR process in both Corporate and Operating Line organizations.

Costa Cruises Sustainability Report for Fiscal Year 2007 (FY2007) – Costa Cruises has released its third Sustainability report for FY2007 in 2008. This report has been issued in accordance with the G3 (third generation) Sustainability Reporting Guidelines of the Global Reporting initiative organization (GRI) and is certified by the Italian Shipping Register (RINA). This report is available for review on the Costa Cruises website (www.costacruise.com/B2C/USA/Corporate/Best4/sustainability_report/sustainability_report.htm#).

AIDA Sustainability Report for Fiscal Year 2007 (FY2007) – AIDA has released its second Sustainability Report for FY2007 in 2008. The report is available for review on the AIDA website (http://www.aida.de/b2b-corporate-site/verantwortung/corporate-responsibility-report.19242.html).

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:



| Significant Environmental Aspect | Potential/Actual Environmental Impact |
|--|---|
| 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 _X , SO _X , CO ₂ , particulates | Release to air, pollution, acid rain, smog, global warming |
| Fire fighting – use of extinguishing gases – Halons, CO ₂ | 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 |
| 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 water |
| | |



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 sludge landed to shore facilities;
- 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;
- Reduce supplier transportation impacts;
- Calculate carbon footprint and provide information to fleet;
- Ensure carbon footprint awareness training is included in shipboard training;
- Enhance quality of waste water effluents being discharged:
- Implement voluntary agreement to avoid discharging untreated waste water into the Baltic;
- Implement voluntary reduction of air emissions in German turnover ports by usage of Marine Diesel Oil and conduct research on alternative ship fuels;
- Conduct feasibility study on carbon offsetting;
- 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.



Environmental Performance

Since 2005, Carnival has been measuring, monitoring, recording and reporting consolidated performance indicators regarding resource consumption, air emissions, water and waste disposal and other key environmental parameters in a standardized format for all Carnival's ships. The data reported below provides the basis for establishing year-over-year environmental performance objectives and targets. Carnival uses the data that has been collected over the four years to demonstrate trends and to provide a means for visualizing performances. For the 2008 report, Carnival added a couple of new metrics in the area of air emissions and waste water.

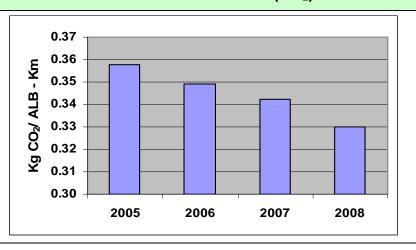
These performance data are primarily focused on Carnival Operating Lines' ship operations. The data does not include information about Operating Line Ibero Cruises, which was acquired in September of 2007 except where indicated. Carnival measures and reports its environmental performance in the following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

- 1. Air emissions (Greenhouse Gases (GHG), Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x), Particulate Matter (PM), and Ozone Depleting Substances (ODS)).
 - a. CO₂ & ODS reported since 2005.
 - b. NO_x, SO_x, PM new for 2008 report.
- Direct energy source consumption Fuel Oil.
- 3. Wastewater discharges.
 - a. Untreated and treated blackwater, grey water, ballast water reported since 2005.
 - b. Bilge water new for 2008 report.
- 4. Water consumption.
- Waste disposal (Hazardous and Non-Hazardous waste).
- 6. Spills.
- 7. Fines and Liabilities.
- 8. Environmental Compliance Expenditures.



DIRECT AIR EMISSIONS - CARBON DIOXIDE (CO₂)

| Year | Kg CO₂/ALB- Km |
|------|----------------|
| 2008 | 0.330 |
| 2007 | 0.342 |
| 2006 | 0.349 |
| 2005 | 0.358 |



Notes

- 1. The **G3 Guidelines of the Global Reporting Initiative (GRI; www.globalreporting.org)** refers to Environmental Performance Indicator (EPI) **EN16** for the reporting of greenhouse gas (GHG) emissions. Carnival's ships emit CO₂ from the combustion of fuels in the ship's engines and boilers. CO₂ emissions are calculated directly from the amount of fuel consumed. This metric reports Carnival's direct CO₂ emissions.
- 2. Carnival normalizes reports of carbon dioxide emissions data in terms of kilograms of CO₂ per ALB-kilometer so that year-to-year comparisons that take into account changes in fleet size, itineraries and passenger capacity can be made. This indicator permits comparison of Carnival's carbon footprint with that being reported for marine and non-marine modes of transportation.
- CO₂ emissions are calculated from established default values of CO₂ emitted per tonne of fuel consumed (HFO = 3117 kg/ tonne; MDO = 3082 kg/ tonne; and MGO = 3127 kg/ tonne; reference: UK National Air Emissions Inventory; Digest of UK Energy Statistics DTI 1998; and GHG Inventory Reference Manual IPCC 1996).
- 4. Other GHG's (e.g., methane and nitrous oxides) emitted during fuel combustion have not been calculated because they are small in comparison to the amounts of CO₂ emitted.
- 5. Carnival achieved the following direct carbon dioxide emission reductions in terms of kilograms of CO₂ per ALB-kilometer:
 - FY 2008 over FY 2007 3.5%
 - FY 2007 over FY 2006 2.0%
 - FY 2006 over FY 2005 2.5%

Key Definitions

- 1. **ALB** is defined as "Available Lower Berth", a commonly referenced cruise industry indicator used to normalize data by passenger capacity.
- 2. **ALBD** is defined as "Available Lower Berth Day", another commonly referenced cruise industry indicator.
- 3. **1 tonne** = 1 metric ton = 2204.62 lbs = 1000 kilograms.



| OTHER DIRECT AIR EMISSIONS - NITROGEN OXIDES (NO _x), |
|--|
| SUPHUR OXIDES (SO _x) and PARTICULATE MATTER (PM) |

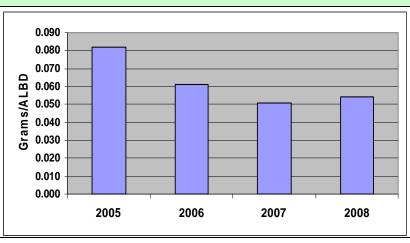
| Year | Туре | Tonnes | Tonnes/ALBD |
|------|-----------------|---------|-------------|
| | SO _x | 133,324 | 0.0023 |
| 2008 | NO _x | 206,607 | 0.0035 |
| | PM | 3,814 | 0.0001 |

Notes

- 1. GRI Environmental Performance Indicator **EN20** refers to the reporting of NO_x , SO_x , and other significant air emission by type and weight.
- 2. The NO_x weight is calculated on default value for the type of fuel consumed by ship's engines, which for the Carnival fleet is estimated at 65 kilograms per metric tonne of fuel.
- 3. The SO_x weight is calculated on default value based on the weighted sulphur content of the fuel consumed.
- 4. Particulate matter (PM) refer to PM₁₀, PM₅ and PM_{2.5} and is calculated on the default value for the type of fuel consumed by ship's engines. For the Carnival fleet this value is estimated at 1.2 kilogram per metric tonne of fuel.

OZONE DEPLETING SUBTANCE (ODS)

| Year | Grams/ALBD |
|------|------------|
| 2008 | 0.054 |
| 2007 | 0.051 |
| 2006 | 0.061 |
| 2005 | 0.082 |



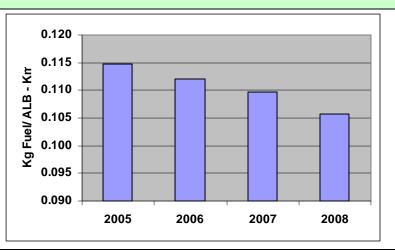
Notes

- The GRI EPI EN 19 refers to the reporting of emissions of ODS by weight. Carnival ships use a
 variety of refrigerants most of which are marginally with or without ozone depleting potential (ODP).
 Quantities of refrigerants lost (fugitive emissions) have been converted to equivalent quantities of
 CFC-11.
- 2. For 2008, the CFC -11 equivalent totals includes the release of 125 kg. of Halon 1301 from a portable fire extinguisher due to equipment malfunction. Excluding this amount, the value would have been 0.032 Grams/ALBD.



DIRECT ENERGY SOURCE CONSUMPTION – FUEL OIL

| DIRECT LINERS | |
|---------------|-----------------|
| Year | Kg Fuel/ALB- Km |
| 2008 | 0.1058 |
| 2007 | 0.1098 |
| 2006 | 0.1120 |
| 2005 | 0.1148 |

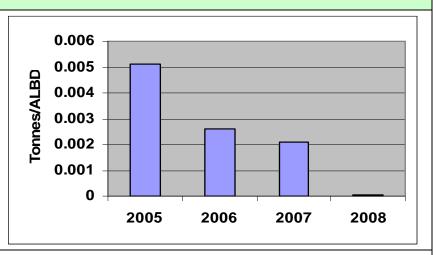


Notes

- 1. The GRI G3 Environmental Performance Indicator **EN3** refers to the reporting of direct energy consumption by primary energy source.
- 2. Carnival reports normalized direct energy source consumption data from fuel oil in terms of kilograms of fuel per ALB-kilometer, so that year-to-year comparisons take into account changes in fleet size, itineraries and passenger capacity.
- 3. Studies have shown that on average, approximately one third of the fuel consumed on board goes towards hotel services.
- 4. 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 total fuel used.

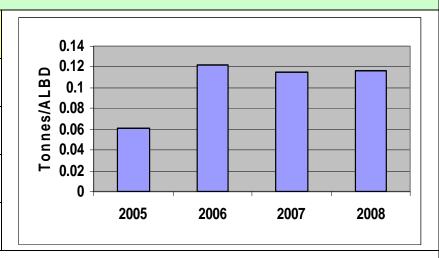
WASTEWATER DISCHARGE – UNTREATED BLACK WATER

| Year | Tonnes/ALBD |
|------|-------------|
| 2008 | 0.00003 |
| 2007 | 0.0021 |
| 2006 | 0.0026 |
| 2005 | 0.0051 |



WASTEWATER DISCHARGE -TREATED BLACK WATER

| Year | Tonnes/ALBD |
|------|-------------|
| 2008 | 0.116 |
| 2007 | 0.115 |
| 2006 | 0.122 |
| 2005 | 0.062 |



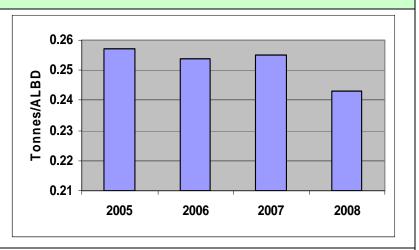
Notes

- 1. The GRI Environmental Performance Indicator **EN21** refers to the reporting of total water discharge by type. Untreated and treated black water discharges are normalized by ALBD.
- 2. Carnival ships use water for various shipboard processes and discharge the water to sea.
- 3. Most significant wastewater discharge is black water (sewage) discharge. Black water is treated and discharged in accordance with MARPOL Annex IV, CLIA and Corporate Standards.
- 4. Untreated black water (sewage) discharges are mainly due to the Sewage Plant malfunctions.



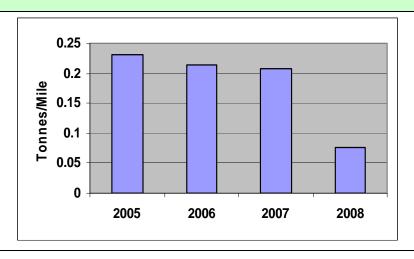
WASTEWATER DISCHARGE – GREY WATER

| Year | Tonnes/ALBD |
|------|-------------|
| 2008 | 0.243 |
| 2007 | 0.255 |
| 2006 | 0.254 |
| 2005 | 0.257 |



WASTEWATER DISCHARGE – UNEXCHANGED BALLAST WATER

| Year | Tonnes/Mile |
|------|-------------|
| 2008 | 0.076 |
| 2007 | 0.208 |
| 2006 | 0.214 |
| 2005 | 0.231 |



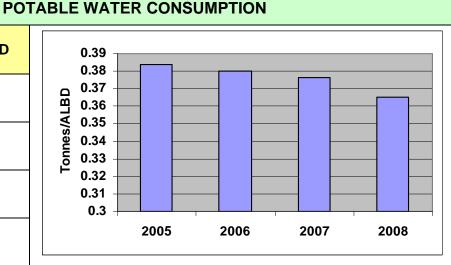
- 1. The GRI Environmental Performance Indicator EN21 refers to the reporting of water discharge by type. Grey water discharge is normalized by ALBD. Carnival ships use water for various shipboard processes and discharge the water to sea. Of the water consumed onboard Carnival ships, approximately 75% is discharged as grey water, which generally consists of water from showers, sinks, and galleys. There are no international regulations for the discharge of grey water, but Carnival ships follow company procedures, CLIA and Corporate Standards for such discharges.
- 2. At times, the ships load or discharge ballast water to maintain required displacement and stability. Ballast water discharged is normalized by miles traveled. The concern for ballast water is the inadvertent transportation of non-indigenous species into local waters. While International, Federal and State regulations require proper management of ballast water, there are no established standards for ballast water treatment. The ballast water reported is that quantity which was not exchanged in accordance with the company ballast management plan.

| WASTEWATER DISCHARGE – TREATED BILGE WATER | | |
|--|---------|-------------|
| Year | Tonnes | Tonnes/Mile |
| 2008 | 242,781 | 0.0296 |

Notes

- 1. The GRI Environmental Performance Indicator **EN21** refers to the reporting of water discharges by type.
- 2. Bilge water discharge is normalized by miles traveled by the ship. Bilge water is waste water normally generated in the machinery spaces of the engine room during vessel operation.
- 3. Treated bilge water is discharged to sea after being processed by an Oily Water Separator to an oil content of less than 15 parts per million (ppm) in accordance with the MARPOL, Annex I regulations.
- 4. On Carnival ships processed bilge water is discharged overboard through the 'White Box' a proprietary system that is considered fail-safe for control of overboard discharges of processed bilge water.
- 5. All discharges of treated bilge water are logged in the ship's Oil Record Book.

POT Year Tonnes/ALBD 2008 0.3651 2007 0.3762 2006 0.3798 2005 0.3835

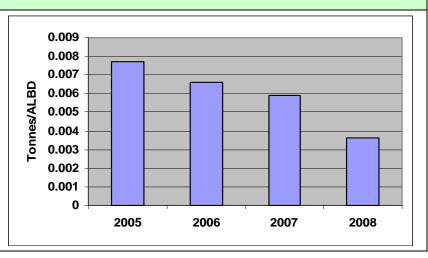


- 1. The GRI Environmental Performance Indicator **EN8** refers to the reporting of total water withdrawal by source. The two main water withdrawals by source for shipboard operation are bunkering municipal water while in port and generating potable water using seawater when at sea.
- 2. Potable water consumption is normalized by ALBD. Carnival vessels consume significant amounts of potable water; however, a large portion of this water is actually produced from seawater by equipment installed on the ship. The remaining water requirements are met by bunkering during ports of call.



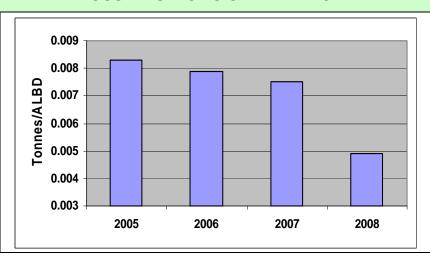
WASTE EMISSIONS – HAZARDOUS AND NON-HAZARDOUS SHORE DISPOSAL

| Year | Tonnes/ALBD |
|------|-------------|
| 2008 | 0.0036 |
| 2007 | 0.0059 |
| 2006 | 0.0066 |
| 2005 | 0.0077 |



WASTE EMISSIONS – NON- HAZARDOUS WASTES TO SEA AND INCINERATED

| Year | Tonnes/ALBD |
|------|-------------|
| 2008 | 0.0049 |
| 2007 | 0.0075 |
| 2006 | 0.0079 |
| 2005 | 0.0083 |



- The GRI Environmental Performance Indicator EN22 refers to the reporting of total weight of waste by type and disposal method. The two main types of shipboard waste are hazardous and nonhazardous wastes.
- 2. Non-Hazardous and Hazardous Shore Disposal and Non-Hazardous Wastes to Sea and Incinerated are both normalized by ALBD.
- Hazardous waste disposal is normally less than 5 % of total waste disposal and is landed to licensed shore facilities. The two main disposal methods for hazardous waste are disposal ashore, and recycling.
- 4. The four disposal methods for non-hazardous waste are disposal ashore, recycling, sea discharge and incineration. Non-hazardous waste disposal to sea and shipboard incineration 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.



| | HAZARDOUS ANI |
|------|---------------|
| Year | Tonnes /ALBD |
| 2008 | 0.00046 |
| 2007 | 0.00049 |
| 2006 | 0.00048 |
| 2005 | 0.00049 |

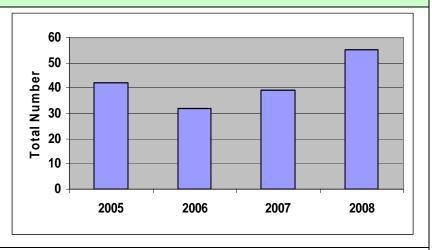


- 1. The GRI Environmental Performance Indicator **EN22** refers to the reporting of total weight of waste by type and disposal method.
- 2. Waste recycled is normalized by ALBD. The figures include hazardous and non-hazardous waste (e.g. aluminum, glass, and scrap metal) that is landed ashore for recycling.



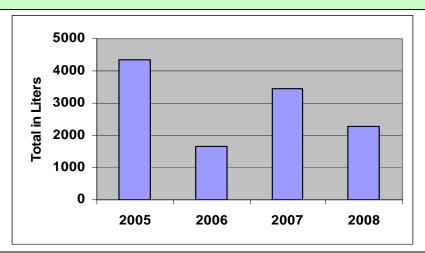
OIL, FUEL OR CHEMICAL SPILLS

| | O. |
|------|---------|
| Year | TOTAL # |
| 2008 | 55 |
| 2007 | 39 |
| 2006 | 32 |
| 2005 | 42 |



OIL, FUEL OR CHEMICAL SPILLS

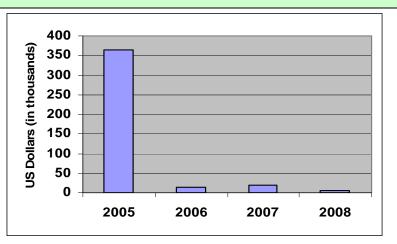
| Year | TOTAL VOLUME (liters) |
|------|-----------------------|
| 2008 | 2293 |
| 2007 | 3434 |
| 2006 | 1642 |
| 2005 | 4352 |



- 1. The GRI Environmental Performance Indicator **EN23** refers to the reporting of spills of chemicals, oils, and fuels in terms of total number and total volume.
- 2. Carnival has defined "spill" as a release 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. In US waters, a spill that causes an oil sheen is reported and included in the total number of spills reported.
- 3. Four of the 55 spills in FY 2008 occurred due to failure of bilge water filtering equipment resulting in spills of bilge water with oil content greater than 15 PPM. These four spills totaled 680 liters.
- 4. Eight of the spills occurred due to ship's thruster and stern tube hydraulic oil leaks. These eight spills totaled 1369 liters. It should also be noted that in some of these cases the hydraulic oil that leaked was of a biodegradable type.

FINES AND LIABILITIES

| | ŀ |
|------|------------|
| Year | TOTAL US\$ |
| 2008 | 4750 |
| 2007 | 18,546 |
| 2006 | 14,750 |
| 2005 | 365,100 |

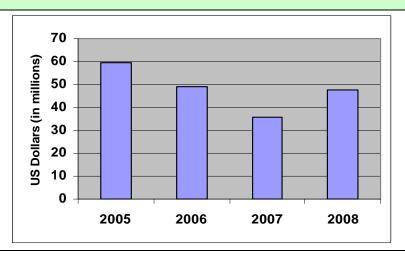


Notes

GRI Environmental Performance Indicator **EN28** refers to the reporting of Annual Fines & Liabilities for non-compliance with environmental laws and regulations.

TOTAL ENVIRONMENTAL PROTECTION EXPENDITURES AND INVESTMENTS

| Year | TOTAL US\$ |
|------|------------|
| 2008 | 47,522,465 |
| 2007 | 35,711,114 |
| 2006 | 48,895,423 |
| 2005 | 59,580,736 |



- 1. GRI Environmental Performance Indicator **EN30** is for reporting Environmental Protection Expenditures and Investments by type.
- 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.



Awards, Environmental Stewardship and Biodiversity

Awards

<u>Kuoni – Green Planet Award</u> – AIDA's and Costa Cruises' entire fleets were awarded the Kuoni Green Planet Award for the year 2008. The Green Planet Award, bestowed by Kuoni Travel of Switzerland for outstanding environmental standards, was established six years ago to recognize eco-minded hotels and resorts and was extended to include 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. The Kuoni Green Planet Award criteria have now been expanded to include child protection and working conditions.

<u>Virgin Holidays Responsible Tourism Award</u> – Holland America Line was awarded the Best Cruise or Ferry Operator Award for 2008. The central tenet of the Award is that all types of tourism – from niche to mainstream – can and should be operated in a way that respects and benefits destinations and local people. The Award recognizes individuals, companies, and organizations in the travel industry that are making a significant commitment to the culture and economies of local communities and are providing a positive contribution to biodiversity conservation. Some of the key factors for Holland America Line being selected for the Award were reducing dockside emissions by 20%, developing and implementing an "Avoiding Whale Strikes" training program, increasing recycling by 50% and introducing new scrubber technology to remove sulphur oxides (SO_x) and particulate matter (PM) from air emissions.

<u>Italian Oscar Dei Porti National Award</u> – Costa Cruises was awarded the 2008 Italian Oscar Dei Porti national award at a charity gala night in Rome. The award exemplified Costa Cruises extraordinary efforts in environmental protection, especially in the marine environment, and for carrying out its activities through the adoption of elevated standards in environmental protection.

<u>Business Excellence Sustainable Task (BEST 4) Award</u> – Costa Cruises was awarded the 2008 Corporate Social Responsibility Award for its Business Excellence Sustainable Task (BEST) 4 project by SODOLITAS a non-profit organization based in Italy.

National Oceanic & Atmospheric Administration Award — In June 2008, Carnival Conquest received a plaque acknowledging the ship's outstanding performance in the Voluntary Observing Ship (VOS) program organized by the National Oceanic & Atmospheric Administration (NOAA) to collect weather and other data for climatologists and other scientists. Three other ships, Carnival Ecstasy, Carnival Elation, and Carnival Valor, received the VOS award from NOAA. All four ships received the award in 2008 for their performances in 2007.

<u>San Francisco Gold Level Cruise Ship Environmental Award</u> – In 2008, Princess Cruises onboard Planet Princess programs to reduce air and water pollution while operating



in San Francisco Bay earned Golden Princess and Dawn Princess the Port of San Francisco's prestigious Gold Level Cruise Ship Environmental Award for 2007. The annual award recognizes the vessels for demonstrating "the strong commitment of Princess Cruises in the areas of Air Emission Reduction, Wastewater Treatment, and Recycling and Disposal Programs for Solid Waste".

The award was given by San Francisco's Cruise Terminal Environmental Advisory Committee (CTEAC), which includes regulatory agencies, environmental organizations, organized labor, community groups and maritime industry representatives which work with the city's many maritime interests to address environmental issues. The advisory committee operates an incentive program to reward cruise lines that are committed to environmentally responsible operations, including the deployment of ships using reduced emission system technology or cleaner-burning fuel.

Global and Local Community Environmental Stewardship Programs

Carnival shipboard and shoreside employees participated on a regular basis in a number of environmental stewardship programs and environmental related charitable activities.

In 2008, Carnival Cruise Lines (CCL) organized the following stewardship programs:

- Collaborated with an organization called Caribbean Student Environmental Alliance (CSEA) based in St. Lucia, whose mission, is to teach children and young adults about environmental protection and conservation. As recognition and encouragement to the participants in the program, CCL arranges visits to the ship's environmental activity management areas during port calls.
- Arranged for port visits to show and explain to children from the Miami-Dade County Schools the shipboard environmental and conservation efforts as part of an innovative educational program between Carnival, Miami-Dade County and Fairchild Botanical Gardens.
- Employees and their families volunteer and participate in community environmental projects organized by CCL's community outreach group with various local organizations. Some examples are beach cleaning and habitat restoration.
- CCL has a comprehensive donation program where materials that have been phased
 out or cannot be used by specific ships in the fleet and are in good condition are
 donated to local organizations at the vessels' various ports of call. Such donations
 extend the use of materials which would otherwise be processed as waste. Some of
 the items donated include furniture, linens and mattresses.

The revenue from the Carnival UK (CUK) biodiesel initiative was donated to Hampshire and Kent Wildlife Trusts to support marine wildlife research and beach cleaning.



Medical equipment from the ship Queen Elizabeth 2 (CUK) was donated to the Good Shepherd hospital in Swaziland. This equipment was in working order and will offer a real benefit to the local people there.

Costa has engaged with a non-profit organization "Alkimia" in Salvador De Bahia (Brazil). This organization is committed to environmental protection in addition to providing local community job opportunities in waste recycling activities. Costa Cruises offloads glass, aluminum, and used cooking oil from the ship calling at this port.

Charitable environmental-related activities include donations of shipboard materials that are in usable condition and would have otherwise been discarded. Throughout the year, CUK donated bedding and mattresses to various charities and shelters throughout Europe.

Materials donated by Princess in 2008 include: bed mattresses, pillows, chairs, aluminum cans, television sets, soap holders, food service trays, and fire extinguishers.

Ship to Shelter Program - Holland America Line has established an innovative community charitable program designed to donate valuable and reusable goods from the line's cruise ships to local people in need. Holland America Line first launched Ship to Shelter in April 2008 in partnership with the Port of Seattle in Washington and expanded the program to Port Everglades in January 2009. In addition to weekly donations of individual-sized toiletries, Holland America Line periodically provides items such as towels, linens, dishes, cookware, silverware, televisions and mattresses.

Biodiversity

Paya Casitas Artificial Reef – A new artificial reef was officially inaugurated on 21 October 2008 by Madame Francine Cousteau, President of the Cousteau Society. The new reef was created using 56,000 tons of concrete pilings salvaged from the original Puerta Maya (Cozumel Island, Mexico) pier that Hurricane Wilma destroyed in 2005.

This reef, funded by Carnival, will create a new underwater habitat within the island's worldrenowned reefs, a part of the largest reef system in the Western Hemisphere. The former marine habitat, which was abundant with fish and other marine mammals, more recently consisted mainly of vast areas of sand and seaweed. The new reef creates an undersea environment that can support a wider variety of marine species, including soft and hard corals and sponges, as well as fish and crustaceans.

Carnival and Puerta Maya officials also unveiled a number of other educational and environmental initiatives designed to heighten awareness of the island's precious natural resources during the inauguration of the rebuilt port in Cozumel. These initiatives include:

 Environmental Education – In partnerships with the Cozumel Department of Education and Puerta Maya, Carnival is underwriting two environmental educational programs for school children. The first is an in-school program for younger students focusing on the importance of ocean and coral reef preservation. The second



program, aimed at high school students, offers an overview of wide-ranging environmental operations of cruise ships and includes field trips to visit cruise ships while they are in port where students can learn about recycling, water treatment and other shipboard environmental programs.

- New Snorkeling Guidelines Carnival has imposed new guidelines for tour operators
 offering reef snorkeling expeditions in waters surrounding Cozumel. The new
 guideline calls for excursions operators to ensure that a minimum depth is maintained
 between the surface of the water and the reefs to protect the reef from damage by
 inexperienced snorkelers.
- Permanent Environmental Exhibit at Puerta Maya Designed to provide a
 comprehensive overview of Cozumel's vast ecosystems, the exhibit features a series
 of panels and three-dimensional objects that focus on a variety of environmental
 preservation and protection efforts with in the island and the surrounding area.
- Beach and Coral Reef Etiquette Card The etiquette card is given to passengers as
 they disembark the ship for a port visit. The card shows the map of the island
 highlighting the major coral reefs and beaches, with guidelines, for the preservation of
 these natural resources.

Turks and Caicos Artificial Reef – Nearly 100 concrete orbs have been submerged in the shallow waters of Grand Turk Island to encourage coral growth, shelter small fish and enhance snorkeling. These concrete orbs (also called reef balls) that weigh some 300 pounds each have been anchored to the sandy seabed to help marine habitats. The reef balls have holes that create currents and circulate nutrients to marine life. Small fish can hide from predators inside these orbs. Larval coral was placed on the rough exteriors of these balls to propagate and enhance the area through human interventions. Carnival was instrumental in providing funding for roughly half of the reef project cost. In addition, Carnival has also created Beach and Coral Reef Etiquette cards (shown on the next page) that are similar to the ones distributed in Cozumel.



Grand Turk Beach & Coral Reef Etiquette





www.grandturkec.com • info@grandturkec.com

Welcome to Grand Turk

Marine-related tourism is a mainstay of Turks & Caicos' (TCI) economy. Our beaches and dive sites are often listed among the best in the world. Whether you swim, snorkel, scuba, or freedive, please help protect TCI's reefs and beaches.

BEACH ETIQUETTE

- Respect the Environment:

 Use boardwalks or foot paths instead of walking across the sensitive dunes; this will help reduce erosion.
- Don't disturb wildlife and plants you are
- Don't disturb withing and plants you are visiting their home.
 Cut the rings of plastic six-pack holders before disposing of them in trash receptacles so that animals (like fish, turtles or birds) can't get
- tangled in them leave no solid plastic loops.

 Fill in any holes created while playing in the

Help Keep the Area Clean:

- Place your trash in trash containers at the beach or take it away with you.
 Should you see trash laying around, please pick it up and place it in a receptacle.

Obey all Park Rules and Regulations: Observe swimming and boating zones. Watercraft should use boat-access lanes only.

- Vehicles are not allowed on the beach. Please use designated parking areas.
- No fires are allowed on the beach.

Use Public Restrooms

CORAL REEF ETIQUETTE

Corals are colonies of very small animals that take hundreds of years to form the structures visible today. Simply touching corals to see what they feel like can cause the death of an entire colony. Oils from your skin can disturb the delicate mucous membranes that protect the saintly from disease.

- the delicate mucous membranes that protect the animals from disease.

 Don't walk upon or stand on coral, as this can kill the living coral polyps that are the builders of the reef structure.

 Consider a flotation device (placed under chest) if you are not a solid swimmer, and never stand on coral to adjust your mask.

 Swim clear of the reef and when you kick ensure that you do not kick the reef.

 Should you need to rest, search for a sandy or coral-free shallow place to stand.

 Don't touch, pick up or hold reef life, and never remove anything from its habitat.

- never remove anything from its habitat.

Take only pictures and bring home only

And finally... Enjoy your stay on Grand Turk!



Prepared in cooperation with: Turks and Caicus Islands Department of Environment and Coastal Resources (DECR)

Cozumel **Beach & Coral Reef** Etiquette







Welcome to the **Island of Cozumel**

Island of Cozumel

The name Cozumel comes from the Mayan
"Cuzam," meaning "sparrow", and "Lamil",
which means "land of." This island is the third
largest in all of Mexico, and the most populous. It
is flat and, having no industrial base, depends
entirely on tourism for its economic development.
Throughout the Cozumel coastline one finds
white-sand beaches and a turquoise sea of great
beauty. The island has a very large projected natural area known as Arrecifes de Cozumel National
Park, famous worldwide for its coral reefs and
wide vairety of water sports, such as seniba diving,
snorkeling, kayaking and others.

ETIQUETTE INSIDE THE ARRECIFES DE COZUMEL NATIONAL

- Beach Etiquette

 Don't stay overnight and/or camp.

 Don't discard or leave trash on the adjacent beaches place all trash in trash containers.

 Don't light fires on or near the beach area.

Coral Reef Etiquette

Coral ecosystems are the most biologically diverse of all manne systems and serve as a refuge for many species. While reasonably well preserved, these reefs are quite fragile and therefore vulnerable to anthropogenic (human) pressure. Consequently, one should

- not

 Throw into the sea any type of trash that could
- Intro mito the sea any type of trash that could affect the ecosystem.
 Practice commercial or sports fishing
 Use darts, hooks, harpoons or other devices capable of harming marine flora or fauna.
 Collect or capture marine life, whether living or
- dead.

 Touch, stand upon, walk on, grab onto, drag equipment along, or otherwise disturb the seabed in coral areas.

 Use gloves or knives.

RESPECT THE ENVIRONMENT

RESPECT THE ENVIRONMENT DOI'D disturb wildlife or plants: remember that you are visiting their habitat. Don't feed the fish: doing so could modify their behavior. Cut the rings of plastic can holders before disposing of them in trash receptacles to prevent animals (fish, turtles or their firms the receptacles to prevent animals (fish, turtles or their firms and th

trash receptacles to prevent animals (fish, turtles or birds) from getting tangled in them. Fill in any holes created while playing in the sand. If you see trash anywhere, please pick it up and place it in a receptacle. In addition to recreational water activities with-in the Marine Park, the island of Cozumel offers archeological sites such as San Gervasio, swim-ming with dolphins, swimming with manta rays, and other activities that will ensure that your visit is empoyable. Fake only pictures and bring home only your memories. And finally.— Fine your stay in Corumel!

Enjoy your stay in Cozumel!

Prepared in cooperation with: Arrecifes de Cozumel National Park National Commission for Protected Natural Areas Ecología Marina y Estudios Ambientales S.C.







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:

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). 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 affecting 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 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. In 2008, Carnival representatives participated in the development of:

- A new, enhanced version 3.0 interactive sustainable development web tool. The tool allows users to establish baseline performance, assess opportunities, set goals, develop action plans and evaluate progress towards sustainable development objectives.
- The "Map of Future Forces Affecting Sustainability", a new tool prepared for the GEMI Senior Advisory Council (SAC) by the Institute for the Future (IFTF).
- The GEMI-Environmental Defense Fund (EDF) Guide to Successful Corporate-NGO Partnerships, a comprehensive resource for designing, implementing and measuring the benefits of partnerships between businesses and non governmental organizations (NGOs).



Ship Emission Abatement and Trading (SEAaT)

Carnival is a sponsoring member of SEAaT (www.seaat.org), a cross-industry, unique, proactive and self funding group, whose mission is to encourage and facilitate efficient reduction of harmful emissions to air from shipping. Formed in 2002, SEAaT raises awareness and promotes acceptance of solutions for emission 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. SEAaT membership represents the broader shipping community, and includes ship owners, brokers, technology companies and fuel suppliers.

World Wildlife Fund (Italy)

Costa Cruises and World Wildlife Fund (WWF) Italia have entered into a partnership that is designed to safeguard three of the most precious and endangered marine eco-regions on the planet – the Mediterranean Sea, the region of the Greater Antilles, and the north-east coast of Brazil – which are currently threatened by degradation, pollution, harmful fishing methods and uncontrolled tourism.

The International SeaKeepers Society

Carnival and The International SeaKeepers Society have entered into a partnership to recognize the ocean's critical importance to the life of our planet and commit to finding real-world solutions to the problems now plaguing our seas. The International SeaKeepers Society is an organization of international leaders that promotes synergy among citizens, governments, educational institutions and corporations to restore and protect the world's oceans. Five Carnival ships have been fitted with the ocean monitoring systems. Carnival is SeaKeepers largest corporate partner and a Two-Star Admiral's Club member.



For More Information

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

Carnival Corporation & plc Vice-President, Maritime Policy and Compliance 3655 NW 87th Avenue, MCEC1150N Miami, FL 33178-2428 1-305-599-2600, ext. 10115