# SUSTAINABILITY REPORT FISCAL YEAR 2012



# The power of our global brands

Our mission is to take the world on vacation and deliver exceptional experiences through many of the world's best known cruise brands that cater to a variety of different geographic regions and lifestyles, all at an outstanding value unrivaled on land or at sea.



# **ABOUT CARNIVAL CORPORATION & PLC**

**Our Global Brands** 



# Operating Line Headquarters:

Carnival Cruise Lines—Miami, Florida & Princess Cruises—Santa Clarita, California & Holland America Line—Seattle, Washington & Seabourn— Seattle, Washington & Cunard—Southampton, U.K. & P&O Cruises (UK)—Southampton, U.K. & AIDA Cruises—Rostock, Germany & Ibero Cruises—Barcelona, Spain & Costa Cruises—Genoa, Italy & P&O Cruises (Australia)—Sydney, Australia

# **COMPANY INFORMATION**

The name of our Company is Carnival Corporation & plc, referred to in this Sustainability Report as "Carnival." Carnival Corporation & plc has a subsidiary Operating Line, Carnival Cruise Lines, referred to in this report as "Carnival Cruise Lines."

Carnival Corporation is incorporated in Panama, and Carnival plc is incorporated in England and Wales. Carnival Corporation and Carnival plc operate a dual-listed company (DLC), whereby the businesses of Carnival Corporation and Carnival plc are combined and they function as a single economic entity through contractual agreements between separate legal entities.

Shareholders of Carnival Corporation and Carnival plc have the same economic and voting interest but their shares are listed on different stock exchanges and are not fungible. Carnival Corporation is traded on the New York Stock Exchange (NYSE) under the symbol CCL. Carnival plc is traded on the London Stock Exchange (LSE) under the symbol CCL and under the symbol CUK as an American Depository Share on the New York Stock Exchange.

# SERVICES AND OPERATING STRUCTURE

Carnival's respect for the past, focus on the present, and planning for the future have enabled our Company to build a rich portfolio of distinct brands. Although our brands are different in terms of product, style and amenities, there are three traits that they all share—each is one of the most successful in its respective area, each has a wellknown brand name, and each has a responsibility to operate sustainably. This leadership, visibility and shared responsibility unite our brands and allow for coordination of sustainability efforts across the organization. Carnival utilizes an "Operating Line" structure to manage the Company. During fiscal 2012, the following Carnival Operating Lines operated and managed one or more of our brands:

- AIDA Cruises;
- Carnival Australia, which operates P&O Cruises (Australia);
- Carnival Cruise Lines;
- Carnival UK, which operates Cunard and P&O Cruises (UK);
- Costa Cruises, which operates Costa Cruises and Ibero Cruises;

(1) Costa Concordia was removed from the ship count on November 30, 2011 Annual Report on Form 10-K.



# ADDITIONAL DISCLOSURES :

Additional details relating to the Company Information, Services and Operating Structure sections are disclosed in the Carnival 2012 Annual Report to Shareholders, and in the Annual Report on Form 10-K on the Carnival Corporation website (www.carnivalcorp.com).

- Holland America Line, which operates Holland
   America Line and Seabourn; and
- Princess Cruises.

Carnival also operates Holland America Princess Alaska Tours, the leading tour company in Alaska and the Canadian Yukon.

Carnival has operations worldwide. Each year Carnival ships visit hundreds of ports around the globe. In 2012, we visited over 700 ports.

# SCALE OF ORGANIZATION

Carnival employs approximately 76,000 crew members on board our ships at any given time. Our shoreside operations have approximately 9,400 full-time and 4,300 part-time/seasonal employees. As of January 22, 2013, we operated 100 cruise ships, with a total capacity of 202,784 guests. During fiscal 2012, we carried more than 9.8 million guests. Carnival's product offerings provide our guests with exceptional vacation experiences at an outstanding value, and our success has made us one of the most profitable companies in the leisure industry. Our fiscal 2012 revenues were approximately \$15.3 billion. Total fiscal assets at November 30, 2012 were approximately \$39.1 billion.

# Table 1.1—Business Dimensions and Direct Economic Value Generated and Distributed<sup>1</sup> (EC 1)

Fiscal Year						
	2010	2011	2012			
Business Dimensions						
Guests (in thousands)	9,147	9,559	9,829			
Guest Capacity <sup>2</sup>	191,464	195,872	202,784			
Number of Ships	98	99	100			
Average Number of Employees	87,000	90,000	90,000			
Financial Data (in US\$ Millions)						
Revenue	\$14,469	\$15,793	\$15,382			
Total Assets	\$37,490	\$38,637	\$39,161			
Operating Costs	\$12,122	\$13,538	\$13,740			
Payroll and Related	\$ 1,611	\$ 1,723	\$ 1,742			
Dividends	\$ 315	\$ 787	\$ 1,168			
Interest Expense, Net of Capitalized Interest	\$ 378	\$ 365	\$ 336			
Income Tax Expense, Net	\$ 1	\$ —	\$ 4			
(1) Per fiscal 2012 Annual Report on Form 10-K.						

(2) Capacity is based on two guest per cabin.



# EMERGING CRUISE REGIONS

During the past five years, we have doubled our guest sourcing from emerging markets, a trend we expect will continue in the future. We are focused on the growth of emerging cruise regions. In 2013, we will capitalize on the increasing popularity of cruising in Asia with the deployment of a second Costa ship in China and the launch of a new Princess program for the Japanese vacation market. As a result of the initial success of the Princess launch, Princess has announced the addition of a second ship to Japan in 2014. We believe the growing prosperity and size of the Asian vacation market provides significant potential for future growth.

# SIGNIFICANT CHANGES

During fiscal 2012, there was a net increase of one ship owned and operated by Carnival's Operating Lines<sup>1</sup>:

- Carnival Breeze was added to Carnival Cruise Lines,
- AIDAmar was added to AIDA Cruises, and
- Pacific Sun left P&O Cruises (Australia).

There were no other significant changes during the reporting period regarding size, structure, or ownership of Carnival.

# **CONTACT US**

For questions or to provide feedback regarding this Sustainability Report or its contents, please contact:

 Elaine Heldewier, Director Sustainability Programs or Karina Hilton Spiegel, Manager Sustainability Programs at Corporate Maritime Policy Carnival Corporation & plc., 3655 N.W. 87th Avenue, Miami, Florida 33178-2428 U.S.A. or email us at: Sustainability@Carnival.com

# SUSTAINABILITY REPORT FISCAL YEAR 2012

**Report Contents** 





While our Company has changed over the years, one area remains constant—our commitment to serving the community. Our founder, my father, the late Ted Arison, believed strongly in the importance of giving back. This philosophy was ingrained in our Corporate culture early on. We strive each and every year to make a difference in our homeports and various regions around the world in need.

Micky Arison—Chairman of the Board, Carnival Corporation & plc

Carnival Corporation & plc continues to be the largest cruise company and among the most profitable and financially strong leisure travel companies in the world. Our mission is to take the world on vacation and deliver exceptional experiences through many of the world's best known cruise brands that cater to a variety of different geographic regions and lifestyles, all at an outstanding value unrivaled on land or at sea. We recognize that our reputation and business viability are contingent on being transparent and sustainable. This means providing satisfying vacations while keeping our guests and crew safe, protecting the environment, developing our workforce, strengthening our stakeholder relationships, and enhancing the port communities that we visit, all while maintaining our fiscal strength.

The year 2012 also marked the historic 25th anniversary of Carnival's initial public offering (IPO). In 1987, our flagship brand, Carnival Cruise Lines, first went public and raised \$400 million, which laid the foundation for our future expansion. Since our IPO, we have grown from a single North American brand with seven ships to a truly global cruise company offering a portfolio of 10 brands and 100 ships in fiscal 2012 serving every segment of the cruise market. Today, we take great pride in providing rewarding and memorable vacations to nearly 10 million guests each year.

While our Company has changed over the years, one area remains constant—our commitment to serving the community. Our founder, my father, the late Ted Arison, believed strongly in the importance of giving back. This philosophy was ingrained in our Corporate culture early on. We strive each and every year to make a difference in our homeports and various regions around the world in need. We are proud to report that during the past year Carnival Corporation & plc gave nearly \$10 million to charitable organizations, including a \$2 million donation to support Hurricane Sandy relief efforts in the U.S.

Looking forward, we remain dedicated to profitably growing our cruise business and driving higher returns on capital. We continue to expand our fleet through a measured pace. Some of these vessels are expected to replace existing capacity from the possible sales of older, less-efficient ships. In 2012, we had nine cruise ships scheduled for delivery through March 2016. Each of our cruise lines has a strong, well-established brand position and continues to attract a growing number of new and repeat customers. We have strategically timed the introduction of these new ships to allow ample time for each brand to grow its passenger base and absorb the new capacity.

In addition, we are focused on the growth of emerging cruise regions. During the past five years, we have doubled our guest sourcing from emerging markets, a trend we expect will continue in the future. In 2013, we will capitalize on the increasing popularity of cruising in Asia with the deployment of a second Costa ship in China and the launch of a new Princess program for the Japanese vacation market. As a result of the initial success of the Princess launch, Princess has announced the addition of a second ship to Japan in 2014. We believe the growing prosperity and size of the Asian vacation market provides significant potential for future growth.

We continue to focus on managing costs and reducing our greenhouse gas (GHG) footprint. We have made significant strides toward reducing both fuel consumption and the resulting GHG emissions. In 2013, we expect to reduce fuel consumption per unit by another five percent. This will represent a cumulative 21 percent reduction since 2007. From 2005 to 2012, we reduced our GHG emission rate by 17 percent. We are nearing our Corporate target to reduce the intensity of GHG emissions from shipboard operations by 20 percent by 2015. In addition, our profit improvement teams are dedicated to reducing other costs through benchmarking and sharing best practices among our operating companies, as well as gaining efficiencies by implementing new technologies.

However, 2012 also was marked by a major unforeseen challenge with the grounding of the Costa Concordia, operated by Costa Cruises. This incident had a profound impact on each and every employee of the Company, both shipboard and shoreside. The entire Carnival Corporation & plc family extends its deepest sympathies to the families and loved ones of those who lost their lives. We have dedicated the full resources of the Company to understand what went wrong and to find solutions to avoid a similar occurrence in the future. Our commitment to the safety and security of our guests and crew has always been and remains our first priority. Since the incident, we have taken steps to identify lessons learned and best practices.

Specifically, we immediately launched a comprehensive audit and review of safety and emergency response. This wide-ranging review included consultation with outside experts in several key safety areas to ensure that we understand what went wrong and prevent it from happening again. Some of the actions we are taking as a result of this review are summarized elsewhere in this report.

Subsequently, we actively participated in a leadership role in the Cruise Industry Operational Safety Review that the Cruise Lines International Association and the European Cruise Council launched on behalf of the global cruise industry.

# CHAIRMAN'S STATEMENT

This review encompassed careful examination of existing safety procedures to identify industry best practices and develop new policies for bridge procedure harmonization and bridge access, passenger muster and emergency instructions, and passage planning and approvals. As a result of the review, regulatory changes were proposed to the International Maritime Organization (IMO) that will benefit the entire industry. In addition, Costa Cruises and Carnival Corporation & plc worked closely with the Italian authorities on the salvage plan with the contract.

Since its inception, the priorities of the salvage project have included respect for the environment, workplace safety and protection of the Giglio Island socio-economic life. The ship is located in the Tuscan Archipelago National Park and the Pelagos Sanctuary. The Tuscan regional environmental protection agency began monitoring water conditions around the ship immediately after the incident and will continue until the ship has been removed. No significant pollution levels have been recorded so far. The fuel contained in *Concordia*'s fuel tanks, which could have been a significant environmental risk if released, was successfully removed on March 24th, 2012. Approximately 2,100 tons of oil from 17 tanks was removed.

Taking care of the sea bottom will be a priority throughout all activities to remove *Concordia*. Once removal is complete, the sea bottom will be cleaned and marine flora replanted. A map of the seabed was prepared on a joint basis with the Università La Sapienza in Rome and the salvage team, to protect priority habitats in the area, including native seagrass meadows and coral formations. About 200 specimens of pinna nobilis or "fan mussels" (a species of large saltwater clams) found near the wreck have been catalogued and transferred to another area, awaiting relocation to their original home when work is complete. The fish population was also studied and experts took a census of marine mammals in the area.

The removal of *Concordia* is a unique and extremely complex technical-engineering operation, considered the biggest salvage ever attempted on a ship of its size—with the deployment of the finest international expertise, state-of-the-art technology and unprecedented financial resources. Activity at the site continued non-stop throughout 2012 with about 500 salvage operators working round the clock. Due to the complexity of the project, along with weather and sea conditions, the latest timelines based on the progress of work on the project thus far envisage that the salvage operation will be completed by the summer of 2014.

A dedicated website (www.theparbucklingproject. com) was developed by Costa Cruises and the salvage group describing all aspects of the project. This includes environmental protection and monitoring, community engagement and updated salvage developments.

We are confident that the combination of these comprehensive initiatives provides us with the tools to further enhance the policies and practices that ensure the safety and security of our guests and crew. The global cruise industry remains one of the world's safest travel options. We reiterate our deep and continuing commitment to protecting the health, safety and security of our guests, employees and all others working on behalf of the Company, and the environment.

In closing, we would also like to thank the 90,000 shipboard and shoreside employees of Carnival Corporation & plc and our Board of Directors for their hard work and perseverance during the past year. Carnival Corporation & plc continues to be a very strong company. This past year is a testament to our ability to weather a challenging period through the outstanding leadership of our global management teams, the foresight and vision of our Board, and the spirit of teamwork shared by our employees worldwide. Our long-term fundamentals remain strong and our brands continue to provide truly exceptional vacation experiences at an outstanding value to millions of satisfied consumers around the globe. We invite you to read our latest Sustainability Report and welcome your comments.

Micky Arison Chairman of the Board



This report is produced for the benefit of all stakeholders. We hope that readers will make use of the information and perspectives, and see them as an invitation to further dialogue with Carnival. As we continue our sustainability journey, we will continue to engage our stakeholders and identify opportunities to contribute to sustainable growth and value creation.

Elaine Heldewier—*Director, Sustainability Programs* and Karina Hilton Spiegel—*Manager, Sustainability Programs* 

Carnival's approach to sustainability is a full-time commitment; it is not a cost of doing business, it is a way of doing business. Our Corporate Sustainability Report complements our Annual Report, as well as our subsidiary Operating Line Sustainability Reports. In this Corporate Sustainability Report we outline our positions and strategies around key sustainability topics of relevance to Carnival, the cruise industry and our stakeholders. This report includes operations that meet the criteria of being subject to Carnival's direct operational control. We have also begun to include some of our initial assessment of our indirect impacts as they relate to our diverse supply chain. The information in this Sustainability Report includes significant actions or events in the reporting period. This report does not intentionally exclude relevant information that would influence or inform stakeholder assessments or decisions, or that would reflect significant economic, environmental or social impacts.

# DEFINING WHAT IS MATERIAL

Carnival and our Operating Lines are members of a number of organizations that work together with key stakeholders to address material sustainability issues in the cruise industry, in the broader maritime industry, and with companies in other industries. We first used our engagement with our stakeholders to help define the Sustainability Report content. Then, through a systematic and an iterative process, we prioritized information on the basis of materiality, analysis of environmental aspects and impacts (ISO 14001), sustainability context, and stakeholder inclusiveness as follows:

- identified those issues that were currently being reported on and/or measured internally,
- selected a core set of issues and identified a related metrics-reporting framework/process,
- agreed on the desired content for each metric and the approach to reporting (qualitative vs. quantitative detailed performance tracking, etc.),
- decided to use performance indicators for other purposes (e.g., making disclosure decisions, driving performance improvement, etc.), and
- expanded supply chain materiality.

# STAKEHOLDER FEEDBACK

Carnival and its subsidiary Operating Lines regularly and proactively engage with a broad range of stakeholder groups that have interests in our sustainability policies, standards and performance. Such stakeholder groups include: guests, employees, home and destination port communities, travel professionals, suppliers, media, non-governmental organizations (NGOs), government agencies, investors, and business organizations.

Through active, ongoing communications, we develop common understandings of the issues relevant to the challenges we face, including industry-specific aspects and technical terminology. There is usually mutual agreement on the type of engagement between Carnival and stakeholders, such as types of meetings (group meetings, one-on-ones), meeting frequency, information exchange, and roles of each party. The engagement process ensures that all stakeholders can voice their concerns.

This report is produced for the benefit of all stakeholders, including Carnival employees—the people whose actions define Carnival every day. We hope that readers will make use of the information and perspectives, and see them as an invitation to further dialogue with Carnival. We will continue to engage in these discussions and seek to adopt and develop opportunities based on what we learn in order to contribute to, and succeed in, sustainable growth and value creation.

# **SCOPE OF REPORT**

This Corporate Sustainability Report provides information related to Carnival's fiscal 2012 (December 1, 2011 to November 30, 2012) for all of Carnival's Operating Lines. This is Carnival's third annual Corporate Sustainability Report, and it follows the same GRI 3.1 framework and metrics as our previous Sustainability Reports.

The scope of this Sustainability Report encompasses the direct operation of the ships, as well as the support facilities and personnel charged with managing the Operating Lines and the Corporate headquarters. As greenhouse gas (GHG) emissions represent one of our main operational direct impacts, we include purchases of shipboard and shoreside energy (fuel and electricity).

We have expanded our report boundary, as we have also begun to include some of our indirect impacts in this report. As we continue our sustainability journey, we expect to incorporate more indirect impacts of our operations related to our diverse supply chain.

There are no significant changes from last year's reporting period in the scope or measurement methods applied in the Sustainability Report for the economic, environmental and social indicators. Even though we have increased the size of our fleet, we have normalized the majority of our indicators to take into account this growth, as well as changes in itineraries and guest capacity.

This report is complemented by 2012 Sustainability Reports published under Carnival Operating Lines as follows:

# • AIDA Cruises,

- Carnival UK (P&O Cruises (UK) and Cunard Line), and
- Holland America Line and Seabourn.

# FRAMEWORKS AND GUIDELINES

We continue to report against the Global Reporting Initiative's (GRI) G3.1 sustainability reporting guidelines. Sustainability performance data included in this Sustainability Report are based on information supplied to Carnival by its subsidiary Operating Lines and the fleets of cruise ships operated by each. These include:

- quantitative data that were collected, aggregated and analyzed, utilizing our in-house sustainability data collection and reporting systems; and
- qualitative data that were collected from each of Carnival's Operating Lines and from other in-house and industry sources.

We selected the 34 performance indicators in this Sustainability Report based on the material economic, environmental and social issues of greatest interest to most of our stakeholders and those that we determined to be material to Carnival. In most cases, we attempted to align our data gathering to follow the GRI indicator protocols as closely as possible. However, in some cases, due to the unique characteristics of our business, we have deviated from strict adherence to the GRI indicator protocol requirements to reflect materiality.

The GRI Content Index of this report follows the standard disclosures listed in the GRI G3.1 Sustainability Reporting Guidelines and can be found at the end of this report.

# **CORPORATE GOVERNANCE**

# WHAT'S INSIDE

- Board of Directors
- Executive Compensation
- Commitments to External Initiatives
- Overview of the Main Environmental and Safety Regulations

• To support our Corporate Governance, Carnival has established ethics, compliance policies and systems to facilitate conduct that conforms with our values and standards.

 Carnival ships are regulated by international, national, state and local laws, regulations and treaties, as well as our Corporate standards and industry guidelines.



Carnival's governance policies and practices in further detail www.carnivalcorp/CorporateGovernance.com

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Carnival is committed to governance policies and practices that ensure stakeholder interests are represented in a thoughtful and independent manner. The Corporate Legal Department is responsible for the corporate secretarial function and legal affairs, including advising the Board with respect to corporate governance policies, monitoring compliance with state, federal and international laws and regulations, and representing the corporation in legal disputes.

Arnaldo Perez—Senior Vice President, General Counsel and Secretary

At Carnival we recognize our responsibility to provide industry leadership and to conduct our business as a responsible global citizen. Our Corporate leadership is manifested in our Code of Business Conduct and Ethics, which requires that every employee and member of the Boards of Directors use sound judgment, maintain high ethical standards and demonstrate honesty in all business dealings. As a responsible global citizen, we are committed to achieving and maintaining the highest standards of professional and ethical conduct.

# **BOARDS OF DIRECTORS**

The membership of the Carnival Boards of Directors includes:

- three members with Executive functions,
- two non-Executive Directors,
- nine independent non-Executive Directors, including two female Board members.

During fiscal 2012, Carnival's Chairman of the Boards was also the Chief Executive Officer, the reasons for which are detailed in the Corporate Governance Guidelines.<sup>1</sup>

The governance structure of Carnival includes the following committees of the Boards of Directors, each of which has a specific charter, defined responsibilities and composition:

- Health, Environmental, Safety & Security (HESS) Committee;
- Compensation Committee;
- Audit Committee;
- Nominating and Governance Committee; and
- Executive Committee.

The charter for each of these committees can be found on the Corporate Governance section on our Corporate website. Further discussion of the HESS Committee can be found in the Risk Management section of this report. Additionally, below is an overview of executive compensation and Compensation Committee objectives.



Click <mark>here</mark> to learn Who's Who on the Board

# **EXECUTIVE COMPENSATION**

Carnival has controls in place to help ensure that we fully comply with or exceed all legal and statutory requirements related to HESS, and that HESS matters are assigned the same priority as other critical business matters. These controls also ensure annual review and approval of Corporate goals and objectives relevant to executive compensation, evaluation of executive performance in light of those goals and objectives, and determination and approval of executive compensation levels.

The objectives of the Compensation Committee with respect to executive compensation are to create competitive compensation packages that provide both short-term rewards and long-term incentives for positive individual and Corporate performances and to ensure the alignment of the financial interests of our Executive Officers and Carnival's shareholders.

Over the last several years, the Compensation Committee has reinforced the commitment to strengthening the linkage between pay and performance. The performance-based share grant program was implemented in 2011 and continues to align an increasing portion of our named Executive Officers' long-term pay opportunity to Carnival's earnings per share growth. The annual bonus programs are intended to closely align annual bonuses to Carnival's performance against pre-determined operating income targets, which are Corporate and operating company specific, where applicable.

Additionally, our Corporate-wide GHG emissions reduction goal, developed by our Corporate Maritime Policy Department, was approved by the HESS Committee of the Boards of Directors. The Compensation Committee on the Boards of Directors also reviews operational achievements related to sustainability in its compensation decisions. Also, as part of their respective Environmental Management Systems (EMS), each Operating Line establishes annual objectives, targets and plans to improve its environmental performance related to energy and water consumption, waste management and related training, among others. Shoreside and shipboard management are held accountable for meeting these goals, which are closely tracked and affect their annual performance, including pay and bonuses.

More information on linkages between compensation for members of the Boards of Directors, Executives and Senior Managers, and the Company's financial, environmental, social and governance performance can be found in the Compensation Discussion and Analysis section of the Annual Proxy Statement.

# ADDITIONAL CORPORATE GOVERNANCE INFORMATION

The following are described in the Corporate Governance section on the Corporate website:

- Mechanisms for shareholders and employees to provide recommendations or direction to the Boards of Directors.
- The processes for the Boards of Directors to ensure conflicts of interest are avoided are detailed in the Carnival Corporation & plc Code of Business Conduct and Ethics.
- The process for determining the qualifications and expertise of the members of the Boards of Directors for guiding the Carnival strategy on economic, environmental and social topics.
- The processes for evaluating the performance of the Boards of Directors.

# COMMITMENTS TO EXTERNAL INITIATIVES— MEMBERSHIPS

Carnival and our subsidiary Operating Lines are members of, and actively participate in, the following organizations. These organizations work together and with key stakeholders to address a broad range of sustainability issues in the cruise industry, in the broader maritime industry and with companies representing other industries:

- Cruise Lines International Association (CLIA)
  - Florida Caribbean Cruise Association (FCCA)
- European Cruise Council (ECC)
- International Chamber of Shipping (ICS)/ International Shipping Federation (ISF)
- European Community Shipowners' Associations (ECSA)
- The U.K. Chamber of Shipping
- Global Environmental Management Initiative (GEMI)
- Sustainable Shipping Initiative (SSI)
- Sustainable Travel Leadership Network (STLN)
- EHS and Sustainability Management (NAEM)
- Maritime Anti-Corruption Network (MACN)

(1) As of the writing of this report, Carnival split the roles of Chairman and Chief Executive Officer. Micky Arison continues to serve as Chairman of the Board of the Company. Arnold W. Donald, a highly experienced and respected business leader who has served on the Company's Board for the past 12 years, assumed the role of President and Chief Executive Officer effective July 3rd, 2013.

# COMMITMENTS TO EXTERNAL INITIATIVES—MANDATORY AND VOLUNTARY

Carnival ships are regulated by the various international, national, state and local laws, regulations and treaties in force in the jurisdictions in which our ships operate. Our ships are registered in the Bahamas, Bermuda, Italy, Malta, the Netherlands, Panama, Portugal and the U.K. They are regulated by these Flag States and by the international conventions that govern health, environmental, safety and security matters in relation to guests, crew members and the ships. Representatives of each "Flag," or country of registry, conduct periodic inspections, surveys and audits to verify compliance with these regulations. In addition, we are subject to the decrees, directives, regulations and other requirements of the more than 700 ports that our ships visit every year, as they apply to the various aspects of our ships' operations. Table 4.1 summarizes some of the principal laws, acts, codes, directives, legislation, protocols, statutes, rules, regulations and voluntary guidelines related to international environmental, maritime safety and labor requirements with which Carnival complies.

# Table 4.1—Overview of the Main Environmental and Safety Regulations

REGULATION	DESCRIPTION AND SUMMARY OF REQUIREMENTS	HOW CARNIVAL MEETS OR EXCEEDS REGULATION
INTERNATIONAL CONVENTIONS:		
International Convention for the Safety of Life at Sea ("SOLAS")	<ul> <li>SOLAS contains safety requirements for design, construction, equipment, operations, safety management, and security. It includes 12 Chapters, seven of which apply to Carnival's operations:</li> <li>Chapter II-General Provisions</li> <li>Chapter II-I—Construction—Subdivision and stability, machinery and electrical installations</li> <li>Chapter II-2—Fire protection, fire detection and fire extinction</li> <li>Chapter III-Life-saving appliances and arrangements</li> <li>Chapter IV—Radio-communications</li> <li>Chapter IV—Radio-communications</li> <li>Chapter IX—Management for the safe operation of ships</li> <li>Chapter XI-1—Special measures to enhance maritime safety</li> <li>Chapter XI-2—Special measures to enhance maritime security</li> <li>Compliance with SOLAS is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance. Port States also verify compliance with these requirements. In addition, cruise ships are subject to surveys that examine the ship's structure (subdivision and stability), machinery and equipment, including life-saving appliances, fire protection and fire-safety systems, navigational equipment, radio installations, and other equipment to confirm compliance with the requirements of SOLAS. These surveys are conducted before the ship is put into service, annually thereafter, and as necessary. The Flag State issues a Passenger Ship Safety Certificate as evidence of compliance with SOLAS requirements. Amendments adopted in May 2011, establishing new, stricter, safety standards for lifeboat release and retrieval systems, will enter into force in 2013.</li> </ul>	Carnival complies with SOLAS. We have also developed and implemented Corporate Safety Standards that go beyond SOLAS requirements to further ensure the safety of our guests, ship personnel and ships, and cover a number of subjects including: • bridge team management; • training; • fire protection, detection and remediation; • emergency preparedness and response; • ship stability; • life-saving equipment and systems; and • watertight integrity.
International Safety Management Code ("ISM Code"), contained in Chapter IX of SOLAS	<ul> <li>The ISM Code is an international standard for the safe management and operation of ships and for pollution prevention. It requires all ship operating companies and ships to develop, implement and obtain certification of their Safety Management System ("SMS"). The SMS covers both shipboard and shore-based activities and must include:</li> <li>a company safety and environmental protection policy;</li> <li>instructions and procedures to ensure the safe operation of ships and protection of the environment;</li> <li>procedures for preparing for and responding to emergencies;</li> <li>defined levels of authority and lines of communication between shore and shipboard personnel, and identification of a designated person ashore responsible for ISM Code compliance;</li> <li>procedures for reporting accidents and ISM Code non-conformities; and</li> <li>procedures for internal and external audits and management reviews.</li> <li>Compliance with ISM code is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance.</li> </ul>	<ul> <li>Carnival complies with ISM Code and has also obtained additional certifications that go beyond the requirements of the ISM Code, including:</li> <li>ISO 14001 Environmental Management System certification (all Operating Lines),</li> <li>ISO 9001 Quality Management System certification (some Operating Lines), and</li> <li>OHSAS 18001 Occupational Health and Safety Management System certification (some Operating Lines).</li> </ul>
International Ship and Port Facility Security Code ("ISPS" Code), contained in Chapter XI-2 of SOLAS	<ul> <li>The ISPS Code:</li> <li>defines security standards, requirements, arrangements and procedures for ships, ports, and governments; and</li> <li>prescribes responsibilities for governments, shipping companies, shipboard personnel, and port/facility personnel, among others, to develop security plans, detect security threats and take preventative measures against potential security incidents affecting ships or port facilities.</li> <li>Compliance is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance.</li> </ul>	Carnival complies with the ISPS Code.

RPOL is the principal international convention governing marine pollution prevention and response. pliance with MARPOL is verified by inspections and surveys conducted by the Flag State, or by its delegated repre- ative (usually a classification society), and certificates are issued that confirm compliance. Port States also verify pliance with these requirements. RPOL has six Annexes, four of which are applicable to Carnival's ships and are described below:	Carnival complies with the requirements of MARPOL. We have also developed and imple- mented Corporate Environmental Standards that go beyond MARPOL and other regulations to further ensure environmental protection. They cover a number of subjects including: • control of refrigerants, • refrigerant personnel training, • wastewater management, • oily waste management
RPOL is the principal international convention governing marine pollution prevention and response. pliance with MARPOL is verified by inspections and surveys conducted by the Flag State, or by its delegated repre- ative (usually a classification society), and certificates are issued that confirm compliance. Port States also verify pliance with these requirements. RPOL has six Annexes, four of which are applicable to Carnival's ships and are described below:	Carnival complies with the requirements of MARPOL. We have also developed and imple- mented Corporate Environmental Standards that go beyond MARPOL and other regulations to further ensure environmental protection. They cover a number of subjects including: • control of refrigerants, • refrigerant personnel training, • wastewater management, • oily waste management
	<ul> <li>hazardous waste management,</li> <li>hazardous materials management,</li> <li>Environmental Management Systems,</li> <li>environmental organization,</li> <li>environmental training, and</li> <li>environmental performance monitoring and reporting.</li> </ul>
ex I, Regulations for the Prevention of Pollution by Oil, establishes requirements that prevent pollution from oil. ex I sets forth a comprehensive list of requirements that include: ssigning and constructing vessel equipment specifications to reduce the occurrence of oil discharge; ting vessels with oil discharge monitoring and control systems, oily water separating equipment, oil content meters ilge alarms) and a filtering system, slop tanks, sludge tanks, piping and pumping arrangements; cordkeeping requirements for such equipment; and aving an approved shipboard oil pollution emergency plan (SOPEP).	<ul> <li>Carnival exceeds the requirements of Annex I in areas that include, but are not limited to:</li> <li>often reducing the oil content of bilge water effluent from oily water separators to five parts per million (ppm) or less, lower than the MARPOL-required 15 ppm; and</li> <li>requiring that Carnival's Operating Lines install "white boxes," which are redundant systems that monitor treated bilge water contains less than 15 ppm of oil before being discharged overboard.</li> <li>Some of Carnival's Operating Lines discharge treated bilge water outside 12 NM from the nearest land, whereas Annex I has no distance restrictions provided the ship is "en route" (sailing).</li> </ul>
ex IV, Regulations for the Prevention of Pollution by Sewage from Ships: tablishes regulations for the discharge of sewage into the sea from ships, including regulations regarding the ships' juipment and systems for the control of sewage discharge, the provision of facilities at ports and terminals for the ception of sewage, and requirements for survey and certification; quires ships to be equipped with either an approved sewage treatment plant, or an approved sewage comminuting disinfecting system, or a sewage holding tank; ohibits the discharge of sewage into the sea, except when the ship has in operation an approved sewage treatment ant, or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance more than 3 NM from the nearest land; nits discharges of sewage that is not comminuted or disinfected to specific rates and at a distance of more than ? NM from the nearest land; and tablishes stricter discharge requirements in designated Special Areas, including the Baltic Sea. ex V, Regulations for the Prevention of Pollution by Garbage from Ships: tablishes rules and guidelines to eliminate and reduce the amount of garbage disposed of into the sea from ships; fines garbage as all kinds of food, domestic and operational waste, excluding fresh fish, generated during the strmal operation of the vessel and liable to be disposed of continuously or periodically; ohibits, in part, the disposal of garbage in waters less than 12 NM from nearest land and prohibits the disposal of astics anywhere into the sea; everely restricts discharges of other garbage from ships into coastal waters and "Special Areas;" and quires vessels to implement a Garbage Management Plan and record all disposal and incineration operations in a arbage Record Book. fective January 1, 2013, new regulations prohibit the disposal of all garbage, with limited exceptions, from ships into	<ul> <li>Carnival exceeds the requirements of Annex IV by:</li> <li>requiring that discharges of treated black water be made beyond 12 NM from the nearest land (Annex IV only restricts treated black water discharges to outside 3 NM).</li> <li>installing Advanced Waste Water Purification Systems (AWWPS) for the treatment of black and gray water in some ships. AWWPS utilize technologies designed to produce a higher effluent quality that is above MARPOL black water treatment standards, and meets or surpasses standards for secondary and tertiary effluents and reclaimed water. Annex IV does not include gray water man- agement or treatment.</li> <li>Carnival complies with Annex V, and some Operating Lines limit discharges to beyond 12 NM, which is even more restrictive than required by this regulation.</li> <li>Some Operating Lines already meet the upcoming 2013 requirements.</li> </ul>
eestii cw estic quo oan nestie	<ul> <li>x I, Regulations for the Prevention of Pollution by Oil, establishes requirements that prevent pollution from oil.</li> <li>x I sets forth a comprehensive list of requirements that include:</li> <li>inging and constructing vessel equipment specifications to reduce the occurrence of oil discharge:</li> <li>inging vessels with oil discharge monitoring and control systems, oily water separating equipment, oil content meters ge alarms) and a filtering system, slop tanks, sludge tanks, piping and pumping arrangements;</li> <li>ordkeeping requirements for such equipment; and</li> <li>ing an approved shipboard oil pollution emergency plan (SOPEP).</li> </ul> x IV, Regulations for the Prevention of Pollution by Sewage from Ships: ablishes regulations for the discharge of sewage into the sea from ships, including regulations regarding the ships' ipment and systems for the control of sewage discharge, the provision of faoilties at ports and terminals for the epiton of sewage, and requirements for survey and certification: wires ships to be equipped with either an approved sewage treatment plant, or an approved sewage comminuting I disinfecting system, or a sewage holding tank; whites the discharge of sewage into the sea, except when the ship has in operation an approved sewage treatment nt, or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance more than 3 MM from the nearest land; x V, Regulations for the Prevention of Pollution by Garbage from Ships: ablishes stricter discharge requirements in designated Special Areas, including the Baltic Sea. x V, Regulations for the Prevention of Pollution by Garbage from Ships: ablishes stricter discharge requirements in designated Special Areas, including the Baltic Sea. x V, Regulations for the Prevention of Pollution by Garbage from Ships: ablishes stricter discharge of garbage in waters less than 12 MM from nearest land and prohibits the disposal of stics

REGULATION	DESCRIPTION AND SUMMARY OF REQUIREMENTS	HOW CARNIVAL MEETS OR EXCEEDS REGULATION
INTERNATIONAL CONVENTIONS:		
	<ul> <li>Annex VI, Regulations for the Prevention of Air Pollution from Ships:</li> <li>establishes reduction requirements for sulfur oxides ("SOX"), nitrogen oxides ("NOX") and particulate matter;</li> <li>sets limits on the sulfur content of fuel oil used by ships;</li> <li>requires that, in special Sulfur Emission Control Areas ("SECAs"), the sulfur content of fuel burned cannot exceed 1.0 percent;</li> <li>establishes stricter controls on emissions of SOx and NOx in the North American Emission Control Areas (ECA), which became enforceable on August 1, 2012, and encompasses most of the United States and Canada's coastal waters out to 200 nautical miles from the coastline;</li> <li>the U.S. Caribbean ECA, which includes the waters adjacent to the Commonwealth of Puerto Rico and the U.S. Virgin Islands out to approximately 50 nautical miles from the coastline, was established in 2011 and will become enforceable in January 2014;</li> <li>requires that, in non-SECA areas, the sulfur content of fuel burned cannot exceed 3.5 percent;</li> <li>restricts the use of Ozone Depleting Substances ("ODS"), by requiring the recording of ODS, usage of rechargeable equipment, emissions and disposal of equipment containing ODS;</li> <li>requires the Energy Efficiency Design Index ("EEDI") for cartain new ships, excluding passenger vessels at this time, and the Ship Energy Efficiency Management Plan ("SEEMP") for all ships, which will enter into effect on January 1, 2013; and</li> <li>establishes new requirements for survey and certification for the International Energy Efficiency Certificate ("IEEC"), which is in addition to the IAPP Certificate. The IEEC is issued by the Flags States upon completion of required survey to demonstrate compliance with SEEMP and EEDI.</li> </ul>	<ul> <li>Carnival complies with Annex VI by using fuel oil that is at or below the Annex VI limits for sulfur content. In addition, the following programs have been implemented:</li> <li>Programs to train and certify individuals responsible for refrigeration and airconditioning plants.</li> <li>Use of recovery units certified to meet refrigerant recycling and recovery requirements.</li> <li>Programs to reduce ODS releases.</li> <li>Carnival ships meet SEEMP energy efficiency management for reducing GHG emissions and will fully comply when it becomes mandatory in January 2013.</li> <li>Carnival actively participates in the working groups at the IMO that are developing efficiencies and standards that could affect the cruise industry.</li> </ul>
International Convention for the Control and Management of Ships' Ballast Water and Sediments (IMO "Ballast Water Convention")	<ul> <li>The Ballast Water Convention:</li> <li>aims to prevent the spread of harmful aquatic organisms from one region to another;</li> <li>establishes standards and procedures for the management and control of ships' ballast water and sediments;</li> <li>requires all ships to implement a Ballast Water and Sediments Management Plan and carry a Ballast Water Record Book;</li> <li>require ships to implement ballast water management procedures to a given standard;</li> <li>phases-out ballast water exchange as the primary control mechanism; and</li> <li>phases-in ballast water discharge standards.</li> <li>The Convention was adopted in 2004, but is not yet in force. It will go into force 12 months after ratification by 30 states, representing 35 percent of the world's merchant shipping tonnage.</li> </ul>	<ul> <li>Carnival voluntarily complies with the IMO's Ballast Water Management Guidelines. In addition:</li> <li>Carnival aims to minimize any discharges of ballast water by monitoring the levels of fuel, potable water, gray water and black water, and uses those tanks when possible to stabilize the vessel as opposed to taking on or discharging ballast water.</li> <li>Carnival's fuel and potable water bunkering is often managed to reduce the need for ballast water.</li> <li>Some Operating Lines have worked with ballast water technology manufacturers and regulatory bodies to advance the development of treatment technologies and testing requirements.</li> </ul>
International Convention on Standards of Training, Certification and Watchkeeping for Seafarers ("STCW")	<ul> <li>STCW requirements include:</li> <li>standards for the training, qualification and certification of seafarers;</li> <li>specific standards of competency of crew members; and</li> <li>methods for demonstrating competency. All eight chapters of STCW apply to Carnival's operations: <ul> <li>Chapter I: General provisions</li> <li>Chapter I: Master and Deck Department</li> <li>Chapter II: Radio-communication and radio personnel</li> <li>Chapter V: Special training requirements for personnel on certain types of ships</li> <li>Chapter VI: Emergency, occupational safety, medical care and survival functions</li> <li>Chapter VII: Alternative certification</li> <li>Chapter VIII: Watchkeeping</li> </ul> </li> <li>Training requirements apply to all levels of crew members and are tailored to their specific on-board responsibilities. New requirements regarding work conditions for seafarers, competence levels and training entered into force January 1, 2012.</li> <li>Compliance is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued to crew members that confirm compliance. Port States also verify compliance with these requirements.</li> </ul>	Carnival complies with the requirements of STCW.

Commitments	to External	Initiatives	and Regulatio	n lable

REGULATION	DESCRIPTION AND SUMMARY OF REQUIREMENTS	HOW CARNIVAL MEETS OR EXCEEDS REGULATION
INTERNATIONAL CONVENTIONS:		
Maritime Labor Convention ("MLC"), 2006	MLC 2006, which was ratified in August 2012, consolidates and updates the International Labor Organization standards into a single document. It: • provides comprehensive rights and protection at work for seafarers on a global basis; • aims to be globally applicable, easily understandable, readily updatable and uniformly enforced; and • was designed to become the "fourth pillar" of the international regulatory regime for quality shipping (SOLAS, MARPOL and STCW). The MLC establishes standards regarding the working conditions of seafarers including: • minimum requirements for seafarers to work on a ship; • conditions of employment; • accommodation, recreational facilities, food and catering; • health protection, medical care, welfare; and • social security protection. Compliance will be verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates will be issued that confirm compliance. Port States will also verify compliance with these requirements.	Carnival already complies with many MLC 2006 requirements, and will fully comply when it becomes mandatory in August 2013.
Some of the Key Port State Require	ments:1	
Limits on Sulfur Content in Fuel in the European Union (EU)	In January 2010, a 0.1 percent sulfur limit on all marine fuels used in EU ports entered into force, requiring the use of distillate fuels.	Carnival complies with EU requirements.
Pollution Prevention Guide- lines for the Operation of Cruise Ships under Canadian Jurisdiction (TP 14202 E)	These Canadian regulations describe waste management practices and procedures, including items such as effluent dis- charge requirements, fuel sulfur content, halocarbon use and reporting.	<ul> <li>Carnival only discharges treated black water outside 12 NM from the nearest land, though TP 14202 E would allow discharges beyond 3 NM.</li> <li>Some of Carnival's Operating Lines dis- charge treated bilge water outside 12 NM from the nearest land provided the ship is "en route" (sailing), exceeding the require- ment of TP 14202 E.</li> </ul>
Canadian Ballast Regulations—Transport Canada (TP 13617 E)	The purpose of the Regulations is to protect waters under Canadian jurisdiction from non-indigenous aquatic organisms and pathogens that can be harmful to ecosystems and introduced by ships. The Regulations are intended to minimize the probability of future introductions of harmful aquatic organisms and pathogens from ships' ballast water, while protecting the safety of ships.	Carnival complies with the Canadian ballast water requirements.
Directive 2000/59/EC of the European Parliament and of the Council 27 November 2000	This Directive 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 Union.	Carnival complies with this Directive.
Council Directive of 12 December 1991 on hazardous waste (91/689/EEC) amending Directive 78/319/EEC on hazardous waste	This Directive provides a uniform definition of hazardous waste and how it is managed.	Carnival complies with this Directive.
Port State Control Requirements: U	Inited States	
National Marine Sanctuaries Act ("NMSA")	Under the NMSA, certain marine environment areas are designated as national marine sanctuaries and are protected due to their national significance, recreational, ecological, historical, scientific, cultural, archeological, educational or esthetic values. The NMSA requires permits for certain commercial operations and includes more stringent discharge restrictions.	Carnival complies with the NMSA.
The Oil Pollution Act of 1990 (33 U.S.C. 2701–2761) ("OPA 90")	OPA 90 amended the Clean Water Act, and it created a comprehensive prevention, response, liability and compensation regime regarding oil pollution in U.S. navigable waters caused by vessels and facilities. OPA 90 increased federal oversight of maritime oil transportation and increased environmental safeguards by: • establishing new requirements for vessel construction and crew licensing and manning; • mandating contingency planning; • enhancing federal response capability; • expanding the scope of enforcement authority; • increasing penalties and liabilities; and • increasing the scope of financial responsibility requirements.	Carnival complies with OPA 90.
U.S. Environmental Protection Agency's Vessel General Permit ("VGP")	The VGP, issued pursuant to the Clean Water Act, regulates discharges incidental to the normal operation of vessels. Each vessel is required to apply for an authorization to discharge in accordance with VGP requirements. The VGP regulates 26 specific discharge streams and contains inspection, monitoring, recordkeeping and reporting requirements.	Carnival complies with the current VGP and will comply with the new VGP when it becomes mandatory in December 2013.

(1) Port State Requirements include those rules and regulations from the countries and other geographic areas where Carnival's ships operate that may differ from those already summarized in this table. Carnival complies with Port State requirements of those countries in which its ships call.

REGULATION	DESCRIPTION AND SUMMARY OF REQUIREMENTS	HOW CARNIVAL MEETS OR EXCEEDS REGULATION
Port State Control Requirements: U	nited States	
	The current VGP expires on December 19, 2013. A new VGP will take effect thereafter, with more stringent requirements.	<ul> <li>Carnival complies with VGP.</li> <li>Carnival's corporate standard exceeds the VGP's 1 NM restriction on discharges of gray water by requiring that discharges of gray water be outside 4 NM from the nearest land.</li> <li>Some of Carnival's operating lines exceed the VGP's 1 NM restriction on discharges of bilge water by requiring that bilge water discharges be outside 12 NM from the nearest land.</li> </ul>
U.S. Resource Conservation and Recovery Act ("RCRA")	RCRA requires hazardous waste management from "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous wastes. RCRA also sets forth a framework for the management of non-hazardous solid wastes.	Carnival voluntarily follows the intent of the RCRA as it pertains to the generation and storage of hazardous waste while the waste is on board the vessel. Carnival complies with RCRA and its imple- menting regulations once waste is landed ashore, including transportation requirements such as packaging, labeling, manifesting, and recordkeeping and reporting.
U.S. Coast Guard Ballast Water Regulations	Ballast Water Management reduces 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. These requirements include ballast water management, exchange, reporting and recordkeeping. New U.S. Coast Guard regulations entered into force on June 21, 2012 and apply to new ships constructed on or after December 2013, upon delivery of the ship, as well as to existing ships from 2014 onwards, based on a phase-in schedule, determined by the dry dock schedule and ballast water capacity of the ship. These new regulations establish a standard for the allowable concentration of living organisms in ships' ballast water discharged in U.S. waters; and generally require the installation of a Coast Guard type-approved ballast water management system. In the interim, ships calling at U.S. ports and intending to discharge ballast water must either carry out exchange or treatment, which is permitted until the implementation deadlines for treatment systems.	Carnival complies with international, federal and state ballast water-management require- ments and aims to minimize any discharges of ballast water. Carnival monitors the levels of fuel, potable water, gray water and black water, and uses those tanks when possible to stabilize the vessel as opposed to taking on or discharging ballast water. Carnival coordinates fuel and potable water bunkering in such a way as to reduce the need for ballast water. Two of Carnival's Operating Lines, Carnival Cruise Lines and Princess Cruises worked with U.S. Coast Guard Shipboard Technology Evaluation Program (STEP). This program pro- vides incentive to shipowners and operators to install and operate experimental or prototype treatment systems with demonstrated potential for effective removal or destruction of organ- isms in ballast water.
Maritime Transportation Security Act of 2002 ("MTSA")	<ul> <li>The MTSA is U.S. legislation implementing the International Ship and Port Facility Security Code ("ISPS") described above. It:</li> <li>establishes a maritime security framework including U.S. vessel and port facility security requirements and standards; and</li> <li>provides for U.S. Coast Guard enforcement of such provisions, including security assessments, security plans, training and drills.</li> </ul>	Carnival's ships, which all have valid International Ship Security Certificates confirming compliance with the ISPS Code, also comply with the requirements of MTSA.
Intelligence Reform and Terrorism Prevention Act of 2004	This post 9-11 Act requires cruise ship operators to provide certain passenger and crew information to the U.S. Department of Homeland Security ("DHS") to enable DHS to compare this information to watch lists to prevent suspected or known terrorists and their associates from boarding, or to subject them to additional security scrutiny.	Carnival complies with the requirements of this Act.
Cruise Vessel Security and Safety Act ("CVSSA") of 2010	This Act, which applies to passenger vessels that are authorized to carry at least 250 passengers and have on-board sleeping facilities: • promotes the safety and security of cruise vessel passengers and crew; • requires cruise vessels to adopt basic reporting, safety and security measures; and • mandates that cruise vessels adopt several other basic security measures, including: -updated ship design; -providing public access to information regarding crime on board cruise ships; -improved precautions, response and medical care and support for victims of sexual assault; and -preservation of evidence necessary to prosecute criminals.	Carnival complies with the requirements of this Act.
Alaska Cruise Ship Legislation; Title XIV— "Certain Alaskan Cruise Ship Operations"	Sets federal effluent standards for black water and allows continuous discharge if treatment standards are met and confirmed via sampling.	Carnival complies with the Alaska Cruise Ship Legislation.

REGULATION	DESCRIPTION AND SUMMARY OF REQUIREMENTS	HOW CARNIVAL MEETS OR EXCEEDS REGULATION					
Port State Control Requirements: United States							
Endangered Species Act ("ESA") and The Marine Mammal Protection Act ("MMPA")	The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service and the Commerce Department's National Marine Fisheries Service ("NMFS"). The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. Pursuant to the Right Whale Ship Strike Reduction Rule, vessels 65 feet or longer must travel at 10 knots or less in cer- tain locations ("SMAs") along the east coast of the U.S. Atlantic seaboard at certain times of the year to reduce the threat of ship collisions with critically endangered North Atlantic right whales.	Carnival complies with the ESA and MMPA. In 2006, Holland America Line partnered with the U.S. National Oceanic and Atmospheric Administration (NOAA) to train navigators to identify different whale species and predict their behaviors in order to avoid collisions with ships. This program was licensed to NOAA and is freely distributed to shipping companies around the world to help train their personnel to avoid whale strikes.					
Key U.S. State Requirements: <sup>2</sup>							
Alaska State Cruise Ship Legislation: Alaskan State Law AS 46.03.460–46.03.490	Establishes effluent limits for gray and black water, describes non-hazardous and hazardous solid waste requirements, and reporting requirements.	Carnival complies with the Alaska State Cruise Ship Legislation.					
Alaska State Regulation 18 AAC 50.070.—Marine Vessel Visible Emission Standards	Establishes visible emissions requirements.	Carnival complies with AAC 50.070. Some Operating Lines have installed opacity meters as an additional tool for monitoring air quality.					
Alaska Ocean Ranger Program	Alaskan Department of Environmental Conservation ("DEC") program, which became law on December 17, 2006, requires U.S. Coast Guard licensed marine engineers on board certain cruise vessels to act as independent observers monitoring state environmental and marine discharge requirements. Ocean Rangers also check that passengers and crew are protected from improper sanitation, health and safety practices.	Carnival complies with the Ocean Ranger Program.					
Hawaii State Cruise Ship Legislation—Act 217, Commercial Passenger Vessels Discharges	The Hawaii State Cruise Ship Legislation establishes standards for the discharge of treated sewage and air emissions from cruise ships and commercial passenger vessels. It prohibits the discharge of untreated sewage from commercial passenger vessels, and it includes specific recordkeeping and monitoring requirements.	Carnival complies with the Hawaii Cruise Ship legislation and some of our Corporate Standards exceed these requirements.					
State Ballast Requirements: California Code of Regulations, Title 2, Division 3, Chapter 1, Articles 4.5–4.8	Ballast Water Management reduces 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.	Carnival complies with State Ballast Requirements.					
California State Limits on Sulfur Content in Fuel	California requires the use of marine gas oil with 1.5 percent sulfur or less or marine diesel oil with 0.5 percent sulfur or less within 24 NM.	Carnival complies with the California require- ments. Several of Carnival's Operating Lines have installed shore power connections, which operate in the ports of Juneau, Seattle and Long Beach in the U.S. Carnival ships operat- ing in California participate in the Port of Long Beach's Voluntary Vessel Speed Reduction Program, which is aimed at reducing vessel speed in an effort to help reduce air pollution.					
California Sewage Discharge Requirements	Effective March 28, 2012, California established a no-discharge zone ("NDZ") for passenger vessels, which applies to Carnival ships.	Carnival exceeds the California requirement by requiring that discharges of treated black water be made beyond 12 NM from the near- est land (California only restricts treated black water discharges to outside 3 NM).					
Flag State Regulations:							
Flag State Requirements	Rules and regulations that generally implement international conventions from which Carnival's ships are registered: Bahamas, Bermuda, Italy, Malta, the Netherlands, Panama, Portugal and the United Kingdom.	Carnival complies with all Flag State requirements.					
State and Trade Association Volunt	ary Guidelines:						
Voluntary Guidelines:							
<ul> <li>a) Memorandum of Understanding— Cruise Operations in Washington State</li> <li>b) Florida Department of Environmental Protection Memorandum of Understanding</li> <li>c) Cruise Lines International Association Waste Management Practices and Procedures</li> </ul>	These are voluntary guidelines related to environmentally responsible handling and disposal of various waste streams, including hazardous wastes, agreed upon by specific states and cruise lines to prevent pollution.	Carnival's Corporate Standards meet or exceed the levels recommended by the Guidelines, for example, by requiring discharge of treated black water outside 12 NM.					
d) The Venice Blue Flag Agreement	Adopted in 2007, this requires ships and ferries that transit from the Lido Port to the Maritime Station to voluntarily use fuel with 0.1 percent or less sulfur prior to entering the Venice lagoon.	Carnival complies with the voluntary Blue Flag agreement.					

(2) There are numerous state requirements that apply to Carnival's ships; only select State requirements are included here as examples. Certain states, including, but not limited to Washington, Oregon, Alaska and California have more extensive requirements than those under federal regulations.

# **RISK MANAGEMENT**

# WHAT'S INSIDE

- Risks and Opportunities
- Enterprise Risk Management
- HESS Management, Audits and Performance Reporting



The Corporate Maritime Risk Management Group provides a center of excellence in the use of risk management techniques for management of maritime risks. In this role, I focus primarily on the prevention and mitigation of serious incidents. My group manages the Enterprise Risk Management program for maritime risks and studies, analyzes and reports on risk trends and opportunities to aid in decision making on these issues.

David Cummings—Senior Director, Maritime Risk Management

# **RISKS AND OPPORTUNITIES**

Managing our impacts, risks and opportunities is essential to Carnival's continued global success. Like companies in many industries, we face a number of challenges and opportunities related to our sustainability, including the emerging regulatory environment, the global political and socioeconomic landscape, and the advance of science and technology. We ensure we identify the best approaches to managing these issues, while simultaneously improving our sustainability performance and addressing the interests of our stakeholders.

Our key impacts, risks and opportunities are addressed throughout this report and are summarized below:

- protecting the health and safety of guests and crew;
- ensuring the security of guests, crew and ships;
- preserving the natural environment;
- remaining transparent in our sustainability performance and accountability;
- recruiting, training and retaining qualified employees;
- conserving fuel and minimizing engine emissions;
- reducing greenhouse gas (GHG) emissions;
- operating in a changing regulatory landscape; and
- partnering with communities/ports-of-call.

# ENTERPRISE RISK MANAGEMENT (ERM)

Risks and opportunities are identified and addressed by Carnival's formal Enterprise Risk Management (ERM) process in various risk categories. Risk assessment activities within ERM occur at two levels: risk categories and risk events. The outputs of the ERM process are communicated to the Boards of Directors on a biannual basis. In addition, supplemental ERM reporting is provided periodically to the Audit and Health, Environmental, Safety & Security (HESS) Committees of the Boards.

At the risk category level, biennial assessments are performed by management at each Operating Line. The Operating Lines score each category in terms of impact, likelihood and other factors that increase or decrease the risk. This involves discussions among senior management of the Operating Lines and considers the underlying risk events in the overall evaluation. Risk categories are prioritized to create a high level company risk profile that is shared with the Boards of Directors as part of ERM reporting. The ERM process is executed by risk committees established at each Operating Line and at Corporate. These committees review risks, define action plans for improvement and support ERM reporting requirements.

Higher-scoring risk categories are subject to more in-depth evaluation, including a crosscompany review of mitigation methods at the risk event level. This process is performed for a select number of high priority risks each year and involves reviews of the detailed elements of mitigation, identification of the "key elements" of mitigation and benchmarking among companies to identify gaps, best practices and areas of opportunities. It also involves assessments of the impact and likelihood of the risk events and an assessment of management's capability to manage each risk. Defined scales are used for scoring. Once an indepth mitigation analysis is complete for a risk category, the ERM program will continue to monitor the status of action plans and risk metrics to ensure the risk is being managed effectively. In addition, as part of our management of regulatory risks, Carnival has developed a Regulatory Risk Tool for strategic planning and Corporate-wide dissemination of regulatory risk.

Areas of opportunities are translated into action plans, which are highlighted to senior Operating Line and Corporate management and to the Boards of Directors.

# HESS MANAGEMENT

The Boards of Directors of Carnival have established a Board-level Health, Environmental, Safety & Security (HESS) Committee to assist the Boards in fulfilling their responsibility to supervise and monitor HESS and sustainability-related policies, programs, initiatives at sea and onshore, and in compliance with HESS legal and regulatory requirements. The HESS Committee meets on at least a quarterly basis.

Senior management reviews the HESS Policy at least annually. If changes are warranted, it will be updated; otherwise the policy remains the same. The full text of our HESS Policy is on page 20, as well as on our Corporate website.

Carnival's management ensures that the values and objectives stated in our HESS Policy are clearly understood by everyone in the organization and articulated on a regular basis. There are no shortcuts to achieving health, environmental protection, safety and security. But with people working together to make an effective system, we are improving the HESS performance of our organizations, while simultaneously enhancing our HESS culture.

Our HESS management systems are designed on the following principles:

- Prevention: Plan and establish objectives and processes necessary to achieve the required and expected results.
- 2. *Implementation:* Implement the established plan and processes.
- Detection: Study the actual results of implementation and compare against the expected results.
- 4. Feedback and improvement: Take action on significant differences between actual and planned results. Analyze these differences to determine their root causes. Determine where to apply changes that will improve the process or results.



In addition to the HESS Committee, Carnival has a Corporate Maritime Policy Department (CMP). CMP is headed by a Senior Vice President, has a full-time professional and administrative staff, and is responsible for providing a common, integrated approach to management of HESS matters, and for reporting to the HESS Committee on such matters. The Senior Vice President CMP reports directly to Carnival's Vice Chairman/Chief Operating Officer and to the Chairman of the HESS Committee of the Boards of Directors.

During fiscal 2012, the principal activities of CMP included:

- conducting HESS audits of Carnival's Operating Lines and ships;
- measuring and reporting on HESS-related performance;
- creating an integrated, Company-wide HESS Management System;
- establishing HESS-related policies, standards and procedures; and
- evaluated and determined the need to expand the Sustainability group.

CMP develops and assures implementation of Corporate maritime policy, standards and guidance based on the:

- results of shipboard audits and Operating Line headquarters reviews of HESS processes and performance,
- assessment of risk,
- identification of best management practices,
- changing and emerging regulations, and
- monitoring and responding to expectations of internal and external stakeholders.

# **HESS AUDITS**

During fiscal 2012, Carnival performed annual Corporate HESS audits of each Operating Line's head office and one-third of each Operating Line's fleet of cruise ships. These were in addition to the internal HESS audits performed by all Operating Lines under their respective management systems and by external third-party certification and regulatory auditors. During fiscal 2012, we restructured our audit program to enhance the effectiveness of Corporate HESS audits so as to ensure consistent best practices. Each HESS audit is organized and planned to:

- verify compliance with international and Flag Administration rules, Corporate Standards, Operating Lines' Safety Management Systems (SMS) for policies and procedures, regulations, codes, and guidance directly involved in the safe conduct of ship operations; and
- verify the effectiveness and efficiency of the shipboard and shore-side HESS management systems.

HESS audit results are used to:

- determine compliance, effectiveness and efficiency,
- analyze trends,
- support newbuild and retrofit decisions,
- report status to the HESS Committee and to Operating Line management, and
- promote best management practices.
- CMP provides the Boards of Directors, the HESS Committee and senior management with:
- results and trends of operational incidents regarding HESS areas,
- · analysis and mitigation of identified risks,
- anticipated and actual impacts of new regulations and expectations of internal and external stakeholders,
- results of consolidated HESS audits, and
- visibility of the Corporation's sustainability-related policies, programs, initiatives and performance.

In addition, to facilitate reporting and transparency Carnival has established a hotline telephone number and website to permit reporting of HESS concerns, fraudulent or corrupt activities, accounting and internal control irregularities, non-compliance with the Code of Business Conduct and Ethics, and retaliation by guests, crew and shoreside employees. The hotline can be contacted at:

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

# HESS PERFORMANCE REPORTING

Carnival has established internal standards that require reporting of incidents related to health, environmental, safety, security and technical performance, including accidents and injuries, to the Corporate Maritime Policy Department (CMP). Criteria for the types of HESS-related incidents that must be reported to CMP and other members of Corporate management are specified in a Corporate standard, which is communicated to and implemented by all of Carnival's Operating Lines. The Corporate Incident standard was developed based on statutory obligation, certification requirements, industry best management practices, and Carnival's transparency values.

Accident, incident and injury data are compiled, analyzed and reported on a quarterly basis, including relevant summaries and trends, to Corporate and Operating Line management, to the HESS Committee, and to the Boards of Directors. In addition, these quarterly internal reports communicate HESS audit results and activity and developments about HESS and sustainability policies, regulations and related matters throughout the corporation and the industry.



Click here to read our HESS Policy and here for the procedure for reporting improprieties



# 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.

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

Micky Arison, Chairman and CEO 15 October 2007

# **OPERATING RESPONSIBLY**

# WHAT'S INSIDE

- Health
- Security
- Costa Concordia
- Safety
- Training



of our fleet scored between 86% and 100% on the CDC VSP inspection.

- Our employees train in facilities with some of the most sophisticated technology in the maritime industry and are accredited by third parties.
- 100% of shipboard employees represented by Health and Safety Committees.





From top management to our newest crew members, we all share the responsibility to understand the risks involved and to do our jobs responsibly. It is a commitment to protecting the health, safety and security of our guests and employees, protecting the environment, and to ensuring that we operate sustainably. This is what I signed on to do and will continue to advocate.

James Hunn—Senior Vice President, Corporate Maritime Policy

Our commitment to the health, safety and security of our guests and crew has always been and remains our first priority. This priority also includes protecting the environment. With almost ten million guests and approximately 76,000 crew members on board our 100 ships in fiscal 2012, we go to great lengths to ensure that they are safe, have fun and enjoy their vacation and work experience.

# HEALTH, SAFETY AND SECURITY— GUEST AND CREW (PR 1)

Carnival places the highest priority on guest and crew health, safety and security. We support and adhere to stringent, international standards for the design, construction and operation of oceangoing cruise ships as set forth by the International Maritime Organization (IMO) in the Safety of Life at Sea (SOLAS) Convention. SOLAS has been ratified and is enforced by virtually all major seafaring nations of the world. We have also developed and implemented Corporate Safety Standards that go beyond SOLAS requirements to further ensure the safety of our guests, crew and ships, and cover a number of subjects including:

- bridge team management,
- training,
- fire protection, detection and remediation,
- emergency preparedness and response,
- ship stability,
- · life-saving equipment and systems, and
- watertight integrity.

All of our ships comply with the standards set forth in the International Safety Management (ISM) Code, originally developed by IMO in the mid-1990's. Each Operating Line has developed and implemented a comprehensive Safety Management System (SMS) based on the ISM Code that governs how they safely manage ship operations and prevent pollution. SMS implementation includes, among other things, formal policies and procedures, safety committees, safety certifications and regular ship inspections and audits performed by on board and shoreside personnel, and external ship inspections and audits performed by Port State authorities, Flag administrations, and classification societies. We strive to continually improve our health, environmental, safety and security (HESS) standards and procedures as new regulations emerge and as new technologies and training techniques are developed.

Carnival's approach to management of HESS and sustainability matters is based on the values and objectives set forth in our Corporate HESS Policy. Our HESS management system is the framework for all of the processes and procedures that we use to ensure that we can fulfill all of the tasks needed to achieve our HESS objectives. We believe that people working in a good, strong system are much more likely to produce good results. HESS management is also part of our Corporate culture. We strive to ensure that the values and objectives stated in our HESS Policy are understood by everyone and articulated on a regular basis. There are no shortcuts to achieving safety or health, environmental protection and security. But with people working together to make an effective system, we can improve the HESS performance of our organizations, while simultaneously enhancing the HESS culture.

For over 10 years, Carnival has had strong Corporate oversight and governance of HESS matters through dedicated Corporate groups that establish and ensure implementation of standards and procedures, perform HESS audits, monitor HESS performance and regularly report to the Boards of Directors.

As part of our continuous improvement process, we complete annual internal and external audits of our safety management systems. All audit observations, findings and non-conformities are reported to the Operating Lines and relevant Corporate groups for review and resolution. In fiscal 2012, we completed a comprehensive audit and review of safety and emergency response to find areas where we could improve and have taken improvement measures as a result. We are committed to providing a secure environment for everyone on board our ships and will continue to work with all appropriate international, national, state and local agencies to ensure the safety and welfare of all guests and crew on our vessels. During 2012, we took a leadership role in the Cruise Industry Operational Safety Review. As a result of the review, regulatory changes have

been proposed to the IMO that will benefit the industry as a whole.

# HEALTH—GUEST AND CREW (PR 1)

Carnival has developed and issued a comprehensive set of Corporate Health Standards that go beyond regulatory requirements to further ensure the health of our guests and crew. These standards are implemented and enforced by each of our Operating Lines. We have taken a proactive role in addressing the quality of shipboard medical care. We participate in the CLIA Medical Facilities Working Group and with the American College of Emergency Physicians (ACEP) that developed, published and maintains industrywide guidelines for the facilities, staffing, equipment and procedures in medical infirmaries on cruise ships.

The Medical Facilities Guidelines are designed to foster the goals of:

- providing emergency medical care for guests and crew;
- stabilizing patients and initiating reasonable diagnostic and therapeutic intervention; and
- facilitating the evacuation of seriously ill or injured patients when deemed necessary by a qualified physician.

All medical personnel employed on Carnival ships meet the qualification standards outlined in these guidelines. Medical facilities and staffing vary from ship to ship among other factors, including the size of the vessel, number of guests and crew, and length and itinerary of the voyage. Guests requiring more comprehensive or specialized care are referred to a shoreside facility.

# COMPLIANCE WITH HEALTH AND SAFETY STANDARDS (PR 2)

All Carnival Operating Lines manage public health programs, taking into account worldwide public health and sanitation regulations, best practices and guidance. This includes compliance with the U.K. Health Protection Agency, Health Canada and U.S. Centers for Disease Control and Prevention (CDC), among others. These programs and their implementation are audited both internally by public health specialists and externally by Officers from the various national and port health authorities worldwide.

In the U.S. for example, we voluntarily work with the CDC, an agency of the U.S. Department of Health and Human Services, which oversees health and sanitary conditions on all passenger vessels visiting U.S. ports. The CDC provides guidelines, reviews plans and conducts on-site inspections during all new ship builds or renovations. We continue to work with the CDC throughout a ship's life to maintain the ship through regular inspections, crew training and guest education.

Every Carnival ship that calls on a U.S. port is also subject to unannounced, twice-yearly inspections by inspectors of the CDC's Vessel Sanitation Program (VSP). Through the VSP, the CDC assists the cruise ship industry in preventing and controlling the introduction, transmission, and spread of illnesses on cruise ships.

Typically two CDC inspectors are assigned to conduct the inspection to determine if it complies with the public health standards found in the VSP 2011 Operations Manual. The inspection may take from five to eight hours, depending on the size and complexity of the ship.

The major areas that CDC inspects include the following parts of the ship:

- medical facilities: for gastrointestinal illness surveillance documentation and medical logs;
- potable water systems: from source to storage, distribution, protection and any cross-connection, and disinfection process;
- swimming pools and whirlpool spas: for filtration, disinfection, general maintenance and safety;
- galleys and dining rooms: for food protection during sourcing, provisioning, storage, preparation, and service. Employee health and personal hygiene are evaluated, as well as facility equipment maintenance and dishwashing;
- child activity centers: for properly equipped diaper-changing stations, toilets, and handwashing stations; facility disinfection; infection control for ill children;
- hotel accommodations: for routine cleaning sequences and infection control procedures during outbreaks of gastrointestinal illness, including the use of appropriate disinfectants and outbreak policies;
- ventilation systems: for maintenance and cleaning of air-handling systems; and
- common areas of the ship: for integrated pest management strategies, general cleanliness, and maintenance.

At the conclusion of each inspection, CDC inspectors meet with ship management to discuss the inspection and any violations and provide them with a draft report. Ships need to address any issues within an established timeframe. Within two weeks of the inspection, CDC sends a final copy of the inspection report to the corresponding Operating Line. These reports are also available to the public on CDC's website.

Table 7.1—CDC VSP Inspection Results (PR 2)							
CDC VSP Inspections	2010	2011	2012				
Total number of inspections	117	118	121				
Ships scoring 100%	24	23	35				
Ships scoring 86–99%	93	94	85				
Ships scoring < 86%	0	1	1				

# SECURITY—GUEST AND CREW (PR 1)

The security of our guests and crew is an issue of primary importance. We make every effort to provide a secure environment. Our security professionals maintain close working relationships with law enforcement, coast guards, naval authorities and government agencies around the world. The resulting information-sharing arrangements and collaborative efforts are essential to our security program.

Our ships are subject to the International Ship and Port Facility Security (ISPS) Code, a set of regulations and guidelines created and approved by the IMO. All of our ships meet or exceed the requirements of the ISPS Code. The ISPS Code:

- defines security standards, requirements, arrangements and procedures for ships, ports, and governments; and
- prescribes responsibilities for governments, shipping companies, shipboard personnel, and port/facility personnel, among others, to develop security plans, detect security threats and take preventative measures against potential security incidents affecting ships or port facilities.

Compliance is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance.

Cruise ships are also subject to domestic security regulations in the countries they visit. For example, ships that visit U.S. locations are subject to the Maritime Transportation Safety Act (MTSA). The MTSA, the U.S. legislation implementing the ISPS described above:

- establishes a maritime security framework including U.S. vessel and port facility security requirements and standards; and
- provides for U.S. Coast Guard enforcement of such provisions, including security assessments, security plans, training and drills.

Our ships meet or exceed the requirements of MTSA and domestic regulations in other countries we visit.

Carnival has developed and issued a comprehensive set of Corporate Security Standards that go beyond regulatory requirements to further ensure the security of our guests, crew and ships.

# SECURITY DURING EMBARKATION AND WHILE ON BOARD (PR 1)

Carnival's security personnel are responsible for monitoring and enforcing our security policies. Guests and crew will notice a visible security presence while embarking the ship and throughout each cruise. Security personnel maintain strict access control to our ships. Only people whose names appear on a ship's official manifest may board. All people, luggage and parcels boarding our ships must pass through screening checkpoints designed to limit access to only authorized persons while ensuring that no prohibited items are brought on board. We employ a variety of technologies to assist security personnel. These include surveillance technologies such as closed circuit television and screening technologies such as metal detectors and x-ray machines. We also have a technology assessment program which is designed to consider and evaluate future technologies to further enhance security.

# **CRIME PREVENTION (PR 1)**

While Carnival endeavors to prevent the occurrence of crime on board, we occasionally receive reports of alleged criminal activity. Each ship in our fleet has several options to report alleged criminal activity. Security staff will respond to and document each allegation.

Circumstances may require shipboard security personnel to safeguard evidence and preserve possible crime scenes. Persons suspected of committing an offense may be detained in a secure location or removed from a ship and transferred to shoreside authority custody depending on the severity of an offense. Depending on jurisdictional considerations and the severity of alleged offenses, Carnival coordinates investigative efforts with appropriate law enforcement authorities. Cruise ships operate within an international legal framework that provides for overlapping investigative jurisdiction. Guests and crew may be subject to the laws of visiting countries or island nations while on board the ship and while ashore enjoying various ports-of-call. Prior to embarkation on a cruise, we encourage our quests to educate themselves regarding the local laws and customs of the places to be visited during the cruise.

# **OPERATING RESPONSIBLY** *Costa Concordia*

# What Happened and Incident Investigation



A few hours after leaving the Italian port of Civitavecchia, *Costa Concordia*, collided with the "Scole Rocks" at Giglio Island and sustained significant hull damage. As the vessel started listing severely, the order was given to deploy the lifeboats and abandon ship. Due to the tremendous efforts of *Concordia*'s crew, along with the Italian Coast Guard and other authorities, over 4,000 people were evacuated under highly challenging conditions. Regrettably, despite these efforts, 27 guests and 5 crew members tragically lost their lives as a result of the accident.

The Italian government's Ministry of Infrastructures and Transports (MIT), performed an investigation of the *Concordia* incident and published their report in May 2013. The investigation concluded, among other things, that a combination of factors caused the immediate and irreversible flooding of the ship beyond any manageable level. The report

- are restructuring our Health, Environmental, Safety & Security (HESS) safety operations audit program to ensure consistent best practices are employed on all of our ships;
- formed a new Corporate Maritime Quality Assurance Department to monitor both bridge operations and the implementation of modified policies across all HESS disciplines and provide feedback for continuous improvement in the safety of our operations; and
- are consolidating our Health, Environmental, Safety & Security (HESS) operating practices into a single, Corporate-wide HESS Management System to ensure uniform application of best practices across our fleet.

highlights that the immediate flooding of five contiguous watertight compartments, where most of the ship's vital equipment was located, made the *Concordia* casualty a unique event since the damage extent exceeded the survivability standards applicable when the ship was built.

The report concludes that the ship was in full compliance with all applicable SOLAS regulations, when leaving Civitavecchia on the evening of the incident. The preliminary and final MIT reports were provided to the International Maritime Organization for review and consideration by the various groups responsible for identifying improvements to current cruise ship design, construction and operational regulations.

During 2012, we actively participated, in a lead-

# Lessons Learned

We launched a comprehensive audit and review of safety and emergency response. This wide-ranging review included consultation with outside experts in several key safety areas. As a result of what we learned from this review, we:

- are implementing uniform, detailed bridge and engine room resource management procedures across all of our operating companies and ships;
- expanded and accelerated training of our bridge and engine room watch teams in those best practices at our CSMART facility in Almere, Netherlands;

ership role, in the Cruise Industry Operational Safety Review that Cruise Lines International Association and European Cruise Council launched on behalf of the global cruise industry. This review encompassed careful examination of existing safety procedures to identify industry best practices and develop new policies for bridge procedure harmonization and bridge access, passenger muster and emergency instructions, and passage planning and approvals. As a result of the review, regulatory changes have been proposed to the International Maritime Organization (IMO) that will benefit the industry as a whole.

# **Environmental Impact**



Environmental protection has top priority throughout the salvage operation. Booms were used to establish a protection perimeter. *Concordia* is located in the Tuscan Archipelago National Park and the Pelagos Whale Sanctuary for Mediterranean Marine Mammals. The Tuscan regional environmental protection agency began monitoring water conditions around the ship immediately after the incident and will continue until *Concordia* has been removed. No significant pollution levels have been recorded so far.

A bionomic cartographic map of the sea bottom has been prepared on a joint basis with Università La Sapienza in Rome and the salvage team, with a view to protecting habitats that are important for their biodiversity and complexity, including Posidonia Oceanica (Neptune Grass) meadows and coral formations. Posidonia Oceanica, grows at depths of between 1 and 30 meters (m), forms thick meadows with a high level of biodiversity. At depths of between 30 and 80 m there are coral formations. The health of the undersea environment is kept constantly under control. About 200 specimens of Pinna Nobilis (fan mussels) found near Concordia have been catalogued and transferred to another area, awaiting relocation to their original home when work is complete. The fish population has also been studied and experts were called to take a census of marine mammals in the area. In order to further evaluate the environmental impact, studies for particle size characterization of the sandy seabed, currents and suspended sediments, plankton population, and underwater noise studies have also been performed.

The fuel contained inside *Concordia*'s fuel tanks, which represented a significant environmental risk if released, was successfully removed on March 24th, 2012. Approximately, 2,100 tons of oil from 17 tanks was removed. The operation was performed using a system of pumps and "hot tap" valves that were attached to the side of *Concordia*. Through each valve, a hole was drilled into the tank and a pipeline attached. This system enabled the oil to be heated and pumped out of the tank while seawater was pumped in, thus maintaining *Concordia*'s stability. Minimal amounts of fuel adhering to the tank walls cannot be pumped out, but this was such a small quantity that it posed no significant environmental risk.

In addition to the fuel, potentially contaminated water containing degraded food, furnishings, systems, as well as hydrocarbons in isolated concentrated compartments within *Concordia*, did not present a significant environmental impact. This was due to the limited water flow between the inside and outside of the wreck. Continual water monitoring is being performed.

During the salvage operation, ecofriendly cement was used to construct the false bottom on which *Concordia* rests after the completion of the rotation phase. During the bottom drilling operations, a closed circuit system was used to monitor and prevent dispersal of materials to the sea. Lastly, during the salvage operation taking care of the sea bottom will be a priority. Once removal is complete, the sea bottom will be cleaned and marine flora replanted.

# Salvage Operation



The project priorities have been respect for the environment, workplace safety and protection of the Giglio Island socio-economic life. The contract to remove *Concordia* was awarded to the international marine salvage consortium Titan-Micoperi Srl, a joint venture between Titan Salvage, a U.S. company owned by Crowley Maritime Group and Micoperi, an Italian company.

The removal project is a unique and extremely complex technical-engineering operation, considered the biggest salvage ever attempted on a ship of its size—with the deployment of the finest international expertise, state-of-the-art technology and unprecedented financial resources. The project was divided into five main phases:

1. Stabilization: Involves the anchoring and stabilization of *Concordia* to prevent any slipping or sinking along the steep seabed. Stabilization was performed using an anchoring system made up of four submarine anchor blocks fixed to the sea bottom between the center of *Concordia* and the coast. 12 retaining turrets were installed for use during the parbuckling phase. Strandjacks (individually controlled by computers) mounted on the tops of the turrets are attached to chains (two per turret or a total of 24 chains) that pass under the hull and are fixed to the port side of *Concordia*. This holdback system was used for balancing purposes during the rotation and parbuckling phase.

# 2. Underwater Support and Portside Sponsons

Caissons: Involves the preparation of the false bottom on which Concordia rests after rotation. Firstly grout bags were positioned and filled with cement to occupy the empty space between the two spurs of rock (one in the stern area and the other in the bow of the hull) on which the Concordia is resting and create a stable base for the hull. After divers have positioned the bags, a special ecofriendly cement prepared on a barge was injected into them. After positioning the grout bags, three large platforms and three smaller ones were fixed in place. The piles were inserted into the granite ground by drilling a 2 m hole, using a closed circuit system to help ensure that no waste was dispersed into the sea. Sea bottom drilling to prepare foundations for the 6 undersea platforms on which *Concordia* rests after rotation into a vertical position was included in this phase. After preparing the false bottom, 15 refloating sponsons or caissons were installed and welded onto the left side of Concordia.

3. The Parbuckling: Strand jacks were used which tightened several cables attached to the top of the caissons and to the platforms, which pulled sea-wards, while the cables attached to the starboard turrets were used for balancing. This was a very delicate phase, during which the forces involved were offset carefully to rotate the *Concordia* without deforming the hull. *Concordia* was successfully rotated to a vertical position on September 17th, 2013, completing the parbuckling phase.

4. Starboard Sponsons/Caissons: With parbuckling complete, 15 refloating sponsons will be attached to the starboard side of *Concordia*. These caissons will be used during the subsequent refloating stage.

5. Refloating: At this point the hull is resting on the false bottom at a depth of about 30 m. A pneumatic system will be used to empty the water gradually from the caissons on both sides of *Concordia*, giving sufficient buoyancy to lift it upwards. On completion of the emptying process, *Concordia* will be floating, with about 18 m remaining submerged.

# Giglio Island Community Engagement



Periodic meetings are held with the citizens of Giglio where information on the progress of the operations such as activities underway, future stages in the project and environmental reports among others are shared. Citizens' issues or concerns are also discussed. These regular meetings ensure that the local community receives prompt and transparent information. In addition to the meetings, press releases are also issued. A detailed website (www.theparbucklingproject.com) was created to post detailed information on the project to keep both local and global communities informed.

Ship Recycling



The port that will accommodate the *Concordia* will need to have specific characteristics suitable for a project of this size and the necessary facilities for dismantling and recycling, in accordance with current national and international regulations and the highest environmental and safety standards. Recycled components such as steel and various other materials will be recycled; non-recyclable components will be disposed of properly. As with the selection of the companies responsible for the *Concordia* removal project, a transparent process was developed to select the organization/ companies and facilities for the dismantling of *Concordia* once it is removed from Giglio Island, in agreement with the Italian authorities. The selected facility will use a method that offers the best solution in terms of certainty of outcome, environmental and workplace safety standards.

# SAFETY—GUEST AND CREW (PR 1)

The safety of our guests and crew is of paramount importance, and we are constantly updating our safety standards by employing the latest training procedures, knowledge, best management practices and technologies.

Our safety principles include:

- maintaining compliance with international ship safety standards;
- employing state-of-the-art technology in ship design, staffing and operation;
- conducting rigorous staff safety training and proficiency drills;
- utilizing a variety of guest communication methods;
- administering ongoing ship and training inspections; and
- conducting ongoing equipment maintenance.

# COMPLIANCE WITH INTERNATIONAL SHIP SAFETY STANDARDS (PR 1)

All of our ships comply with the standards set forth by the International Safety Management (ISM) Code developed by the International Maritime Organization (IMO), a United Nations agency focused on the safety and security of shipping, as well as numerous other U.S. and international codes. Ship classification societies ensure that we are in compliance with their classification rules, international conventions and flag administration requirements regarding the safety of life at sea. Carnival's vessels are routinely inspected regarding their design, construction, alteration and repair. Port State authorities, such as the U.S. Coast Guard, ensure Carnival adheres to applicable laws, regulations, and international standards.

# SAFETY MANAGEMENT SYSTEMS (SMS) (PR 1)

Each of Carnival's Operating Line has a SMS to ensure that safety is an integral part of managerial processes. Each SMS establishes lines of safety accountability throughout the organization and integrates regulatory and managerial safety requirements. Each SMS is established in accordance with the requirements of the International Safety Management (ISM) Code for the Safe Operation of Ships and for Pollution Prevention.

The SMS covers both shipboard and shorebased activities and must include:

- a Company safety and environmental protection policy;
- instructions and procedures to ensure the safe operation of ships and protection of the environment;

- procedures for preparing for and responding to emergencies;
- defined levels of authority and lines of communication between shore and shipboard personnel,
- identification of a designated person ashore responsible for ISM Code compliance;
- procedures for reporting accidents and ISM Code non-conformities; and
- procedures for internal and external audits and management reviews.

# SAFETY COMMITTEES (LA 6)

The vast majority of Carnival's total workforce is represented in formal joint management-worker health and safety committees. Carnival's shipboard safety committees serve as the conduit between the Captain and the crew of each ship. Carnival's shipboard employees are represented on joint worker health and safety committees. The safety committee, under the leadership of a ship's senior Officer, includes Officers and crew from the different shipboard departments.

During regularly scheduled meetings, shipboard safety committees review and address specific workplace safety topics. The committees play a key role in reducing shipboard accidents through hazard assessment, accident reviews and inspections. These sessions also serve as a forum for raising, discussing and recommending solutions for shipboard safety issues and promoting safety awareness. Safety representatives in Operating Line shoreside departments communicate and share experiences and best practices throughout their respective fleets.

# SAFETY CERTIFICATIONS (PR 1)

All of our occupational health and safety management systems are based on and incorporate the principles and practices delineated in British Standard OHSAS 18001:2007, the world's most recognized occupational health and safety management systems standard. Several of our Operating Lines have also obtained voluntary third-party certification in accordance with OHSAS 18001. This standard is intended to help companies to consistently identify and control health and safety risks; reduce the potential for accidents; aid legislative compliance; and improve overall performance. Our OHSAS certifications recognize and demonstrate that our Operating Lines have the elements in place for effective occupational health and safety management systems.

# SHIP SAFETY INSPECTIONS (PR 1)

Our vessels and safety equipment are regularly inspected by the ship classification society, flag administration, port state control and internal auditors. The port state authorities, such as the U.S. Coast Guard, regularly inspect our ships for compliance with international safety regulations including watertight integrity and structural fire protection. Ships also must comply with SOLAS regulations for fire protection, lifesaving equipment, security and navigational safety. Shipboard safety inspections are also designed to verify all safety and lifesaving systems are functional and ready for use in an emergency situation, such as communications systems, alarm systems, lifeboats and life rafts, lifejackets and buoys, distress signals, navigational equipment and other safety devices. In addition to these inspections, ships' crewmembers regularly conduct safety drills to test the effectiveness of the emergency response organization. Drills include fire/flooding response, passenger mustering and abandoning the ship. All safety systems are regularly tested to ensure functionality. If any inspection identifies an unacceptable condition or situation, it is reported to shipboard management, and shoreside management to ensure that prompt, effective corrective and preventative action is taken.

# OCCUPATIONAL SAFETY (LA 7)

Providing a safe and accident-free workplace makes good business sense. Preventing injuries reduces expenditures through lower medical costs, time away from work, litigation and claims management costs. Accidents and injuries also can lead to additional overtime costs for other employees, reduce morale and losses to equipment, machinery and work areas. We do everything we can to keep our shoreside and shipboard employees and guests safe and free from all recognized hazards while they are on board with us.

Carnival's management measures safety performance to determine how well we are doing in achieving one of the aims of our HESS Policy: protecting the health, safety and security of our

# Figure 7.1—Shipboard Accidents 2012 (LA 7)



Table 7.1—Shipboard Workplace Accident Rates							
2010 2011 2							
Injuries as % of Workforce	2.7%	2.6%	2.8%				
Deaths as % of Workforce	0.006%	0.001%	0.006%				

guests, employees and all others working on behalf of the Company. We recognize the relationship between low injury rates and positive trends in employee morale and productivity, and we measure these rates to assess whether health and safety management practices that we implement actually result in fewer occupational health and safety incidents.

The key shipboard occupational safety risks include manual and mechanical material handling, falls, weather-related accidents and, in extreme cases, fire and collision. The challenge is maintaining safety awareness among a large, diverse shipboard workforce whom we employ on a contractual basis. We face an additional challenge because our workers live and work on board our ships, extending our responsibility for their safety to a sphere larger than a traditional workplace. We manage these challenges through Safety Management Systems, certifications, workplace safety committees that meet regularly, and continuous standardized training.

# TRAINING—GUEST AND CREW (LA 10)

Our employees must frequently adapt to new rules, systems and technical advancements. To help, we provide all employees with ongoing training. Training helps our employees work confidently and safely within our management systems. Our Corporate HESS Policy describes our commitment to providing appropriate health, environmental, safety and security support; training; advice; and information to employees and others working on behalf of the Company. This commitment includes implementation of policies and standards related to treatment of shipboard and shoreside employees, ensuring that employees have the knowledge and skills necessary to perform their jobs properly; and providing appropriate employee benefit programs. In addition, we provide regularly scheduled specialized training to management and staff to help enhance their service-delivery skills, safe work practices and understanding of their operational roles and responsibilities.

We also conduct ongoing safety training programs on board our ships. We conduct regularly scheduled boat drills and fire drills for crew and boat drills for guests. Guest boat drills are held in embarkation ports before departure, as required by SOLAS and CLIA guidelines. A safety video covering lifeboat, fire and general safety is also aired on the in-cabin television system for guest viewing. This link leads to an example of the safety video shown on Carnival Cruise Lines ships.

# ETHICS TRAINING (SO 3)

Adherence to the rule of law, ethical working practices, good Corporate governance and

transparency are extremely important to our guests, employees and investors, and they are central to our sustainable business success. We have strong Corporate policies and safeguards in place, and a long history of adhering to the law and promoting high ethical standards.

Every Carnival employee is responsible for adhering to business practices that are in accordance with the letter and spirit of the law, and with ethical principles that reflect the highest standards of Corporate and individual behavior. Integrity of performance is a Carnival standard wherever we do business.

We inform Carnival employees of our Code of Business Conduct and Ethics when they are hired. In addition, all shoreside employees at the Director level and above, or the local equivalent, complete and sign a Business Ethics Disclosure Form at least once annually, indicating that they have read, understood and agreed to comply with our Code of Business Conduct and Ethics.

To reinforce the Company's commitment to ethical business behavior, Carnival introduced mandatory ethics training during 2011. All employees must complete the computer-based Code of Business Conduct and Ethics training biennially, while the anti-corruption and anti-trust training is based on employee position and responsibilities. Certain employees in sensitive roles receive anticorruption training annually, instead of biennially. The Board of Directors and senior management also receive in-person anti-corruption training. Training completion rates are monitored and transmitted to the Corporate Compliance Officer annually.

### ENVIRONMENTAL TRAINING

At Carnival, employees at all levels of our organization take responsibility for ensuring that environmental concerns are a key part of our planning and decision-making process, and for guaranteeing that environmental practices are executed fleet-wide. Carnival has a comprehensive environmental training program for all shipboard and shoreside employees tailored to their specific job responsibilities. Additionally, each employee receives specific technical and environmental training related to his or her area of expertise.

Our training also encompasses wildlife and local habitats. We train employees on how to observe and avoid harming marine life, coral reefs and other ocean habitat by implementing best management solutions and specific training practices. Additionally, when arriving at ports and prior to participation in shore excursions, we provide information to guests to reinforce the Company's commitment to the preservation and protection of local habitats.

# CAREER DEVELOPMENT TRAINING PROGRAMS (LA 10)

All of our ships have on board trainers and have computer training centers for our employees to use for career development purposes. Trainers work closely with all shipboard department Managers to ensure employees receive relevant, innovative professional development and offer specialized courses. A number of trainers also travel from ship to ship to supplement on board training efforts. Trainers offer individual instruction and group classes. The computer-equipped training centers provide employees access to Corporate training courses and career development courses. Employees who aspire to advance in their positions quickly are encouraged to take advantage of these training programs. Additional career development training is available at nautical and hotel training centers worldwide.

# TRAINING FACILITIES WORLDWIDE (LA 10)

As indicated in our Corporate HESS Policy, we actively and continually provide our employees with appropriate health, environmental, safety and security training, information, support and advice to enable them to achieve our HESS commitments. The following are just some examples of Carnival's extensive investment in shipboard employee training and development.

# CENTER FOR SIMULATOR MARITIME TRAINING (CSMART)

CSMART is Carnival's maritime training facility located in Almere, Netherlands. Carnival established this sophisticated training complex with a commitment to delivering and offering the finest maritime training experience anywhere. CSMART features the latest state-of-the-art equipment and instructional tools to provide participants with a superior maritime training experience that will foster critical thinking, problem solving, ethical decision making, and enhance confidence. CSMART offers two full mission bridge simulators, six parttask bridge simulators and the ability to simulate fixed propeller and azipod simulation. On the engineering side CSMART offers two full mission Engine Control Rooms with four machinery outstations and 16 part-task Engine Room simulators. The facility also features large instructional classrooms, meeting rooms and a catering facility.

CSMART's mission is to be a leader in delivering high quality professional maritime training, by:

- providing high quality maritime training services for industry-wide safety and excellence;
- developing flexible training courses that optimize learning;

- researching and developing training courses to meet the changing needs of officers within the maritime industry;
- providing the latest simulation and training equipment relevant to each course;
- using stringent quality assurance criteria to determine the concepts and procedures for our training courses; and
- ensuring that our faculty provides up-to-date, relevant, practical and effective maritime training.

Click here to view a video about CSMART's state-of-the-art training complex.

# **COSTA CAMPUS**

Costa's employee training programs for shoreside and shipboard personnel are run by Costa Campus, which promotes continuous training activity, aimed at all shoreside and shipboard personnel and covering social accountability, environment and safety, as well as managerial, technical and language refresher courses. In order to provide training programs covering skills development in the many required fields, and also ensuring compliance with the relevant international regulations, the Costa Campus is arranged in 5 separate areas: Hospitality, Maritime, Leadership, Language skills and Professional skills. Costa Cruises currently has seven training schools located all over the world. Six out of seven are dedicated entirely to the training of shipboard personnel, and are run in partnership with leading local universities. Five of them (located in the Philippines, Indonesia, India, Brazil and China) train hotel personnel. One of the top priorities is the provision of preembarkation orientation for new hires at the training schools in Italy, Brazil, China, the Philippines, Indonesia, India and the satellite locations where other employees are recruited. The curriculum at the training institutes is largely technical and focuses on the methods and quality of service delivery on board the ships. The courses in the program use facilities that provide hands-on experience of the workplace environment, with a fully functional cruise ship cabin as well as simulated restaurants, galleys and bars.

In addition, Costa Cruises also has its own modern Training Center, situated near the Company's Head Office in Genoa, Italy, used to teach technical and managerial skills to all Costa's shoreside and shipboard employees. When it is necessary to provide training for personnel recruited in regions where there is no Costa school, there is a network of "Mobile Instructors," namely Costa employee certified trainers. There are also "Train the Trainer" courses at various levels, thus guaranteeing uniformity of preparation and consistent standards. Each ship in the fleet has a crew training center equipped with computer workstations for distance learning.

# HOLLAND AMERICA LINE

Holland America Line operates training centers in Jakarta, Indonesia, and Manila, Philippines. The ms Nieuw Jakarta in Indonesia and the Holland America Line Training Center outside Manila prepare Holland America's new and returning crew in marine hotel operations. Job-specific skills are taught at both training centers. Crew also participate in environmental and safety training and are involved in a pre-departure ship orientation. New employees must graduate from these courses in order to join a vessel.

Ms Nieuw Jakarta's curriculum includes English, housekeeping and dining room skills classes. All new Indonesian crew members participate in an English language course for five weeks to enhance their language skills. Holland America Line Training Center typically hosts 20 students in three-week classes developed with the Culinary Institute of America. The center is fully outfitted with all the tools and cooking equipment the crew will encounter on the ships, as the galley unit replicates the conditions of cooking on board.

# AIDA ACADEMY

The AIDA Academy, located near AIDA's headquarter in Rostock, Germany, is AIDA's employees training and development center. This center provides practical on board experiences that are integrated into research innovations. It offers educational, training programs and continuing education options specific to the cruise industry, including maritime, marketing, and engineering training. In September 2012, the Academy also opened a simulation center for nautical and technical officers. In the simulation center, crew members practice maritime maneuvers and safety drills on a main bridge and four secondary bridges. As well as providing employees with classic training and workshops, the center also use modern methods to help crew members gain qualifications, including blended learning and e-learning.

AIDA is the only cruise line in the world to train mechatronics engineers. The mechatronics engineering training program provides specialized, practical training based on state-of-the-art technology on board our ships. During the three-anda-half-year program, trainees acquire knowledge in complex maritime technology and special training with a focus in mechanical engineering, electrical engineering, telecommunications engineering, control engineering and computer engineering. The broad training also includes safety-related technical topics.



# COMMUNITY

# WHAT'S INSIDE

- Impacts on the Community
- Emergency Aid and Relief
- Investing in Communities
- Philanthropic Activities
- Public Policy Positions
- Awards and Recognition

# **9.8 N** of the 20 million global passengers cruised with Carnival in 2012.

- The cruise line industry generated \$42.3 billion in total economic activity to the U.S. economy in 2012.
- The cruise industry generated \$2.0 billion in direct expenditures, 45,224 jobs and \$728 million in employee wages in Caribbean destinations in 2012.



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Carnival fosters and encourages community partnerships, philanthropic donations and employee driven volunteer activities geared to build better communities throughout the world. Over the years, our various community programs have helped create stronger communities, strengthen our corporate values and generated extraordinary personal satisfaction among our employees. The Carnival Foundation which I'm honored to lead is one of the many vehicles the corporation uses to work with our various communities.

Linda Coll—Director, Carnival Foundation

# IMPACTS ON THE COMMUNITY (EC 1 AND SO 1)

While Carnival has changed over the years, our commitment to serving the community has remained constant. Our founder, the late Ted Arison, strongly believed in the importance of giving back and that philosophy was ingrained in our Corporate culture early on. We recognize the inextricable link between the health of our business and the vitality and sustainability of our communities, both in our homeports and in the destinations that our ships regularly visit throughout the world. We understand that there may be some impact on sustainability when we engage with, operate in, or cease operating in a community. We continually strive to contribute in a positive social and economic manner to our communities, working in conjunction with local governments, trade associations, tourism organizations and other community stakeholders.

Below is a list of areas that we take into consideration to help ensure our positive influence on communities:

- planning itineraries,
- selecting new ports,
- assessing community economic impacts,
- managing environmental impacts,
- supporting local economies, including during natural disasters, and
- implementing reorganizations and other significant operational changes.

A record of 20 million-plus global passengers went on a cruise during 2012 and over 9.8 million of them sailed with Carnival. Spending by Carnival, our guests, and our crews generate employment, income and other economic benefits for communities where our businesses are located, in the ports where our cruises originate and ships visit, and in the home communities of our crew members and shoreside employees.

These economic benefits arise from:

 spending by guests and crew for cruise-related goods and services, including travel between their places of residence and the ports of embarkation, excursions, and pre- and postcruise spending;

- shoreside staffing by our Corporate and Operating Line organizations for their headquarters, ship management and support functions, marketing, sales and tour operations;
- expenditures for goods and services necessary for cruise operations, including fuel, food and beverages, hotel supplies and equipment, and navigation and communications equipment;
- expenditures for services at ports-of-embarkation and ports-of-call;
- expenditures for the purchase of ships, ship maintenance and repair, and capital expenditures for port terminals, office facilities and other capital equipment; and
- philanthropy and support of charitable and cultural organizations in our communities.

For example, according to an independent study commissioned by Cruise Line International Association (CLIA), the cruise line industry generated \$42.3 billion in total economic activity to the U.S. economy in 2012, a 4.6 percent increase from 2011. This economic activity generated 356,311 jobs, paying \$17.4 billion in wages to American workers.<sup>1</sup>

According to the CLIA Europe (formerly known as the European Cruise Council—ECC) 2012/2013 report, the European Cruise industry generated  $\in$  36.7 billion worth of goods and services in 2011, carried over 6 million passengers, who, together with crew members, spent  $\in$  3.5 billion during visits to the 250 European port cities.<sup>2</sup> Additionally, the European cruise industry generated over 315,000 direct and indirect jobs, compared with only some 180,000 five years ago.

Caribbean destinations have also benefitted from the cruise industry. According to a study prepared for the Florida Caribbean Cruise Association during the 2011/2012 cruise year, cruise tourism generated significant economic benefits to the 21 participating destinations in the Caribbean.<sup>3</sup> Cruise tourism generated nearly \$2.0 billion in direct expenditures, 45,225 jobs and \$728 million in employee wages.

# EMERGENCY AID AND RELIEF

We strive every year to make a difference in our homeports and various regions around the world in need. For example, during times of crisis, Carnival works closely with various national and international relief organizations, coordinating Corporate and employee donations for emergencies such as hurricanes, earthquakes, and other natural disasters. For example, in fiscal 2012 we donated \$2 million to support Hurricane Sandy relief efforts. Over the years, these and many similar efforts have empowered our employees and made Carnival a stronger company. Carnival supports the accomplishments of our employees and will continue our efforts to build better and stronger communities throughout the world.

# **INVESTING IN COMMUNITIES**

All of our Operating Lines are deeply rooted in the communities in which we operate and visit and have a vested interest in making investments into enhancing these communities. We have locally tailored programs in many of our communities, including community development, charitable and responsible excursions, and various recycling programs.

The following are some examples of what our Operating Lines do to enhance our communities:

Carnival Australia (CAU) has developed a unique program called Born to Knit, an on-board knitting program where guests and crew can be directly involved in the communities CAU visits. In this program, guests and crew take a hands-on approach by knitting blankets for newborn babies, which CAU distributes throughout the Pacific communities they visit.

Princess Cruises has donated aluminum cans from its ships' recycling program to Juneau's Boy Scout Troops for the past eleven years during the Alaska cruise season. The program generates more than \$500 each week and has thus far raised more than \$27,500 for the scouts. Princess donates tens of thousands of cans each year, and the troops use the proceeds received from selling the recycled aluminum cans to fund camps, equipment and scholarships for their members.

Carnival UK brands have offered 'Green World Tours' since 2010, a program of charitable and responsible excursions which seek to make a difference to the environment, community and social well-being at ports featured on our itineraries. Several of these excursions are designed

<sup>(1)</sup> CLIA: 2012 Economic Studies, "The Contribution of the North American Cruise Industry to the U.S. Economy in 2012," http://www.cruising.org/regulatory/pressroom-research/market-research (2) "European Cruise Council 2012/2013 Report," http://www.ashcroftandassociates.com/publications.html

<sup>(3) &</sup>quot;Economic Contribution of Cruise Tourism to the Destination Economies," http://www.f-cca.com/research.html

in partnership with SOS Children's Villages International, a charity which focuses on building a community for children who have lost their parents through war, famine, disease or poverty. Guests have the opportunity to visit the villages, interact with the children and learn how the charity invests in the futures of the children in the community by making sure they have the tools and education they need to become independent young adults.

Several of our Operating Lines have various programs to recycle used cooking oil from our ships. This used cooking oil can be converted to biodiesel and used for sustainable power generation by the recipient of the cooking oil. Each of our Operating Lines' cooking oil community programs vary and benefit non-profits, education, and charities. For example, the money generated from Costa Cruises' program in Brazil is donated to charity, while Carnival UK's program helps support Hampshire and Kent Trusts SeaSearch and ShoreSearch marine surveys. Finally, Princess Cruises' program helps power the Cape Eleuthera Island School's fleet of vans, boats, trucks, backup generators, and sawmill.

Many of our Operating Lines have donation programs where reusable goods from our ships are funneled to people in need throughout the world. Local non-profit groups and government agencies work with the Operating Lines to collect toiletries, dishes, cookware, mattresses, tableware, furniture and other items from the ships and distribute them to shelters, hospitals, orphanages and homeless programs.

### PHILANTHROPIC ACTIVITIES

As one of the world's largest travel companies, Carnival recognizes its responsibility to the communities in which we operate, including our Corporate and Operating Line headquarters locations and the many homeports and ports-of-call our cruise brands visit. Through the extraordinary efforts of our employees worldwide, Carnival supports a variety of programs providing aid, donations and services to an array of charitable organizations that touch many thousands of lives worldwide.

From employee fundraisers and hands-on volunteer initiatives to cash and cruise donations and innovative philanthropic programs, Carnival strives to make a difference across the globe. Over the years, these efforts have created a stronger, more cohesive company and generated extraordinary personal satisfaction among our employees. Carnival fosters and encourages the charitable and volunteer activities of our employees and will continue to help build better communities throughout the world. Listed below are some philanthropic activities that our cruise brands have undertaken over fiscal 2012.

AIDA Cruises' social commitment to children is a cause that AIDA Cruises has supported for years. Together with their guests, they attempt to give the gift of a smile to the world's children. Through the AIDA Cares program, every year AIDA's guests support projects in crisis regions by taking part in a New Year's Eve raffle. In 2012, AIDA donated €100,000 to the emergency relief program of the international charitable organization SOS-Kinderdorf. The donations were used to build a new orphanage in Addis Ababa. This is home to 150 children whose parents have died or who live in abject poverty so that their families are no longer able to care for them. Other programs AIDA Cares sponsors and promotes are sports, a variety of social and cultural events, and institutions in the region. AIDA Cruises supports maritime organizations such as the German Seafarers' Mission in Rostock, as well as the University of Rostock, the School Music Weeks that take place in the city and the Rostock Zoo.

Carnival Cruise Lines and its employees support a variety of charitable, environmental, social and arts-related organizations, both through financial support and in-kind donations, as well as its employee volunteer service group, the "Friends Uniting Neighbors (F.U.N.) Team." Perhaps the most comprehensive project is a groundbreaking mentoring and scholarship program operated in conjunction with Big Brothers Big Sisters of Greater Miami that matches nearly 100 local high school students with members of Carnival's management team to offer a first-hand look at the business world. Carnival has purchased 150 scholarships through the Florida Pre-Paid Scholarship Foundation with an estimated value of \$1.8 million and thus far has awarded 60 scholarships to deserving students.

Carnival Australia (CAU) and its employees raised over \$82,000 Australian dollars for their three charity partners, Make-A-Wish, Cathy Freeman Foundation and Lifeline Australia during fiscal 2012. Make-A Wish is a children's charity whose mission is to grant the wishes of children with life-threatening medical conditions to enrich the human experience with hope, strength and joy. CAU funds Make-A-Wish gift baskets for young children and provides cruises for the charity's fundraising drives. Olympic Gold Medalists, Cathy Freeman, established the Catherine Freeman Foundation as a way of giving something back to the many Australians who supported her journey to become an Olympic champion. The Foundation aims to provide opportunities and environments to encourage disadvantaged individuals and communities to achieve positive change.

CAU also has a telephone counseling program called Lifeline. It is a 24-hour service that connects people in need with mental health support in addition to delivering a range of services, including financial counseling, youth services, and indigenous support services, among others. Lifeline receives more than one million contacts each year from people seeking care via telephone, Internet or face-to-face.



Carnival UK, in conjunction with Betts Metals, continued to support Dorset Wildlife Trust's kayak safaris at Kimmeridge Bay on the Jurassic Coast World Heritage Site in 2012. In addition, Carnival UK (with Betts Metals) funded a very successful pilot 'beach school' organized and delivered by Sussex Wildlife Trusts. Carnival UK has committed to continuing this funding in 2013 and Sussex Wildlife Trust aims to teach school staff so that they can run their own events.

Holland America Line and Seabourn donated cash and services worth nearly \$1.4 million in 2012. Employee-run community service committees support giving efforts of land-based employees throughout the year with activities such as Toys for Tots, blood drives and in the Adopt-a-Family program. In 2005, The Holland America Line Foundation, a Washington non-profit organization, and Susan G. Komen for the Cure together created On Deck for the Cure, an ongoing campaign that brings much needed funds to cancer research. In fiscal 2012, the Holland America Line Foundation donated \$480,500 to the Komen Foundation. Holland America Line employees make pledges each year to United Way, which are matched by the Company. In fiscal 2012, \$135,000 was donated. Holland America Line employees also volunteer annually to process food and prepare meals to support the Northwest Harvest, which is an organization that collects and distributes food in Washington State. In fiscal 2012, the Holland America Line employees donated time and money totaling nearly \$23,000 to the Northwest Harvest.

Princess Cruises launched the "Cruising for a Cause" initiative that dedicates an entire cruise to support select charitable causes in 2012. This industry-leading program provides a way for guests to make a difference even as you vacation. A portion of every cruise fare ranging from \$100 to \$300 per guest, depending on stateroom category, will be donated to Section 501(c)(3) exempt public charities and is tax deductible. Princess Cruises provides participating guests with a written acknowledgment of the charitable contribution for tax records and matches every dollar donated, up to \$500,000 for each sailing. The first fundraising cruise supported two U.S. Veterans charities; the second—the American Heart Association.



Please visit the Community Relations section of our Corporate website and our Operating Line websites for additional information on our philanthropic activities.

# AWARDS AND RECOGNITION

As evidenced by the selection of awards and recognition listed below, in fiscal 2012 Carnival was recognized in a number of global and local forums for our sustainability-related performance, particularly in relation to environmental, social, governance and guest-satisfaction issues.

# CORPORATE



# FTSE4Good Index

Since 2006, Carnival has been a member of the FTSE4Good Index, the socially responsible investment index calculated by global index provider FTSE Group. The FTSE4Good Index measures the performance of companies that meet globally recognized corporate responsibility standards and facilitates investment in those companies.

- Carbon Disclosure Leadership Index The Carbon Disclosure Project (CDP) has recognized Carnival for our transparency, particularly in relation to our GHG emissions and climate change disclosures, by inclusion in CDP's Carbon Disclosure Leadership Index for the past five years.
- Maplecroft Climate Innovation (CII) Leaders
   Index Carnival has been listed on the Maplecroft
   Climate Innovation (CII) Leaders Index of the
   "100 Top Performing Companies" that success fully innovate and manage climate-related
   opportunities and risks.
- Newsweek Green Rankings Carnival ranked number 254 in the Newsweek annual rankings of the "Top 500 Green U.S. Companies." These rankings, based on research conducted by KLD, Trucost and CorporateRegister. com, take into account environmental impact, green policies and reputation.
- Corporate Responsibility Magazine—"100 Best Corporate Citizens"
- Corporate Responsibility magazine listed Carnival as number 52 on its 13th Annual "100 Best Corporate Citizens List" for 2012. The 100 Best Corporate Citizens database is based on publicly available data sources and computed by IW Financial, a Portland, Maine-based financial analysis firm serving the environmental/ social/governance (ESG) investment community.
- Southeastern Corporate Sustainability Rankings Carnival was recognized as Top Ranked Company in Florida in recognition of excellence in sustainability in May 2012 by Southeastern Corporate Sustainability Rankings.

### Venice Blue Flag Award

All of our Operating Lines that visited Venice, Italy in 2012 received this award for complying with voluntary use of fuel with 0.1 percent or less sulfur.

# **OPERATING LINES**

Some of our Operating Line Awards include:



# AIDA CRUISES

- ADAC cruise safety test—top rated
- German Tourism Industry—Innovation Prize
- Pegasus Awards—Most Trustworthy Brand in the Cruise Industry
- The Golden Seal for Service Quality—Awarded First Place



**CARNIVAL CRUISE LINES** 

- Cruise Critic 2012 Editors' Pick Awards—Best new Ship (Carnival Breeze), Best Bar (Alchemy Bar) and Best Cruise Value
- Cruise International Awards—Best Cruise Line, Best Innovation (Thrill Theater) and Best Cruise Blogger (Senior Cruise Director John Heald)
- American Culinary Federation—Achievement in Excellence award recognizing Carnival Glory's Emerald Room Steakhouse
- Porthole Magazine Readers' Choice Awards— Best Value, Best Entertainment, Best Caribbean Itineraries, Best Mexican Riviera Itineraries, Best Theme Cruises
- Porthole Magazine Editor-in-Chief Awards— Guy's Burger Joint and John Heald's Blog



# COSTA CRUISES

• Weekend Weekly's Go Green Award 2012— The Most Devoted Go Green Organization



# CUNARD

- Travel Weekly Magellan Gold Awards—Queen Elizabeth—Best Luxury Cruise Ship for Entertainment and Best Luxury Cruise Ship for Atrium Design
- Cruise International Awards—Best For Food
- Daily Telegraph Ultra Travel Awards—Favourite
  Cruise Line

- Travel Weekly Readers Choice Awards—Queen Mary 2—Best in Cruise Ships—Luxury
- Porthole Cruise Magazine Readers Choice Awards—Best Onboard Educational Programme, Best World Itineraries, and Best Transatlantic Itineraries
- Condé Nast Traveler Readers Choice Awards— Top 10 Cruise Lines, Medium-Ship Lines
- Travel Weekly Magellan Awards—Queen Elizabeth—Gold Magellan Award, Best Luxury Cruise Ship for Entertainment, Gold Magellan Award, Best Luxury Cruise Ship for Atrium Design, and Silver Magellan Award, Cruise Ship/Luxury Ship
- Daily Telegraph Ultratravel 100 Awards— Favourite Cruise Line
- British Travel Awards—Best Luxury Cruise Line

# Holland America Line

HOLLAND AMERICA LINE

- U.S. Coast Guard William M. Benkert Environmental Protection Award—Gold Award
- APEX Award for Publication Excellence— Holland America Line/Seabourn Cruises HESS Newsletter
- Port of Seattle Green Getaway Partnership— Platinum Award
- National Geographic Traveler and Hospitality Sales and Marketing Association International (HSMAI)—Leader in Sustainable Tourism— Gold Award
- 2012 Cruise Critic Cruiser's Choice Awards (US) —#1 Best Alaska Cruises, #1 Best Cruises from West Coast, #1 Best Cabins for ms Amsterdam; #1 Embarkation for ms Ryndam (mid-sized ships)
- 2012 Cruise Critic Cruiser's Choice Awards (UK) —#1 Fitness for Volendam; (mid-sized ships)
- Ethisphere World's Most Ethical Company



**IBERO CRUISES** 

• European Cruise Excellence Awards/Cruise News Group Media—Best Cruise Company in Terms of Best Entertainment and Value for Money



# P&O CRUISES (AUSTRALIA)

- Readers Digest—Top 100 Most Trusted Brand
  Porthole Magazine—Best Itineraries Award for
- Australia and NZ
- Cruise Passenger Magazine Awards—best midrange line
- Out and About with Kids—Best Family Cruise Line

# P&O CRUISES

# P&O CRUISES (UK)

• British Travel Awards—Best UK Departure Cruise Line, Best Family Cruise Line, and Best Mainstream Cruise Line



# PRINCESS CRUISES

- Port of San Francisco Cruise Ship Environmental Awards—Sea Princess and Sapphire Princess Gold Level
- Port of Vancouver, B.C. Blue Circle Award

- Port of Los Angeles Green Flag award—Vessel Speed Reduction
- Port of Seattle Green Gateway Partnership Award 2012
- Recommend Magazine Reader's Choice Awards
   —Best Cruise Line Itineraries
- Travel Weekly Reader's Choice Awards—Best Cruise Line (Alaska)



# SEABOURN

- APEX Award for Publication Excellence— Holland America Line/Seabourn Cruises HESS Newsletter
- Travel + Leisure annual World's Best Awards— World's Best Small-Ship Cruise Line
- Condé Nast Traveler Readers' Choice Awards— Best Small-Ship Cruise Line
- Condé Nast Traveler—Gold List
- 2012 Berlitz® Complete Guide to Cruising and Cruise Ships—Five Stars



For additional information on the Operating Line awards, please refer to their respective websites and Sustainability Reports.



# PUBLIC POLICY POSITIONS (S0 5)

Carnival establishes public policy positions and participates in public policy development and lobbying on behalf of Carnival's subsidiary Operating Lines through various organizations. Some of Carnival's public policy positions on significant issues beyond those disclosed in this Sustainability Report are addressed on the websites of these organizations listed below.

ORGANIZATION	DESCRIPTION
Cruise Lines International Association (CLIA)	Carnival is a member and Board Member of, and actively participates in, CLIA, the world's largest cruise association. CLIA exists to promote all measures that foster a safe, secure and healthy cruise ship environment; educate and train its travel agent members; and promote and explain the value, desirability and affordability of the cruise vacation experience. CLIA has Environmental and Safety Committees, composed of representatives from most cruise lines, who meet regularly with stakeholder groups such as the Port State Authorities and regulators to discuss issues related to compliance and best management practices. CLIA also works with NGOs, universities, regulators and scientists around the globe.
Florida Caribbean Cruise Association (FCCA)	Carnival is a member of, and actively participates in, the FCCA, a not-for-profit trade organization composed of 15 member cruise lines operating more than 100 vessels in the waters of Florida, the Caribbean and Latin America. By fostering an understanding of the cruise industry and its operating practices, the FCCA seeks to build cooperative relationships with its partner destinations and to develop pro- ductive bilateral partnerships with every sector. The FCCA works with governments, ports and all private/public sector representatives to maximize cruise passenger, cruise line and cruise line employee spending, as well as enhancing the destination experience and the amount of cruise passengers returning as stay-over visitors.
CLIA Europe (formerly known as the European Cruise Council—ECC)	Carnival is a member of, and actively participates in, CLIA Europe, which represents the leading cruise companies operating in Europe and aims to promote the interests of cruise operators with the European Union institutions (European Parliament, Council of the European Union, and European Commission) in all matters of shipping policy and ship operations.
International Chamber of Shipping (ICS)/ International Shipping Federation (ISF)	Carnival actively participates in the International Chamber of Shipping (ICS) and the International Shipping Federation (ISF). ICS is the principal international trade association for the shipping industry, representing all sectors and trades. It is concerned with all technical, legal and policy issues that may have an impact on international shipping. ISF is the principal international employers' organization for the shipping industry, representing all sectors and trades. It is concerned with labor affairs, manpower and training, and seafarers' health and welfare issues that may have an impact on international shipping. ICS and ISF enjoy close relationships with national maritime authorities throughout the world and with relevant departments and agencies of the European Union.
European Community Shipowners' Associations (ECSA)	Carnival participates in ECSA, which is composed of the national shipowners' associations of the EU and Norway. ECSA works through a permanent Secretariat in Brussels and a Board of Directors, as well as a number of specialized committees. Its aim is to promote the interests of European shipping so that the industry can best serve European and international trade and commerce in a competitive free enterprise environment to the benefit of shippers and consumers. Most ECSA members are also members of ICS.
UK Chamber of Shipping	Carnival is an active member in the UK Chamber of Shipping, the trade association for the U.K. shipping industry, which works to promote and protect the interests of its members both nationally and internationally. With 144 members and associate members, the Chamber represents more than 860 ships of about 23 million gross tonnes and is recognized as the voice of the U.K. shipping industry. The Chamber works with government, Parliament, international organizations, unions and the general public on behalf of the sectors that make up the shipping industry (including deep-sea bulk, short-sea bulk, containers, ferry, cruise, offshore support and specialized operators) to ensure that the U.K. continues to be a global center for shipping business with world-class standards and an internationally competitive and consistent fiscal and policy environment.
Maritime Anti-Corruption Network	Carnival is a member of and actively participates in MACN. MACN is a global business network working towards its vision of a maritime industry free of corruption that enables fair trade to the benefit of society at large. MACN members promote good corporate practice in the maritime industry for tackling bribes, facilitation payments, and other forms of corruption by adopting the MACN Anti-Corruption Principles, communicating progress on implementation, sharing best practices, and creating awareness of industry challenges.
Global Environmental Management Initiative (GEMI)	Carnival is an active member of GEMI, an organization of leading companies dedicated to fostering global environmental, health and safety (EHS) and sustainability excellence through the sharing of tools and information to help business achieve environmental sustainability excellence. GEMI currently has 25 member companies representing more than 12 business sectors. Through the collaborative efforts of these members, GEMI promotes a worldwide business thic for EHS management and sustainable development through example and leadership. GEMI is unique in that it provides a way for companies in a wide range of industrial sectors to work together in a cost-effective manner. Members address strategic and tactical issues impacting progressive corporate EHS activities in their companies around the world.
Sustainable Shipping Initiative (SSI)	Carnival is a member and actively participates in SSI. The SSI is a four-stage initiative designed to help the industry make long-term plans for future success. Its members are leading companies from around the world and NGOs Forum for the Future and the World Wide Fund for Nature (WWF). The cross-industry group represents shipowners and charterers, shipbuilders, engineers and service providers, banking, insurance and classification societies.
Sustainable Travel Leadership Network (STLN)	Carnival is a member and actively participates in STLN. STLN is an association of forward-thinking organizations convened by Sustainable Travel International, working together to tackle today's industry challenges. This unique collaboration is centered on the development of sustainability solutions, which benefit participating companies today while helping tourism destinations build for tomorrow.
The National Association for Environmental Management (NAEM)	Carnival is a member and actively participates in NAEM. NAEM is a professional association that empowers corporate leaders to advance environmental stewardship, create safe and healthy workplaces, and promote global sustainability. It is the largest network for Environmental, Health and Safety (EHS), and Sustainability decision-makers, and provides peer-led educational conferences and an active community for sharing solutions to today's corporate EHS and Sustainability management challenges.

# **ENVIRONMENT**

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- Carnival's Response to Climate Change and Air Emissions
- Regulatory Compliance
- Biodiversity



• GHG emissions certified under ISO 14064-3: 2006.

SEA PRINCESS

- 83.6% of our 2015 GHG emissions reduction goal have been achieved.
- 6.3% reduction in our hazardous and non-hazardous solid waste rate in 2012 from 2011.

498.00

Click here to see Environmental Performance Data.

11100

111

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PRINCESS CRUISES United States



The key to our global environmental performance is focused on systematic development and improvements of our systems. We continuously review and optimize our policies based on our own standards, regulatory landscape, technological progress and stakeholder dialogue. We set short- and long-term goals for the implementation of our environmental strategy and use key sustainability indicators to measure and evaluate our progress.

Monika Griefahn—Director of Environment and Social Responsibility, AIDA Cruises.

Across our diverse global operations, we are committed to finding ways to continually reduce environmental impacts from the operations of our cruise ships. We understand and embrace our role as a global corporate citizen who is dependent on the health of the world's oceans. We have therefore established our own benchmarks in terms of climate and environmental protection, often exceeding regulatory mandates. We believe this is the right thing to do.

# ENVIRONMENTAL MANAGEMENT AND IMPACT MITIGATION (EN 26)

Carnival's environmental footprint is defined by the significant environmental aspects associated with the operation of our cruise ships. These include our use of fuel, electricity, water and food; discharge of wastewater; generation and disposal of solid wastes; emissions from combustion and refrigeration equipment; and our supply chain (see Figure 9.1). We also recognize that some of these factors can affect the biodiversity of the areas where we operate. We continue to seek opportunities to reduce the environmental impacts from our operations by reducing emissions and generation of waste. In fact, we have set a Corporate target of 20 percent reduction by 2015, from our 2005 baseline, in the intensity of carbon dioxide emissions from shipboard operations.

Carnival carefully manages environmental activities and addresses environmental stewardship at every level of our organization. Our Corporate Maritime Policy (CMP) Department evaluates environmental risks, develops standards and procedures, and raises the bar on our environmental leadership and performance. The management teams of Carnival's Operating Lines identify and manage environmental aspects and



impacts, supervise the environmental performance of the ships, and ensure implementation of the environmental statutory requirements, best management practices and Corporate standards. Most importantly, the dedicated ships' Officers and crew carry out our policies and procedures on board.

Directed by the Corporate Health, Environmental, Safety & Security (HESS) Policy and Standards, the Operating Lines monitor, manage and continuously improve our environmental performance. The majority of these standards extend beyond the requirements of current environmental laws and regulation, and address:

- refrigeration technician training;
- refrigerant recovery units;
- black and gray water management;
- bilgewater and oily waste management;
- underwater paint coatings;
- grease trap—grease/oil/residue disposal;
- waste management;
- hazardous materials management and hazard communications;
- Environmental Management System (EMS) Certification;
- environmental organization and reporting structure;
- environmental awareness and training;
- Corporate environmental auditing and monitoring;
- environmental accountability and reporting; and
- reporting of ship and shore facility incidents.

Carnival has invested in a number of environmental initiatives based on our impacts as described in figure 9.1. We are also actively involved in research and development projects for our existing ships and for new ships under construction. We have dedicated departments that evaluate technology and new systems for installation throughout our fleet. These departments evaluate technical, regulatory, safety, environmental and operational aspects associated with the systems/technologies. Among the challenges typically encountered when adapting shore-based technologies to shipboard use are adjustments for space, weight and access limitations, material standards, operating environment and regulatory approvals. All of these factors increase the complexity of projects to improve environmental technologies. In order to expedite the process, ships within the fleet are selected to test systems/technologies. There are three basic outcomes of such tests:

Green light is given for Operating Line installation;

- Yellow light is given where manufactures typically need to make adjustment to the systems/ technology before further evaluations could be considered; and
- Red light is given and systems/technologies are not approved for installation.

Some of our initiatives and projects include:

- creating an energy-efficient design of new ships;
- evaluating and installing Advanced Wastewater Purification Systems (AWWPS);
- setting wastewater discharge limits for some waste streams stricter than regulatory requirements;
- deploying water-use reduction technologies (e.g., special shower heads, flow regulators, and infrared switches);
- examining and testing various types of exhaust gas cleaning systems (scrubbers);
- utilizing water-lubricated shaft-bearing systems;
- using JETS vacuum (reduced-water usage) sewage systems;
- reducing and, in some cases, eliminating drycleaning chemicals (PERC);
- using refrigerant-recovery units;
- using biodegradable oils;
- evaluating and installing technology required to use shore power in ports where it is available ("cold ironing");
- training shipboard staff who are key to implementing initiatives;
- participating in a research project on heat recovery and fuel cells ("e4ships");
- evaluating and incorporating an innovative "Air Lubrication System," which creates bubbles between the ship's hull and water to reduce friction and improve fuel economy;
- using variable-frequency ventilation drive fans;
- · selecting enhanced hull coating and paints;
- using waste heat in fresh water production evaporators;
- increasing efficiency of heating, ventilation and air conditioning (HVAC) systems; and
- installing ship trim optimization systems.

The Sustainability Reports published by some of our subsidiary Operating Lines provide further details on our efforts to reduce our overall environmental footprint and the actions we are taking to mitigate environmental impacts.

# **ISO STANDARDS**

Each Operating Line has implemented an Environmental Management System (EMS) in accordance with the International Organization for Standardization (ISO) Standard 14001. ISO is an international standard-setting body that produces worldwide industrial and commercial standards. ISO 14001, an EMS standard that was developed to help organizations manage the environmental impacts of their processes, products and services, presents a structured approach to setting environmental objectives and targets. It provides a framework for any organization to apply these broad conceptual tools to their own business and processes.

An independent, third-party organization audits and certifies the EMS of each of our Operating Lines in accordance with ISO 14001. Since 2006, each of our Operating Lines has established and implemented an EMS by which they set annual objectives and targets, and develop plans to improve environmental performance, thereby enabling us to reduce our environmental footprint. The performance indicators in this section demonstrate some of the measurable results of this approach.

Climate change is one of the major challenges facing nations, governments, businesses and individuals now and in the future. To address this challenge, Carnival, like many other companies, is actively working to help limit greenhouse gas (GHG) concentrations in the Earth's atmosphere. To do this we quantify, monitor, report and verify our GHG emissions. We developed a GHG Inventory Management Plan (GHG IMP) in accordance with the requirements of the ISO 14064-1:2006 and The Greenhouse Gas Protocol, which also enables LRQA Americas Sustainability, Inc. (LRQA), Carnival's independent third-party GHG verifier, to certify our GHG emissions inventory.

Carnival's GHG IMP, which applies to material shipboard and shore activities that result in GHG emissions, describes the policies, procedures and other management system elements that we use to design and develop, collect, calculate, verify, manage and report on our Carnival's GHG inventory and emissions.

# ENVIRONMENTAL OFFICERS

Each ship in our fleet has a full-time Environmental Officer (EO), who oversees environmental compliance and implementation of procedures. Each EO reports directly to the ship's Captain, and has a direct line of communication to the Operating Line's shoreside Environmental Management Executive or his/her designated representative. The EO's responsibilities include:

 evaluating new methods to minimize the ship's environmental aspects and impacts (waste minimization, water and energy conservation, and other measures);

- assisting the crew in addressing environmental concerns and questions related to respective Environmental Management System and applicable laws;
- aiding the Captain, Engine Department and government officials, in the event of accidental releases or spills, and coordinating all related communications;
- reviewing ship document management and record keeping;
- responding to inquiries or complaints of any crew members, guests or government officials regarding environmental practices and operations;
- participating in shipboard management meetings and ensuring that environmental matters are always addressed, as needed;
- managing environmental shipboard training of crew and contractors who have environmental responsibilities;
- collecting and monitoring data for environmental performance indicators; and
- educating interested guests on maritime environmental matters.

The scope of EO responsibility has evolved over time in some of our Operating Lines to include oversight of health and occupational safety, as well as environmental management and compliance. For these Operating Lines, their titles reflect these additional duties.

# **CLIMATE CHANGE**

Addressing the global challenge of climate change requires the efforts of governments, industry and individuals. We actively participate in, and contribute to the process of determining our industry's role in addressing climate change. We participate in Working Groups at the International Maritime Organization (IMO) that have and are continuing to develop efficiency regulations and standards that affect the cruise industry. We have publicly disclosed our carbon footprint since 2006 and are taking specific and proactive steps to reduce this footprint. Since 2007, we have also disclosed our carbon footprint via the Carbon Disclosure Project (CDP).

In November 2011, Carnival was a key signatory to Vision 2040, the major statement of intent from the newly formed Sustainable Shipping Initiative (SSI) set up by Forum for the Future and founding member, the World Wide Fund for Nature (WWF). Carnival along with 16 other companies from across the shipping industry committed to various actions and policies through to 2040 to realize our shared vision for a sustainable shipping industry.

### **GREENHOUSE GAS EMISSION REDUCTION (EN 18)**

GHG emissions greatly affect the temperature of the Earth. Experts say that the greenhouse gases that are major contributors to climate change are carbon dioxide ( $CO_2$ ), methane ( $CH_4$ ), nitrous oxide (N<sub>2</sub>O) and chlorofluorocarbons (CFC). We recognize that greenhouse gas (GHG) emissions are one of our most significant risks, therefore we set a Corporate target to reduce the intensity of carbon dioxide emissions from shipboard operations by 20 percent by 2015, from our 2005 baseline, as measured in grams of CO<sub>2</sub>e per ALB-km. Measuring our GHG emission rate permits us to make meaningful GHG emissions reduction comparisons that take into account changes in fleet size, itineraries and quest capacity. We expect to achieve this target primarily by reducing energy consumption by our ships.

During our GHG footprint analysis process, we determined that among our scope 1 and scope 2 emissions, shipboard fuel consumption was the most significant contributor to Carnival's carbon footprint. Fuel is the primary source of energy consumed for the propulsion of Carnival's 100 ships and the on-board hotel power requirements. Based on this analysis, when we developed our GHG reduction goal, we focused on our GHG emissions related to fuel (scope 1). During our analysis phase, we also completed an initial assessment of some of our scope 3 emissions including employee travel, upstream transportation and distribution, purchased goods and services, and waste generated in operations. However, at the time we decided to focus on fuel consumption, since it had the greatest opportunity for improvement, we had the greatest control over these emissions and further study and analysis on our scope 3 emissions was needed.

We have already started our evaluation of our next GHG goal. Based on our analysis thus far, we believe that we will continue to focus on shipboard operations, in particular fuel consumption, as it continues to be our most significant driver in reducing our GHG emissions. However, we also continue to gather and analyze our supply chain (scope 3) GHG emissions.

We have already made substantial progress toward reaching our current goal. From 2005 to 2012, Carnival reduced our GHG emission rate by 16.7 percent. This included a 3 percent decrease from 2011 to 2012. In order to reach the 2015 target, we must reduce our GHG emission rate by approximately 3.8 percent, which will require an average annual reduction rate of approximately 1.3 percent.

We are achieving our GHG emission reduction goal primarily by reducing the rate of shipboard fuel consumption. As part of our GHG emissions reduction strategy, we have implemented a number of energy efficiency initiatives, and energy conservation and training programs tailored for our shipboard crew and passengers. We are also actively involved in new shipbuilding research and development for new abatement technologies and new equipment to improve energy efficiency. The annual cost associated with these management actions and the initiatives is approximately \$30 million. We continue to work on practical and feasible energy reduction and conservation initiatives to help us to reach our target.

Although our absolute GHG emissions increased from 2005 to 2012, our GHG emissions rate declined over the same period, indicating that we are increasing our fuel efficiency. Ships' absolute fuel consumption and related GHG emissions increased over the period from 2005–2012, due to new ships entering service and the addition of ships through the 2007 acquisition of Ibero Cruises. However, the trend depicted in Figure 9.2 clearly shows that we are on track to reaching our 2015 GHG reduction target, because of our efforts described in the Energy section of this Sustainability Report.

# Table 9.2—Target and Performance Against Target

	Units	2005	2006	2007	2008	2009	2010	2011	2012	Target
Ship Fuel GHG Emissions	Metric Tonnes CO2e	8,576,173	8,750,741	9,546,678	10,001,638	10,019,771	10,447,851	10,686,274	10,561,863	N/A
Ship Fuel Greenhouse Gas (GHG) Emissions	Grams									
Kate	CO <sub>2</sub> e/ALB-Km	347	338	335	327	315	303	298	289	2/8
Number of Ships	Number	79	81	85	88	93	98	99	100	N/A
41.0						,			,	

(1) Carnival's GHG emissions for 2012 have been independently verified by LROA in accordance with ISO 14064-3:2006, "Greenhouse gases-Part 3: Specification with quidance for the validation and verification of greenhouse gas assertions."

# Figure 9.2—Target and Performance Against Target (EN 18)



# DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS (EN 16)

As depicted in figures 9.3 through 9.5, in fiscal 2012, Carnival's direct GHG emissions remain 99.5 percent of our total scope 1 and scope 2 GHG emissions. The emissions due to the ship's fuel consumption represented the bulk of the direct GHG emissions, specifically 97.6 percent. The bulk (77 percent) of Carnival's indirect GHG emissions were attributed to shore-based activities.



Figure 9.4—Direct GHG Emissions (EN 16)







### AIR EMISSIONS (EN 19 AND EN 20)

Air emissions pose a threat to human, animal and environmental health. MARPOL Annex VI (Regulations for the Prevention of Air Pollution from Ships) established stricter controls on emissions of sulfur oxide (SOx), nitrogen oxide (NOx) and particulate matter (PM) and sets limits on the sulfur content of fuel oil used by ships in the Emissions Control Areas (ECA).

The first sulfur emissions control area was the Baltic Sea in 2006, followed by the North Sea in 2007. The North American ECA became enforceable on August 1, 2012, and encompasses most of the United States and Canada's coastal waters out to 200 nautical miles from the coastline. The U.S. Caribbean ECA, which includes the waters adjacent to the Commonwealth of Puerto Rico and the U.S. Virgin Islands out to approximately 50 nautical miles from the coastline, was established in 2011 and will become enforceable in January 2014.

The volume of NOx, SOx and PM emissions depend on the quantities of the different types of fuel consumed by the ships. Carnival uses the types of fuel that are required by international, regional, national and port regulations. We comply with MARPOL Annex VI by using fuel oil that is at or below the Annex VI limits for sulfur content. We are also using and evaluating other technological options such as cold ironing and application of scrubber technologies. The type of fuel consumed, engine design, operation and maintenance, can all affect PM emissions. We are continually working to control and reduce these air emissions by evaluating all feasible marine solutions.

Our ships use two fuel types:

- heavy fuel oil (HFO) and
- marine diesel oil/marine gas oil (MD0/MG0).

At Carnival, HFO is broken down into two categories:

- high sulfur fuel oil (HSFO) and
- low sulfur fuel oil (LSFO), a much cleaner fuel than HSFO.

In 2010, Carnival defined LSFO as HFO with a sulfur content of less than or equal to 1.5 percent. After August 2012, LSFO was defined as sulfur content of 1.0 percent or less. Our direct environmental footprint is determined in part by the types of fuel we use. In prior reporting periods, we used LSFO, but we did not track it as a separate fuel category. In 2010, we began to track and report LSFO as a separate fuel type.

# Figure 9.6—Ship Fuel Breakdown by Type in Percent of Total Fuel (EN 20)



2008 and 2009, but began monitoring and reporting LSFO as a seperate HFO fuel category in fiscal 2010.

From fiscal year 2011 to fiscal year 2012, we decreased our SOx emissions rate, continuing the downward trend from fiscal year 2008 levels. One of the reasons for this reduction is the use of marine fuel that had lower weighted-average sulfur content. In addition, from 2009 to 2012, we also consumed more MD0/MG0, which results in lower SOx emissions than HF0.

# Figure 9.7—Total Sulfur Oxides (SOx) Emissions by Weight and SOx Emission Rate (EN 20)



From 2008 through 2012, we also achieved a reduction in our NOx and  $PM_{2.5}$  emission rate. Our improved fuel efficiency per distance traveled was a major contributor to this reduction.

# Figure 9.8—Total Nitrogen Oxides (NOx) Emissions by Weight and NOx Emission Rate(EN 20)



# Figure 9.9—Total Particulate Matter (PM<sub>2.5</sub>) Emissions by Weight and PM<sub>2.5</sub> Emission Rate (EN 20)



MARPOL Annex VI also restricts the use of Ozone Depleting Substances ("ODS"), by requiring the recording of ODS emissions, use of refrigerant recovery equipment and proper disposal of ODS-containing equipment. The earth's ozone layer filters out most of the sun's biologically harmful ultraviolet (UV-B) radiation. Ozonedepleting substances (ODS) released into the atmosphere damage this ozone layer. These substances include:

- chlorofluorocarbon (CFC) refrigerants,
- hydrochlorofluorocarbon (HCFC) refrigerants,
- hydrofluorocarbon (HFC) refrigerants, and
- halon (a shipboard fire-extinguishing medium).

We have implemented programs to comply with the ODS requirements of MARPOL Annex VI, including training and certifying individuals responsible for refrigeration and air-conditioning plants, using recovery units certified to meet refrigerant recycling and recovery requirements, and implementing programs to reduce ODS releases.

#### **ENERGY**

Demand for energy is expected to increase by as much as 36 percent between 2011 and 2030.<sup>1</sup> Population and economic growth are the main drivers of global energy demand. Fuel is the primary source of energy consumed for the propulsion of Carnival's ships and the on-board hotel power requirements. This increased demand for energy has the potential to increase the costs of the fuel we use. Significantly higher fuel prices reduced earnings by \$215 million in fiscal 2012 compared with the prior year. However, we were able to mitigate that impact by driving down fuel consumption per unit four percent. This continues our multiple-year fuel consumption savings trend. Implementing a combination of fuel saving initiatives has allowed us to reduce our rate of fuel consumption by 18 percent over the past seven years.

# ENERGY-SAVINGS INITIATIVES AND RESULTS (EN 6)

Carnival has established a Corporate Energy Conservation group charged with reducing the overall energy consumption of the corporation. The goal of this group is to identify both current and long-term opportunities for saving fuel. In addition, each Operating Line has implemented an Environmental Management System (EMS) in accordance with International Organization for Standardization (ISO) Standard 14001. An independent, third-party organization audits and certifies the EMS of each of our Operating Lines in accordance with ISO 14001. Our Operating Lines set annual energy savings objectives and targets ranging from 0.25-2.5 percent, in accordance with their respective ISO 14001 EMS, including reducing energy consumption, which yields corresponding  $CO_2$  and  $CO_2$ e emissions reductions.

Carnival is investing in a broad range of voluntary energy reduction initiatives that meet or surpass the requirements of current laws and regulations. Reducing fuel and driving energy efficiency takes multimillion-dollar investments and a multipronged strategy that includes:

# 1. DESIGNING OUR SHIPS FOR GREATER EFFICIENCIES

Effective fuel conservation starts with efficient ship design. Engine design has a major impact on efficiency and resultant emissions. The Energy Efficiency Design Index (EEDI), was developed by the International Maritime Organization (IMO) for application to the designs of new ships and is an important technical measure aimed at promoting the use of more energy-efficient equipment and engines. The EEDI requires a minimum energy efficiency level per unit of ship capacity for different ship types and sizes. EEDI requirements have been established for the largest and most energy intensive segments of the world's merchant ship fleet and now cover oil tankers, bulk carriers, gas carriers, general cargo, container ships, and refrigerated cargo and combination carriers. However, EEDI requirements for cruise and other types of passenger ships are still being developed. Carnival actively participates in the Working Groups at the IMO that have and are continuing to develop efficiency regulations and standards that affect the cruise industry. When Carnival builds new ships, consideration is given to implementing fuel conservation-related design strategies including:

 optimizing hull design and coating systems to minimize drag;

- selecting fuel-efficient combustion equipment;
- installing equipment to use waste heat; and
- installing energy-efficient on-board equipment, including lighting.

# 2. MAINTAINING OUR VESSELS

Carnival continuously refurbishes and updates vessels to make them more efficient and to reduce fuel consumption and air emissions. We are achieving some key energy reductions through:

- optimizing diesel generator use at sea and in port;
- managing use of evaporators;
- using fluorescent and LED lighting;
- utilizing automatic heating ventilation and airconditioning (HVAC) control systems;
- changing chiller additives;
- applying silicone-based anti-fouling marine hull coatings;
- cleaning propellers and hulls periodically;
- optimizing plant energy consumption;
- increasing use of waste heat from engine exhaust for fresh water production and steam generation; and
- using vessel shore power installations ("cold ironing").

# 3. MINIMIZING FUEL USE AND ENGINE EMISSIONS

To reduce the environmental footprint and our fuel costs from operating our ships' diesel-electric and diesel power plants, we implement measures that are based on existing International Maritime Organization (IMO) regulations. These measures include developing a ship-specific 'Ship Energy Efficiency Management Plan' (SEEMP) for each vessel. SEEMP will become mandatory for all ships of 400 gross tonnage and above starting on January 1st, 2013.

We also examine ways to increase energy efficiency through fuel homogenizers, which improve combustion and reduce fuel consumption. In addition, we optimize the use of diesel generators on board to improve efficiency, and we use waste heat generated by the ships' engines to heat water instead of relying on the ships' boilers. We reduce the power required by engine room ventilation fans, through use of variablefrequency fan-drive motors and related pressure and temperature control systems.

# 4. IMPLEMENTING OTHER ENERGY-SAVING INITIATIVES

Carnival is introducing other energy-saving measures, including:

- designing more fuel-efficient itineraries;
- using voyage optimization tools;

(1) International Energy Agency, "World Energy Outlook 2012," http://www.worldenergyoutlook.org/publications/weo-2012/

- increasing energy use awareness through education and training of guests and crew;
- developing our ability to use alternative fuels; and
- researching and developing emissions-reduction technologies.

Our long-term energy-savings strategy is to meet our emissions reduction target. We are achieving this target primarily by continuing to reduce the fuel consumption of our existing ships and by designing more energy-efficient ships that will enter our fleet in the future.

# **DIRECT ENERGY USE (EN 3)**

We measure our ability to use direct energy efficiently by calculating the amount of primary source energy we consume. Reduction of fuel consumption by our ships, the main energy source, is one of the key objectives of each of our Operating Lines. Carnival recognizes that combustion of fossil fuels is a major source of GHG emissions, and we are controlling our GHG emissions by efficiently managing our shipboard energy consumption.

Carnival also has operational control over a number of shoreside stationary and mobile activities that consume non-renewable energy sources. The primary energy sources consumed by these activities are diesel, gasoline, heating oil, aviation fuel, natural gas and coal.

The energy consumption by these shoreside stationary and mobile activities is small compared with the total fuel consumed by our ships. In fiscal 2012, our ships consumed approximately 99.8 percent of our total direct energy consumption.

Measuring and reporting our normalized energy consumption rate allows us to make meaningful energy reduction comparisons that take into account changes in fleet size, itineraries and guest capacity. Carnival's absolute ship energy consumption increased over the period from fiscal 2008 to fiscal 2012, due to growth from building new ships. The rate trend shows that we are moving in a favorable direction. This improvement in our energy consumption rate is a direct result of our energy conservation efforts. See Table and Figure 9.10.

Carnival measures and reports the ship fuel consumption rate in terms of grams of fuel per Available Lower Berth Kilometer (ALB-Km). We developed this indicator using the IMO Guidelines for Voluntary Use of the Ship Energy Efficiency Operational Indicator (EEOI), as applicable to passenger ships. This indicator enables us to make meaningful fuel consumption comparisons that take into account changes in fleet size, itineraries and guest capacity. The trend clearly shows that we are moving in a favorable direction, improving consumption rates and efficiency as a result of our efforts.

Figure 9.10—Total Energy Consumption by Users (Ship and Shore) and Total Energy Consumption Rate (EN 3)



There are no GHG emissions standard metrics in the cruise line industry. However, to reduce the environmental footprint from operating the ships' diesel-electric and diesel power plants, we implement measures that are based on existing International Maritime Organization (IMO) regulations. These measures include developing a ship-specific 'Ship Energy Efficiency Management Plan' (SEEMP) for each vessel. The SEEMP provides an approach for managing ship efficiency performance over time using an Energy Efficiency Operational Indicator (EEOI) as a monitoring tool. Improving engine and ship efficiency results in lower emissions.



#### INDIRECT ENERGY USE (EN 4)

Carnival purchases indirect energy from external sources in the form of electricity and very small quantities of steam for use in our shoreside offices, hotels, cruise terminals, ships, shore power connection ("cold ironing"), and during dry dock and other shore facilities.

In fiscal 2012, the electricity purchased for our shore operations decreased by 2.8 percent of total electricity purchased. The shore power purchased by our fleet while at port increased by 82.7 percent compared with Fiscal 2011 (see the Cold Ironing, page 43, for more information).



# Figure 9.13—Ship Shore Power Energy Consumption (EN 4)<sup>1</sup>



(1) Includes drydock purchased electricity.

# **Climate Change and Air Emissions**

Climate change is one of the major challenges that nations, governments, business and individuals face now and in the future. The worldwide demand for energy is considered one of the main factors responsible for climate change. Population and economic growth are the main drivers of global energy demand. It is expected that the world's energy demand will increase by as much as 36 percent between 2011 and 2030.<sup>1</sup>

The use of energy sources affects global output of greenhouse gases (GHG) and other air emissions. GHGs greatly affect the temperature of the earth and lead to climate change, while other air

# **Regulatory Framework**

Regulatory bodies and various organizations have developed and implemented initiatives to limit carbon dioxide equivalents ( $CO_2e$ ), the standard metric of GHG emissions.  $CO_2e$  relates to how much global warming a given type and amount of greenhouse gas may cause, based on the functionally equivalent quantity of  $CO_2$ .

As emission limits become more stringent, compliance becomes more challenging and costly.

The United Nations response to climate change is the Kyoto Protocol. The Protocol is an international treaty that sets binding obligations on industrialized countries to reduce emissions of greenhouse gases. The protocol was adopted by Parties of the United Nations in 1997 and was amended in 2012. emissions pose a threat to human, animal, and environmental health. Experts point to carbon dioxide  $(CO_2)$ , methane  $(CH_4)$ , nitrous oxide  $(N_2O)$  and chlorofluorocarbons (CFC) as major contributors to climate change. Additionally, other air emissions including sulfur oxide (SOx), nitrogen oxide (NOx), and particulate matter (PM) contribute to the seriousness of the situation.

In the cruise industry, like the broader maritime industry, fuel is the primary source of energy consumed for ship propulsion and generation of on-board hotel power. At Carnival we strive to understand the impact of the worldwide strategies and frameworks that are being developed to address climate change and air emissions. (1) International Energy Agency, "World Energy Outlook 2012."

Several Parties have signed, but not ratified, the Protocol, while others have withdrawn.

The International Maritime Organization (IMO), Marine Environment Protection Committee (MEPC), in response to the need to address air emissions, introduced regulations under Annex VI of the MARPOL Convention. The volume of NOx, SOx and PM emissions depends on the quantities and qualities of the different types of fuel consumed by ships. Sulfur level is one of the benchmarks used to measure fuel quality. Annex VI requires use of fuel with 3.5% sulfur or less, effective January 2012, and will require this to be less than 0.5% by 2020 depending on 2018 review as to the availability of required fuel.

Annex VI requires mandatory limits on emissions of sulfur oxides (SOx) and nitrogen oxides (NOx) both globally and within designated sea areas, known as Emission Control Areas (ECAs). Currently there are four ECAs worldwide: The North Sea, the



Baltic Sea, the North American ECA, and the U.S. Caribbean ECA. The North America ECA became enforceable on August 1, 2012 and encompasses most of the United States and Canada's coastal waters out to 200 nautical miles from the coastline. The U.S. Caribbean ECA includes the waters adjacent to the Commonwealth of Puerto Rico and the U.S. Virgin Islands out to approximately 50 nautical miles from the coastline, and will become enforceable in January 2014.

In addition to Annex VI, a number of regional, national and local regulators have introduced their own controls, leading to a patchwork of regulatory requirements. Some regions (e.g., California and the European Union) already require ships to switch to cleaner fuel when in their local waters or while docked in port.

# **Technological Alternatives**

Technological options are an important influence on the future response to climate change worldwide. In the process of developing alternatives, it is essential to understand how energy is produced and used; methods to capture and sequester carbon; technologies to intervene directly in the climate system; ways to improve efficiency; low carbon mobility solutions; and options for reducing or virtualizing general consumption. The success of any of these will be determined by many factors, not just the availability of the technology. Levels of investment, the speed of technological development, the speed and extent of implementation, technical effectiveness and public acceptability of the technology are all important.

Though there are various technological options available for mitigating point source emissions at land-base applications, the options for the maritime industry remain limited. The maritime industry is working with various land based applications technologies in order to optimize them for marine applications within the various maritime sectors. Carnival is continually working to control and reduce our air emissions by evaluating all feasible marine solutions. We have implemented a number of energy efficiency initiatives, and energy conservation and training programs tailored for our shipboard crew and passengers to reduce our use of fuel. We are also actively involved in new shipbuilding R&D for new abatement technologies and new equipment to improve energy efficiency. We have also been involved in a number of initiatives and projects which include:

- creating energy-efficient designs of new ships;
- examining and testing various types of exhaust gas cleaning systems (scrubbers);
- installing technology required to use shore power in ports where it is available (cold ironing or Plug-In);

- training shipboard staff who are key to implementing initiatives; and
- incorporating an innovative "Air Lubrication System," which creates bubbles between the ship's hull and water to reduce friction.

The maritime industry currently complies with regulatory requirements for sulfur emissions by either switching to low sulfur fuel distillates or by continuing to use traditional fuel oil bunkers with the use of land-based scrubber technologies optimized for marine use. The choice of method depends on various factors including the cost and availability of compliant low sulfur fuel, the type of ship and length of time operating in ECAs, and cost of alternate technologies. Longer term alternatives, such as use of liquefied natural gas (LNG) as ship fuel source, are being evaluated both from the ship technical and safety requirements as well as from the shoreside infrastructure needed to supply the gas.

# **ENVIRONMENT** Carnival's Response to Climate Change and Air Emissions



# Scrubber Technology

The maritime industry is working on optimizing land based scrubber technology for marine applications in order to expand the options for meeting SOx emission limits. Currently, there are two main types of SOx scrubbers. Wet scrubbers use sea or fresh water as the scrubbing medium. Dry scrubbers use calcium hydroxide granules as the scrubbing medium. Exposed granules are stored and disposed. Both wet and dry scrubbers also reduce particulate matters from the exhaust. Holland America Line was the first cruise line to test the use of seawater scrubbers to eliminate emissions of sulfur dioxide and particulate matter from a marine diesel engine. Testing started on the *ms Zaandam* in 2007 and ran through 2012. While that scrubber is no longer in operation, the work was an important test-bed for advancing seawater scrubbing technology in the maritime industry.

Carnival continues to work on scrubber technology research in order to optimize the land based scrubber technologies for marine applications. Challenges include size and number of scrubbers needed per ship, wastewater discharges for wet scrubbers, among others.

# Cold Ironing/Plug-In

"Cold ironing" or "Plug-In" refers to the process of providing shoreside electrical power to a ship tied up at port while its main and auxiliary engines are turned off. The term came into existence during the time when ships were coal fired. Once the coal fired ship was in port, the engines no longer needed to be stoked by coal and the fires would die down until the large iron engines grew cold. Hence, cold iron became cold ironing. Today cruise ships equipped with cold ironing capabilities can plug in to specific port connections facilities allowing the ship to receive electricity from the electrical grid in the port instead of using the ship's engines and fuel to generate power. By connecting to the electrical grid, the air emissions are managed and regulated under the emission control requirements at the power plant supplying the port. Opinions vary as to whether connecting to the electrical grid is just transferring the  $CO_2$  emissions used to generate the electricity from the port to the power plant. The answer depends on the type of air emission controls used by the electric utility company, and the resources used to generate the electricity. Renewable sources such as hydro, solar, wind, geothermal and nuclear have a minimal climate change and air emission impact compared with non-renewable sources such as petroleum hydrocarbons, coal or natural gas.

There are only four ports worldwide, all on the west coast of North America that have so far made the major investment to provide shore power to support cruise ships. As a result, approximately

# Corporate CO<sub>2</sub> Goal

As part of our sustainability commitment, we recognized that our carbon footprint is one of our most significant risks. Therefore, we set a Corporate target of 20 percent reduction by 2015 from our 2005 baseline in the intensity of CO<sub>2</sub> emissions from shipboard operations. Measuring our GHG emission rate helps us make meaningful GHG emissions reduction comparisons that account for changes in fleet size, itineraries, and guest capacity. We are achieving our target primarily by reducing shipboard energy consumption, since shipboard fuel consumption is the largest contributor to our carbon footprint. From 2005 to 2012, we reduced our emission rate by 16.7 percent. In order to meet our target, we need to reduce our GHG emission rate by approximately 3.8 percent from 2013–2015. We are well on our way to achieving our goal by 2015.

In fiscal 2012, our direct GHG emissions accounted for 99.5 percent of our total GHG emissions. The emissions due to the ship's fuel consumption represented the bulk of the direct GHG emissions,



20 percent of Carnival's ships which operate in the region are now equipped with cold ironing connections. In addition, several ships within our fleet have partial plug-in installations which will be retrofitted to a full installation if they are deployed on an itinerary where the port has the infrastructure and capacity for connection. Carnival was instrumental in the development of the first North America cold ironing port infrastructure for cruise ships in Juneau, Alaska where Princess Cruises worked with the port and other stakeholders. Looking forward, Carnival is working with the port of Brooklyn, New York to provide shore power service to cruise ships by 2014. In addition, Carnival, working with other stakeholders, was instrumental in developing an International Organization for Standardization (ISO) standard specifically for commercial ship-to-shore power connections.

97.6 percent. Most of Carnival's indirect GHG emissions (77.4 percent) were attributed to shoreside activities from the generation of electricity, heat or steam purchased and consumed by our ships and shoreside facilities. Our GHG emissions have also been independently verified since 2010 by LRQA in accordance with ISO 14064-3:2006, Greenhouse gases—Part 3. In order to achieve this goal, our Operating Lines use a combination of the options listed in the above technological alternatives section, as well as operational options discussed in the Environmental Management section of this report.

# WATER

Along with climate change, ensuring an adequate supply and quality of water is another major challenge facing the world today in light of both expanding human needs and increasing climate variability and change. Water unifies companies, communities and natural ecosystems. We all rely on clean water to survive. Climate change is modifying weather patterns affecting water bodies, and key sources that we tap for drinking water are being overdrawn or tainted by pollution.

# WATER CONSUMPTION (EN 8)

Water is essential to our business and we approach water management accordingly. We are committed to reducing water use fleet-wide. The water used on board our ships is either generated from seawater or purchased ashore while in port.

We produce approximately 73 percent of the water we use on board our ships; the remaining 27 percent is bunkered from the ports and from water companies in the ports where we call. This percentage varies considerably from ship to ship, depending on itineraries. In regions where water sources are highly restricted, our water consumption patterns may influence relations with our stakeholders. Therefore, water is bunkered from ports where water is abundant, of high quality and cost effective to purchase.

Figure 9.14—Water Consumption (EN 8)



Since water consumption is a vital issue, we systematically monitor and strive to improve the efficient use of water on board Carnival ships. Reducing water use is also essential for Carnival to remain economically sustainable, as it is more cost effective to use less water than to continuously purchase, desalinate and treat water. Over time, Carnival has increased the percentage of water we produced on board to the total water bunkered, which helps us to reduce the risk associated with disruption of water supplies in the ports-of-call where we bunker water. Over the years, our overall consumption of water has increased due to fleet expansion. However, we continue to drive efficiencies, implement conservation programs and monitor our impact on local water sources. Our Operating Lines set annual intensity-based water consumption reduction

targets ranging from 1–5% within their ISO 14001 EMS. The targets set only apply to shipboard activities. In fiscal 2012, we reduced our water consumption rate to 237 liters per person-day from 245 in fiscal 2011.

The quantity of water consumed by our shore offices and operations is small compared with our shipboard water consumption. As a result, we have not gathered shoreside water-consumption data.

### WASTEWATER MANAGEMENT (EN 21)

Promoting efficient water management helps us to decrease the amount of wastewater we generate on board. This Sustainability Report includes wastewater generated as a result of operating our ships. The quantity of wastewater generated by our shoreside offices and operations is small compared with our shipboard wastewater generation. We take great care to properly remove and dispose of wastewater to avoid marine impacts and to protect the health and safety of our workers.

Designated tanks located throughout our ships are used to collect specific wastewater streams. The types of wastewater streams generated by our ships include: bilge water, gray water, black water, biomass/sewage sludge and ballast water.

# **BILGE WATER**

Bilge water is wastewater normally generated in the machinery spaces of the engine room during vessel operation.

All bilge water from Carnival ships is discharged only when the ships are underway at sea and proceeding at a speed of no less than six knots. The bilge water is processed through approved oil filtering equipment so that the oil content of the treated bilge water without dilution does not exceed 15 parts per million (ppm). Such discharges are in strict compliance with applicable international and national laws and regulations, and often contain less than five ppm of oil.

On all of our ships, processed bilge water is discharged to sea through a "white box," a voluntary and proprietary system that is considered fail-safe for control of overboard discharges of processed bilge water. If the white box reading indicates 15 ppm or greater of oil in the system, it will sound an alarm and automatically stop the discharge, redirecting the flow to on-board storage tanks. Bilge water not meeting discharge criteria and oil residues/sludge are offloaded for shoreside disposal or recycling depending on available shoreside infrastructure.

# **GRAY WATER**

Gray water is wastewater from sinks, showers, galleys, laundry and cleaning activities. Gray water from our ships is discharged only while the ship is underway and proceeding at a speed of not less than six knots.

Gray water is not discharged in port and at a minimum not within four nautical miles from shore or such other distance provided for by local law or as agreed with the authorities that have jurisdiction, except in case of an emergency. Though gray water on most ships is not treated unless an Advanced Wastewater Purification System (AWWPS) is used, we monitor materials in gray water to minimize contaminants. We continue to review AWWPS' worldwide.



### **BLACK WATER**

Black water is sewage and liquid waste from medical facilities. Prior to discharge, all black water from our ships is processed through a sewage treatment plant called a Marine Sanitation Device (MSD) that is approved in accordance with applicable international and national regulations. Discharges of treated black water take place only when the ship is at a distance of more than 12 nautical miles from the nearest land and when the ship is travelling at a speed of not less than six knots.

The above distance and speed limits do not apply to black water or gray water discharges that have been processed through an Advanced Wastewater Purification System (AWWPS). However, all discharges comply with all applicable international and national laws and regulations.

On more than one-third of our ships, black water and gray water are treated in an AWWPS that uses technologies designed to produce a higher effluent quality that meets or surpasses standards for secondary and tertiary effluents, and reclaimed water.

# **BIOMASS/SEWAGE SLUDGE**

The different gray and black water types of wastewater treatment systems installed on board our ships produce treated wastewater effluent along with partially treated organic waste. These treatment systems include Advanced Wastewater Purification Systems (AWWPS) and Marine Sanitation Device (MSD) systems. The biological treatment portion of an AWWPS requires routine testing to determine the concentration of microbes and other solids in the tank. If the solids exceed a set limit, this portion of the treatment system will not perform optimally, reducing the quality of the permeate discharge. When this limit is reached, the tank must be emptied to recreate optimum conditions for the microbes. This partially treated wastewater is called biomass and is discharged more than 12 nautical miles from shore while the vessel is traveling more than six knots, or it is landed ashore. Sewage sludge accumulates at the bottom of an MSD and is periodically cleaned out. It is discharged from the system when the vessel is more than 12 nautical miles from shore and traveling at a speed of more than six knots, or it is landed ashore.

# **BALLAST WATER**

Ballast water is seawater that is intentionally pumped into and carried in tanks to adjust a ship's draft, buoyancy, trim, list and stability under various operating conditions. Carnival is conscious of the impacts of non-indigenous, invasive species introduced through ballast water transferred from one body of water to another.

Aquatic invasive species may impact biodiversity in the world's coastal and inland waters because they often have no natural predators and may out-compete native species for food in their new environment. Cruise ships do not use large amounts of ballast water compared with other sections of the maritime industry. Understanding the impacts of ballast water, we minimize its use by managing other on-board liquids (e.g., fuel, potable water and wastewater), using them as much as possible in lieu of ballast water.

At certain times, based on the ship's itinerary and other operational and design factors, we do not discharge ballast water. Carnival, through our Corporate Research and Development (R&D) group, proactively evaluates emerging treatment technologies that can meet both international and U.S. Coast Guard ballast water treatment standards. Specifically, Carnival Cruise Lines and Princess Cruises submitted pilot programs to the U.S. Coast Guard's Shipboard Technology Evaluation Program (STEP), which evaluates ballast treatment technologies for vessels entering U.S. waters. Princess has completed the application process and is testing the system.



Click here for more details on our Performance

# WASTE

Cruise ships are essentially floating hotels, with all the amenities that accompany them. Wastes generated by our operations and activities of our guests and crew mirror the waste generated by hotels and resort complexes, requiring us to provide the same type of waste-management services.

Carnival collects and manages information on waste generation to assess the level of progress we are making in our waste reduction efforts. Monitoring our waste streams allows us to identify potential opportunities for improvements in the efficiency of our waste management. Our shipboard waste is disposed of in strict accordance with our Corporate environmental standards that are designed to meet or exceed internal, national, regional and local environmental regulatory requirements and industry standards.

# WASTE MANAGEMENT (EN 22)

All of our ships have a waste management plan that specifies how we manage each type of waste on board. In addition, we record all waste management operations in designated record books and logs.

We use four main methods to manage shipboard waste:

- waste minimization;
- disposal ashore;
- incineration; and
- discharge to sea.



# WASTE MINIMIZATION

Our waste minimization program consists of reducing, reusing and recycling.

- Reducing: We work to reduce the volume and toxicity of our waste.
- -We reduce our waste by:
- bulk purchasing;
- acquiring only what we need when we need it;
- working with suppliers to reduce packaging;
- using alternative products to accomplish the same job; and
- treating waste on board to minimize volume by stacking, shredding, crushing and incinerating.
- -We reduce the toxicity of our waste by:
- purchasing non-toxic products;
- controlling material purchases with an "approved chemicals list"; and
- replacing older equipment with new equipment, designed for non-toxic products.
- Reusing: We seek new opportunities to reuse materials and equipment on board or find others who can use things that are in good condition that we no longer need. This extends the use of many items. For example:
- -Our ships donate tons of usable items, including mattresses and clothing, at ports-of-call around the world.
- Carnival receives certain supplies in plastic and metal drums, which we reuse as waste receptacles, thereby avoiding the need to purchase waste containers.
- Recycling: We strive to recycle as many items as possible. We place recycling collection containers throughout the ship so our guests and crew can segregate the various recycling materials. We offload collected materials for recycling at ports around the world, including plastic, glass, paper, cardboard, aluminum, electronic equipment, toner cartridges, batteries, fluorescent lamps, silver, scrap metal, oily waste and used cooking oil.

# **DISPOSAL ASHORE**

- We label, collect and store waste on board in designated areas.
- Authorized vendors remove materials from our ship and dispose of them at approved shoreside facilities.
- Landed waste is disposed of in landfills, incinerated or recycled, depending on the type of waste.

# **INCINERATION ON BOARD**

- Shipboard incinerators substantially reduce the volume of combustible materials.
- We sort waste to ensure that only proper materials are introduced into the incinerator.
- Incinerator ash is tested annually to confirm that it is not a hazardous waste.

# **DISCHARGE AT SEA**

- Only food waste and ground glass are discharged to the sea from Carnival ships.
- These materials are discharged at more than 12 nautical miles (nm) from shore, or three nm if the food waste is ground to no more than 25 millimeters.
- Wastewater discharges are included in the water section of this Sustainability Report.

# **TYPES OF WASTE**

Our waste is divided in two main categories: hazardous and non-hazardous waste.

"Hazardous" waste is waste that poses a risk to human health or to the environment. We classify shipboard waste as hazardous based on the requirements of the jurisdiction where the waste is offloaded for disposal. Some jurisdictions classify oily sludge as hazardous waste. In jurisdictions that classify oily sludge as hazardous waste, oily sludge makes up the majority of hazardous waste offloaded for disposal. Sludge oil also accounts for the highest percentage of our recycled waste.

Our hazardous waste is mainly comprised of photograph development waste. The hazardous waste disposal is normally less than five percent of total waste disposal and is transferred to licensed shoreside waste contractors for appropriate disposal.

# Figure 9.15—Total Hazardous and Non-Hazardous Waste and Total Waste Rate (EN 22)



# Figure 9.16—Non-Hazardous and Hazardous Waste Recycled (EN 22)



The quantity of waste generated by our shore offices and operations is small compared with our shipboard waste generation. We have not, therefore, gathered shoreside waste data

# REGULATORY COMPLIANCE (EN 23, EN 28 AND SO 8)

As indicated in our Corporate HESS Policy, Carnival and our Operating Lines are committed to fully complying with or exceeding all legal and statutory requirements related to health, environment, safety and security in all of our business activities. To meet the requirements of this policy, we promptly report and investigate all health, environmental, safety and security incidents, and take appropriate action to prevent recurrence.

# SPILLS, FINES AND SANCTIONS

Carnival recognizes that spills of fuels, oils, chemicals, wastewater and other materials can have negative impacts on the environments in which we operate. We work hard to protect water quality and prevent spills, but when a spill occurs, we work just as hard to clean it up.

We have a rigorous internal incident-reporting system that requires the reporting of unintended or unexpected spills, releases or discharges into the bilge or overboard of chemicals, oils, refrigerants or other ozone-depleting substances (ODS), solid waste/materials, and non-hazardous liquid waste. Spills, releases or discharges are reported to external authorities as required by applicable regulations.

Typically, spills occur due to the accidental discharge or operational leaks of fuel oil, hydraulic oil, paint or chemicals. Most spills are inadvertent releases of hydraulic oil or lubricating oil from our shipboard equipment and systems. These systems operate under high pressure, while their repeated operation causes wear that sometimes results in leaks.

Carnival had no "significant spills" in fiscal 2012. A significant spill is defined as a spill for which the monetary sanctions are \$100,000 or greater, and which is reportable in the Carnival Corporation & plc Annual Report on Form 10-K. For internal reporting purposes, Carnival has defined a "reportable spill" as a release that is in excess of 0.5 liter (500 ml). We comply with the spill reporting requirements of all jurisdictions in which we operate.

During fiscal 2012, Carnival did not receive any non-monetary sanctions for non-compliance with non-environmental laws and regulations.

Carnival paid fines of \$67,800 during fiscal 2012, the bulk of which was in relation to wastewater permit violations (2008, 2009 and 2010) finalized in 2012.

# BIODIVERSITY

Our obligation to protect the earth's biodiversity drives Carnival to minimize water and air pollution, dispose of waste responsibly and effectively manage our environmental impacts. Carnival complies with international, national and local environmental laws and regulations wherever our ships sail. We also implement operational requirements that exceed mere compliance with regulations.

# HABITATS WE PROTECT AND RESTORE (EN 13)

Carnival's biodiversity strategy includes a number of elements that collectively help to prevent, manage and lessen the impact on natural habitats. We are involved in several initiatives intended to prevent negative impacts on habitats, thus ensuring their integrity and stabilizing the surrounding natural environment. These initiatives include:

- Ensuring a Healthy Future
- Initiatives to Limit Wastewater Discharges
- Marine Mammal Protection
- Sustainable Food Sourcing

# **ENSURING A HEALTHY FUTURE**

Carnival works with local communities to ensure that the presence of our ships and guests is as beneficial and non-intrusive as possible. Destinations visited by Carnival ships are located in unique ecosystems such as the Bahamas, the Baltic Sea, the Caribbean, the Gulf of Mexico, Alaska, Hawaii, the Mediterranean and Australia's Great Barrier Reef.

We endeavor to ensure that our guests have safe, enjoyable vacation experiences, while keeping the destination healthy and attractive to future guests. Carnival's Operating Lines, for example, organize beach cleanups at various ports-of-call. We also review all marine wildlife concerns or potential concerns reported to us at ports-of-call and handle each inquiry on a case-by-case basis. For example, in the case of animal excursions on land, we have responded to our stakeholders concerns by working with independent experts to evaluate and report on the conditions under which animals are held and how they are treated. Depending on the findings of such reports, we encourage our tour operators to implement the recommendations, or we may discontinue these tours.

One of our greatest potential impacts on biodiversity is a risk that can be introduced through ballast water, which is seawater that is intentionally pumped into and carried in tanks to adjust a ship's draft, buoyancy, trim, list, and stability under various operating conditions. Water transferred from one geographic location to another may introduce invasive, non-indigenous species to the waters where we sail. Invasive aquatic species constitute a significant threat to biodiversity in the world's coastal waters because they often have no natural predators and may out-compete native species for food in their new environment. Therefore, we avoid and/or minimize the use of ballast water by monitoring the levels of fuel, potable water, gray water and black water, and using those whenever possible instead of ballast water. In addition, some of our Operating Lines have worked with technology manufacturers and regulatory bodies to develop and improve ballast water treatment systems by installing and testing systems on board various ships in our fleet.

#### INITIATIVES TO LIMIT WASTEWATER DISCHARGES

Around the world, Carnival ships operate in or near numerous environmentally sensitive regions, where biodiversity and habitat protection are particularly crucial. Such areas include:

- MARPOL-defined "Special Areas" and "Particularly Sensitive Sea Areas,"
- marine-protected areas,
- marine sanctuaries,
- no-discharge zones,
- national parks, and
- other areas where discharges are restricted or subject to local agreements.

In addition to complying with applicable regulations, Carnival also participates in a number of voluntary initiatives to limit wastewater discharges in areas where such discharges could impact biodiversity.

# MARINE MAMMAL PROTECTION

Marine mammal strikes are rare, and we have comprehensive policies and processes to avoid these incidents. We have clear and established requirements to follow if marine mammals are sighted nearby, including altering the ship's course, reducing speed, utilizing additional bridge lookouts and notifying appropriate authorities and shoreside personnel. Reporting the positions of marine mammals, such as whales, assists researchers who study these animals.

Reports are especially helpful when the animals are spotted in locations where they are not typically found. We have encountered these situations during el Niño and la Niña weather conditions. We also monitor feeding and migration patterns of whales known to be found in areas where we operate, and we adjust course and reduce speed as needed. We comply with voluntary seasonal shipping lane changes and speed restrictions to avoid whale strikes.

In addition, Holland America Line, in collaboration with the U.S. National Oceanic and Atmospheric Administration (NOAA), developed a computer-based training program to train navigators to identify different whale species and to predict their behaviors to avoid collisions with ships. This program was licensed to NOAA and is freely distributed to shipping companies around the world to help train their personnel on avoiding whale strikes. Designated positions within the Carnival fleet are required to take a whale protection training program.

In order to protect particularly sensitive species, such as right whales, our Operating Lines require bridge watch leaders to be familiar with whale identification and reporting requirements prior to entering protected areas, especially those in the northern and southern Atlantic Ocean. Other efforts to protect biodiversity include our involvement and sponsorship in several voluntary efforts, including:

ORGANIZATION	CARNIVAL'S INVOLVEMENT AND SPONSORSHIP EFFORTS
The International SeaKeepers Society	Carnival established an alliance with the International SeaKeepers Society to house scientific data-gathering devices on five Carnival Cruise Lines and Holland America Line ships ( <i>Carnival Triumph, Carnival Spirit, Carnival Legend, Carnival Miracle</i> and <i>ms Amsterdam</i> ) to monitor ocean water quality. Developed under the direction of scientists at the University of Miami's Rosenstiel School of Marine and Atmospheric Science, the devices gather a wide range of data to aid in assessing ocean pollution and researching global climate change and cyclic weather patterns. The data collected on board our ships are transmitted via satellite to the University of Miami and then to various environmental groups, govern- ment agencies and universities. In addition to providing ships as platforms for the required equipment, Carnival has also supported the organiza- tion with annual financial contributions since 2008.
SISTeR Detectors on <i>Queen Mary 2</i>	Sea Surface Temperature (SST) is considered one of the essential climate variables and is crucial in the understanding of how oceans exchange energy with the atmosphere. Not only are SST's important in understanding climate change but they are also used as input parameters to the meteorological models that are used to generate accurate weather forecasts. A partnership between Carnival UK and the U.K.'s Science and Technology Facilities Council has culminated in the installation of an instrument developed by the Rutherford Appleton Laboratory on board <i>Queen Mary 2</i> . The SST monitoring instrument, SISTER (Scanning Infrared Sea Surface Temperature Radiometer), is a project aimed at validating satellite measurements and improving climate records.
The Florida Ocean Alliance	Carnival Cruise Lines has been a sponsor of the Florida Ocean Alliance since 2000. The Alliance is a non-partisan organization dedicated to bringing together government, academic and private sector organizations in Florida to protect and enhance Florida's coastal and ocean resources for continued social and economic benefits. Specifically, it serves as a clearinghouse for information on key ocean and coastal issues facing the state in both the public and private sectors, as well as by monitoring and publicizing actions related to the oceans and coasts. The Alliance's main activities include: <ul> <li>conducting outreach and educational activities for the public and policy makers in Florida,</li> <li>coordinating conferences,</li> <li>developing economic studies and issuing papers on ocean and coastal policies in Florida, and</li> <li>providing testimony to national or state agencies and commissions concerned with ocean or coastal policy in Florida.</li> </ul>
The Carnival Foundation	<ul> <li>The Company's wide-ranging charitable and philanthropic contributions are coordinated through the Carnival Foundation, whose mission is to provide financial and in-kind support to non-profit organizations dedicated to enhancing the quality of life in our homeport communities. Some of the many organizations and agencies that the Carnival Foundation supports related to biodiversity include:</li> <li>Coast Guard Foundation, a 501(c)(3) non-profit organization that supports projects that enhance the education, welfare and morale of Coast Guard personnel;</li> <li>Florida International University's School of Hospitality &amp; Tourism Management;</li> <li>Zoological Society of Florida, a non-profit support group for Zoo Miami (formerly Miami Metro Zoo) in Miami-Dade County Carnival Foundation also supports community programs and local initiatives, such as the Coral Reef Task Force and beach cleanups.</li> </ul>

# SUSTAINABLE FOOD SOURCING

Food sustainability encompasses the entire food value chain, from farmers and growers (land and water based) to processors and manufacturers, distributors, retailers and consumers, and the transportation that links the chain together. In addition, it cover the environmental, social and economic spectrum as it includes issues such as animal welfare, biodiversity, community, human rights, air emissions, and chemical use among other. At Carnival we have started to look at the sustainability component of our food sourcing both from our Corporate global procurement division which procures a percentage of the food we serve in our ships, as well as from the Operating Lines procurement departments which procure the remaining percentage of the food consumed on board the ships.

From the biodiversity component of food sourcing, some of our Operating Lines have also implemented Line-specific programs in the area of sustainable seafood. In particular, in 2010, Holland America Line, in partnership with the Marine Conservation Institute (MCI), implemented a sustainable seafood program where MCI reviews all seafood proposed for procurement. MCI's professional staff makes a determination about whether a marine species (fish, crustacean or shellfish) product is sustainable after reviewing third-party certification that a marine species will be sourced from sustainable fisheries. In cases where there is not a certified sustainable source, MCI reviews information about where and how the marine species is caught or farmed. They also look into general marine species stock health, environmental impacts of the harvesting or farming methods, and potential by-catch issues. Carnival UK also purchases a vast majority of seafood from sustainable sources and is sourcing more local produce from suppliers at or close to their home and transit ports.

# PEOPLE

# WHAT'S INSIDE

- Workforce
- Creating Positive Work Environments
- Carnival's First Female Captain
- Employee Performance, Career Development and Turnover
- Human Rights and Child Labor
- Guest Satisfaction, Privacy, Feedback and Complaint Resolution
- Guest and Crew CareTeam

- Our people are our most important asset.
- Providing excellent service and guest satisfaction is at the heart of our guest service strategy.



Click here to see our Code of Business Conduct and Ethics



I am responsible for developing strategic policies and programs throughout Carnival's Global HR. Our people are our most important assets. We are dedicated to the changing needs of our employees. My group focuses on enhancing Carnival's employee culture, which recognizes and rewards employees for their performance and achievements. Through our strategic programs, Carnival continues to recruit, retain and develop top talent to support worldwide Company growth.

Aimeerenee Layton-Junco-Vice President, Global Human Resources

Carnival knows the cruise industry like no other. No one else can cater to every type of guest. Twenty-five years since we set out to become the world's largest cruise operator, we are one of the biggest success stories in the travel industry. We sail the world and carry nearly 10 million guests each year, or half of all cruise passengers. None of this would have been possible without the combination of talent, passion and dedication of our employees.

# WORKFORCE (LA 1)

In fiscal 2012 Carnival employed approximately 76,000 crew members on board our 100 ships at any given time. Our shoreside operations have approximately 9,400 full-time and 4,300 parttime/seasonal employees. Due to the highly seasonal nature of our Alaskan and Canadian operations, Holland America Princess Alaska Tours increases its workforce during the late spring and summer months in connection with the Alaska cruise season, employing additional seasonal personnel, who are included in the workforce numbers already mentioned. We source our shipboard Officers primarily from Germany, Holland, Italy, Norway, and the U.K. People from around the world comprise the remaining crew positions. We utilize various staffing agencies in many countries and regions to help source our shipboard crew.

# CREATING POSITIVE WORK ENVIRONMENTS (LA 1 AND HR 4)

Carnival is a diverse organization. Each of our Operating Lines has their own unique culture based on their headquarters location, guests served and the diversity of their employees. We value this diversity of people and thought. We recognize that maintaining a diverse workforce promotes an open, tolerant and positive work environment where everyone's different talents and strengths can be utilized. We work to attract, motivate, develop and retain the best talent from the diversity the world offers. We believe that our ability to be competitive and to thrive globally depends on it.





To support the integrity of our work environment, Carnival has established ethics and compliance policies and systems to facilitate conduct that conforms with our expectations that apply equally to all employees, irrespective of geographic locations and boundaries. Our engagement with a diverse community of individuals provides us with many opportunities to enjoy multicultural experiences. Sometimes these experiences create challenging situations where we may not know how to react. Our Code of Business Conduct and Ethics provides us with the tools to navigate these situations and respond with integrity when dealing with fellow employees, guests, global communities, government agencies, consultants, vendors, distributors and other business partners. By following our Code of Business Conduct and Ethics when interacting with these valued stakeholders, we maintain our reputation for integrity and uphold the standards of our Company. Carnival abides by CLIA's anti-corruption principles and is a member of the Maritime Anti-Corruption Network.

We also work to ensure that our workplace is free from harassment, which would include any form of unwelcome conduct by one person toward another that has the purpose or effect of creating an intimidating, hostile or offensive work environment. While the definition of harassment may vary in the locations where we do business, our Company does not tolerate any form of harassing behavior.

All Carnival employees are encouraged to report any harassment or discrimination concerns immediately to management. We investigate these reports and take appropriate corrective actions. Employees do not face retaliation for making a report in good faith.

As part of our ethics policy program, Carnival has established the infrastructure for employees to feel comfortable and safe to report any noncompliance matters to their direct supervisor or upper management without the fear or concern of retaliation. However, if an employee prefers to remain anonymous, Carnival has also established a website (www.carnivalcompliance.com) that allows employees to report suspected issues of non-compliance and to have their report reviewed and investigated by the Company.



# CARNIVAL'S FIRST FEMALE CAPTAIN

On December 1st, 2010, Captain Inger Klein Olsen made history as Carnival's first female Captain under the Cunard Operating Line. Captain Olsen took command of Cunard's *Queen Victoria* ship. Now living in Denmark, Captain Olsen was born and brought up in the Faroe Islands. She began her career at sea on a cargo ship, before applying to be a cadet with Scandinavian Seaways. After obtaining her

Masters License, Captain Olsen sailed for a couple of years on various ships before joining Cunard on the *Vistafjord* (which became *Caronia*), in 1997 as a First Officer. In 2001 she transferred to the Seabourn fleet, which was part of Cunard at the time. She sailed on *Seabourn Sun* and *Seabourn Spirit* before being promoted to rank of Staff Captain on *Seabourn Pride* in 2003. Captain Olsen then spent about a year in the Cunard office in Miami during the building of *Queen Mary 2*. She then spent some years with some of Cunard's sister brands before finally joining *Queen Victoria* as deputy Captain in August 2010. Although Inger is our first female Captain, she is not the only female to climb the ranks within our organization. In fact, our Operating Lines have female Officers at various ranks, providing further evidence of our commitment to diversity.





# EMPLOYEE PERFORMANCE AND CAREER DEVELOPMENT (LA 12)

Carnival's sustainability as a company depends on the skills, commitment and behaviors of our people in every country in which we operate. Carnival recognizes that appraising employee performance against common targets helps individual employees to develop their personal knowledge and skills. It also helps Company management to assess employee skills in relation to business requirements and to develop the organization's human capital.

Appraising performance can also enhance employee satisfaction, which improves organizational performance. Carnival conducts performance reviews of all employees using both informal and formal processes. Performance reviews help us to determine how effectively we monitor, maintain and improve employee competencies. These competencies, which include the knowledge, skills and behaviors employees need to do their jobs, are in position descriptions on which performance reviews are based. Our informal performance reviews are routine activities, whereby Managers and supervisors meet regularly with their subordinates, sometimes daily, and use observation, communication, checking of work and immediate feedback. The more formal performance review systems that we use involve documenting employee strengths and weakness, recording of objectives, describing any necessary training, and annual completion of forms. We are

actively increasing the usage of more formal performance appraisal processes, and enhancing the related tracking systems.

# EMPLOYEE TURNOVER (LA 2)

Our employees are crucial to our success. We are committed to offering opportunities for career development, rewarding performance, providing a safe and healthy work environment, and supporting our diverse culture.

Carnival management monitors and measures employee turnover rates to assess the levels of job satisfaction among our employees. We recognize that employee turnover results in changes to the Company's human and intellectual capital, which can impact productivity and have direct cost implications, especially in terms of recruiting, replacement and training expenses.

We utilize a number of strategies to reduce our shipboard employee turnover. While recruiting top candidates is a strategic priority, retaining them is even more important. Like many other companies, we face the challenge of keeping our best performers. Younger professionals are typically more mobile and seek rapid career advancement. They are also less accepting of the demands of a seafaring lifestyle, which traditionally requires Officers and crew to leave their families and friends for months at a time.

To help improve Officer and crew retention, Carnival has taken steps to ease the difficulty of being separated from family for extended periods, as is the norm in this industry. Therefore we offer variable sailing schedules and improved communications with their fleets. Such steps have helped to ensure that existing personnel and prospective new hires are aware of their benefits, incentives, contractual provisions and key Company initiatives. We also endeavor to enhance employee understanding of the knowledge and skills required for advancement. In addition, we have formal systems in place to ensure that we properly compensate employees for the hours they work and that they receive adequate time for rest and recreation.

We also face employee turnover challenges in our shoreside operations. Although the state of the economy in recent years has helped to reduce employee turnover rates, we still study the reasons that our employees leave so that we can identify the causes and take appropriate action to reduce future attrition. We attempt to raise satisfaction rates among our employees by promoting from within, a practice that creates opportunities for many shoreside employees to advance to other positions within their Operating Line or between Carnival organizations.

# HUMAN RIGHTS (LA 4, HR 5, HR 7)

Carnival's management recognizes two important rights of our employees: freedom of association and participation in collective bargaining. Freedom of association is a human right as defined by International Labour Organization (ILO) Conventions 87 and 98, and in the ILO Maritime Labour Convention 2006. The ILO is devoted to promoting social justice and internationally recognized human and labor rights. Its main aims are to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues.

The percentage of employees covered by collective bargaining agreements (CBA) varies among Carnival's Operating Lines and the use of CBA's vary by geographic region. Collective Bargaining Agreements are agreements between employers and a group of employees that are aimed at regulating working conditions. Our policies, such as our Code of Business Conduct and Ethics and our Corporate Health, Environmental, Safety & Security (HESS) Policy, as well as procedures and other established mechanisms such as safety committees, address our commitments to maintaining and improving our work environments. We have entered into agreements with unions covering certain employees in our hotel, transportation and shipboard operations. We consider our employee and union relations generally to be good.

Seafarer Employment Agreements set forth basic conditions of employment, including position, wages, work hours and duration of contracts for shipboard employees. They also inform the seafarer of his or her rights concerning grievances and the right to arbitrate any claims against Carnival.

We believe that the pay and benefits packages for Carnival's non-union shipboard employees meet or exceed the benefits available to Carnival's unionized employees and employees of other cruise lines. Carnival complies with working and living condition requirements that meet or exceed international standards.

To address potential labor issues, we train and provide support to our Officers and Managers. This includes implementing systems to prevent, report, investigate and resolve employee and crew member complaints.

# CHILD LABOR (HR 6)

As part of our comprehensive Corporate Health, Environmental, Safety & Security Policy and related commitments in our Code of Business Conduct and Ethics, we condemn all forms of child exploitation and forced labor. We do not recruit child labor. In accordance with the ILO Maritime Labour Convention, and related Flag State regulations, our Operating Lines do not employ any crew members younger than 18 years of age. As permitted by such regulations, however, Officer trainees (Cadets) younger than 18 may be employed within shipboard Deck and Technical Departments.

# GUEST SATISFACTION AND COMPLAINT RESOLUTION (PR 5)

Cruising appeals to a broad range of ages and income levels. The average age of a cruise guest varies by brand and ranges from approximately 40 years to 60 years across the contemporary, premium and luxury cruise categories. Cruising provides something for every generation, from kids clubs to an array of on-board entertainment provided to teens and adults. Cruising also offers a diverse range of ship types and sizes, as well as price points, to attract guests with varying tastes and from most income levels. To attract more first time cruisers, the duration of some cruises has been shortened, which has lowered the purchase price and thus broadened the appeal for cruising. The range of pricing varies by a wide margin, from a three-day cruise in an inside cabin on a contemporary line embarking at a local homeport to a world cruise in a balcony suite on a luxury brand requiring air transportation to and from the port.

No matter what type of cruise our guests choose, providing excellent service and guest satisfaction is at the heart of our guest service strategy. Measuring the satisfaction of our guests provides a powerful indicator of our Operating Lines' sensitivity to their needs and is essential for our long-term success. In the context of sustainability, guest satisfaction provides insight into how we approach our relationships with this key stakeholder group. Having served almost ten million guests in fiscal 2012, we consider the views of our guests of vital importance.

Our goal is to provide all of our guests, whether first-time cruisers or longtime Carnival enthusiasts, with high-quality, memorable vacations, invite them to return, and inspire them to recommend Carnival's Operating Lines, thereby sustaining our business. While pre-cruise and post-cruise service is important, guests' overall satisfaction with their on-board cruise experience is by far the most important component of Carnival's success. Each of Carnival's Operating Lines continues to upgrade and enhance the vacation experiences it offers with new features as part of our effort to attract first-time cruisers and keep our product fresh for repeat guests.

Although the vast majority of guests are satisfied with their Carnival vacation, there are occasional complaints. Each Carnival Operating Line has undertaken a number of initiatives to reduce on-board complaints and to expeditiously resolve guests' issues.

Guests have different means available to convey their opinions and their degree of satisfaction to the Company. A common tool is a guest comment/ survey form handed out to guests at the end of the cruise, on which the guests may express their opinions about the various aspects of the service and assign a performance score to each aspect. Email surveys are also used.

Carnival's Operating Lines actively engage in the collection of complaints and suggestions from their guests on how to improve the services offered. Guests wishing to complain about unsatisfactory service while they are still on board can do so by approaching the appropriate crew member, by phoning the Front/Reception Desk, or by filling out a complaint form.

Resolving issues in an expedient manner during the cruise, rather than having guests wait until they return home to make contact, enables guests to more fully enjoy their vacations. This approach also provides Operating Line management with a valuable on-the-spot learning tool that supports improvement of policies, procedures and cruise product. Guests who are not satisfied with the service received on the ship can send their complaints to the Company, either directly by letter, email or phone, or indirectly through their travel agencies.

# **GUEST AND CREW CARETEAM**

The CareTeam was founded by Carnival Cruise Lines and due to its success has expanded to all of our Brands. The CareTeam consists of approximately 1,200 Carnival Cruise Line employees who volunteer their time to support guests and their families affected by illness or injury during their cruise. The goal of the CareTeam is to provide compassionate care during a crisis. CareTeam employees have received specialized training on how to sensitively and appropriately support victims and their families in the aftermath of a crisis. CareTeam members respond to a variety of guest and crew emergencies, primarily medicalrelated situations, and are dispatched to locations throughout our cruising regions to provide personalized support and assistance as needed to all of our Brands.

The CareTeam has not only made a tremendous impact on our Company, it has also become engrained in Carnival's Corporate culture. CareTeam volunteers view their participation in the organization as a privilege. Their commitment to assisting our guests, as well as their families, friends and loved ones, provides these individuals with compassionate assistance and invaluable support during challenging situations.

# **GUEST PRIVACY (PR 8)**

Carnival has established standards and guidelines that each Operating Line must include in their respective privacy program.

Each Operating Line has developed processes, policies, procedures and a privacy incident response plan to support the principles established in the privacy policy. They provide training to employees to create and maintain awareness of our privacy practices.

Carnival's privacy standards require the performance of annual reviews of the adequacy of the privacy program that address key issues such as estimated losses incurred by Carnival or our guests due to breaches, training status of employees, attempted and actual unauthorized access to personal information, and management response.



# PERFORMANCE DATA

# WHAT'S INSIDE

• Environmental Data



# Environmental Data<sup>1</sup>

	UNITS	2008	2009	2010	2011	2012
GREENHOUSE GAS EMISSIONS (GHGS) (EN 16, EN 18)						
Total GHG Emissions	Metric Tonnes CO <sub>2</sub> e	10,317,817	10,317,221	10,748,636	11,003,072	10,877,399
Direct GHG Emissions	Metric Tonnes CO <sub>2</sub> e	10,255,943	10,264,098	10,700,266	10,949,844	10,819,814
Ship Direct GHG Emissions	Metric Tonnes CO <sub>2</sub> e	10,221,210	10,236,642	10,677,839	10,924,006	10,797,635
Ship Fuel GHG Emissions	Metric Tonnes CO <sub>2</sub> e	10,001,638	10,019,771	10,447,851	10,686,274	10,561,863
Ship Refrigerant GHG Emissions	Metric Tonnes CO <sub>2</sub> e	219,572	216,870	229,988	237,732	235,772
Shore Direct GHG Emissions	Metric Tonnes CO <sub>2</sub> e	34,732	27,456	22,428	25,838	22,178
Indirect GHG Emissions	Metric Tonnes CO <sub>2</sub> e	61,874	53,123	48,370	53,228	57,585
Shore Indirect GHG Emissions	Metric Tonnes CO <sub>2</sub> e	56,660	47,488	44,591	46,222	44,565
Ship Indirect GHG Emissions	Metric Tonnes CO <sub>2</sub> e	5,214	5,635	3,779	7,006	13,020
Ship Fuel Greenhouse Gas Emission Rate	Grams CO2e/ALB-Km	327	315	303	298	289
OZONE-DEPLETING EMISSIONS (EN 19)						
Ship Fugitive Refrigerant Releases	Kilograms	117,772	123,010	124,376	127,170	126,907
Ship Ozone Depleting Substances (ODS) Emissions <sup>2</sup>	Kg CFC-11e	3,288	2,004	1,975	6,172	4,133
NOx, SOx AND PARTICULATE MATTER (EN 20)						
Total SOx Emissions <sup>3</sup>	Metric Tonnes	131,732	134,683	140,218	145,480	130,042
SOx Emissions Rate	Kg SOx/NM	16.1	16.0	15.2	15.3	13.6
Total NOx Emissions <sup>4</sup>	Metric Tonnes	206,607	206,988	215,719	220,624	218,035
NOx Emissions Rate	Kg NOx/NM	24.8	24.2	23.4	23.2	22.8
Total Particulate Matter (PM <sub>2.5</sub> ) Emissions <sup>5</sup>	Metric Tonnes	3,814	3,821	3,983	4,073	4,025
Particulate Matter (PM <sub>2.5</sub> ) Emission Rate	Kg PM/NM	0.46	0.45	0.43	0.43	0.42
ENERGY AND ELECTRICITY (EN 3, EN 4)						
Total Energy Consumption	Gigajoules	130,365,440	130,479,420	136,071,929	139,240,147	137,615,148
Ship Energy Consumption	Gigajoules	129,881,214	130,109,891	135,785,273	138,902,224	137,305,926
Shore Energy Consumption	Gigajoules	484,226	369,529	286,656	337,923	309,222
Total Energy Consumption Rate	Kilojoules/ALB-Km	4,267	4,106	3,948	3,887	3,759
Total Ship Fuel Consumption	Metric Tonnes	3,178,569	3,184,434	3,318,750	3,394,214	3,354,389
Ship Fuel Consumption Rate	Grams Fuel/ALB-Km	104	100	96	95	92
Total Purchased Electricity	MWh	91,153	76,795	70,439	77,160	84,174
Shore Purchased Electricity	MWh	83,855	68,724	64,021	66,463	64,633
Ship Purchased Electricity	MWh	7,298	8,071	6,418	10,697	19,541
SHIP FUEL (EN 20)						
High Sulfur Fuel Oil (HSFO)	Percent	96.7%	96.9%	87.1%	87.8%	79.2%
Low Sulfur Fuel Oil (LSFO) <sup>6</sup>	Percent	N/A	N/A	8.0%	7.0%	15.3%
Marine Diesel Oil/Marine Gas Oil (MDO/MGO)	Percent	3.3%	3.1%	4.9%	5.2%	5.5%
WATER (EN 8, EN 21)						
Total Water Consumption	Metric Tonnes	21,178,777	22,127,915	23,626,059	25,003,002	24,919,718
Water Purchased (From Shore)	Metric Tonnes	5,984,082	6,345,896	6,375,849	6,624,805	6,641,554
Water Produced (From Sea)	Metric Tonnes	15,194,695	15,782,019	17,250,210	18,378,197	18,278,164

# Environmental Data<sup>1</sup> (Continued)

	UNITS	2008	2009	2010	2011	2012
WATER (EN 8, EN 21) (continued)						
Water Consumption Rate	Liters/Person-Day	247	243	237	245	237
Bilge Water Discharge to Sea	Metric Tonnes	242,781	272,656	244,609	255,045	240,057
Bilge Water Sea Discharge Rate	Liters/NM	29.6	32.4	26.5	26.8	25.1
Total Gray Water Discharged	Metric Tonnes	14,177,772	15,436,512	16,280,438	16,539,347	16,657,680
Gray Water Discharged to Sea	Metric Tonnes	14,070,260	15,299,010	16,115,456	16,223,973	16,522,837
Gray Water Discharged to Shore	Metric Tonnes	107,512	137,502	164,982	315,374	134,843
Gray Water Discharge Rate	Liters/Person-Day	165	169	163	162	158
Total Black Water Discharged	Metric Tonnes	6,733,375	6,725,706	7,075,801	7,776,089	7,783,594
Treated Black Water Discharged to Sea	Metric Tonnes	6,714,180	6,688,436	6,995,178	7,701,161	7,677,346
Treated Black Water Discharged to Shore	Metric Tonnes	16,438	34,627	54,875	50,762	68,017
Untreated Black Water Discharged to Sea	Metric Tonnes	1,721	2,065	16,138	20,567	27,664
Untreated Black Water Discharged to Shore	Metric Tonnes	1,036	578	9,610	3,599	10,567
Black Water Discharge Rate	Liters/Person-Day	78.5	73.8	71.0	76.3	74.0
Total Biomass/Sewage Sludge Discharged	Metric Tonnes	273,057	263,704	291,040	275,866	279,953
Biomass/Sewage Sludge Discharged to Sea	Metric Tonnes	272,645	258,816	289,855	272,753	278,752
Biomass/Sewage Sludge Discharged to Shore	Metric Tonnes	412	4,888	1,185	3,113	1,201
Total Biomass/Sewage Sludge Discharge Rate	Liters/Person-Day	3.18	2.89	2.92	2.71	2.63
WASTE DISPOSAL (EN 22)		_				
Total Waste	Metric Tonnes	517,067	447,319	489,075	493,926	469,990
Hazardous Waste	Metric Tonnes	15,212	19,091	25,463	34,068	27,223
Non-Hazardous Waste	Metric Tonnes	501,855	428,228	463,612	459,858	442,767
Total Waste Rate	Kilograms/Person-Day	6.0	4.9	4.9	4.8	4.5
Hazardous Waste Disposed to Shore	Metric Tonnes	13,429	16,829	6,394	8,780	8,916
Hazardous Waste Recycled to Shore	Metric Tonnes	1,300	1,429	17,919	24,164	16,994
Non-Hazardous Waste Disposed to Shore	Metric Tonnes	192,666	161,842	135,067	144,709	134,164
Non-Hazardous Waste Recycled to Shore	Metric Tonnes	25,281	50,670	109,099	86,842	102,415
Non-Hazardous Waste Discharged to Sea	Metric Tonnes	103,803	107,030	123,760	132,278	120,463
Non-Hazardous Waste Incinerated Shipboard	Metric Tonnes	180,588	109,519	96,836	97,154	87,038
Non-Hazardous and Hazardous Waste Recycled	Percent	5.1%	11.6%	26.0%	22.5%	25.4%
SPILLS AND FINES (EN 22, EN 23, EN 28)						
Total Number of Significant Spills <sup>7</sup>	Number	0	0	0	0	0
Total Number of Reportable Spills	Number	55	54	26	32	26
Total Volume of Reportable Spills	Liters	2,294	4,333	984	3,363	2,717
Total Number of Non-Monetary Sanctions	Number	0	4	0	1	1
Monetary Value of Fines <sup>8</sup>	US Dollars(\$)	4,750	48,957	0	1,000	67,800

(1) Ibero Cruises was acquired in 2007; the figures exclude Ibero Cruises for the period 2008–2009 as the data was unavailable.

(2) The conversion factors to obtain the amount of CFC-equivalent from the various types of refrigerant gases are those given in the Montreal Protocol Technical Papers.

(3) The SOx weight calculations take into account the weighted-average sulfur content of the fuel consumed and the default emission factors. The default emission factor used for calculating SO<sub>x</sub> value is %S x 20 x 0.96, where S is the fuel sulfur content.

(4) The NOx weight is calculated based on default emission factors. The default emission factor used for calculating NOx value is 65 kilograms of NOx per tonne of fuel consumed.

(5) PM<sub>25</sub> refers to particles with diameters between 2.5 and 10 micrometers. The PM<sub>25</sub> weight is calculated based on default emission factors. The default emission factor used for calculating PM<sub>25</sub> value is 1.2 kilograms of PM<sub>25</sub> per tonne of fuel consumed.

(6) We were using Low Sulfur Fuel Oil (LSFO) in fiscal 2008 and 2009, but began monitoring and reporting LSFO as a separate HFO fuel category in fiscal 2010.

(7) A significant spill is defined as a spill for which the monetary sanctions are \$100,000 or greater, and which is reportable in the Carnival Corporation & plc Annual Report on Form 10-K.

(8) Carnival paid fines of \$67,800 during fiscal 2012, the bulk of which was in relation to wastewater permit violations (2008, 2009, and 2010) finalized in 2012.

# Social Data—Shipboard

	UNIT	2010	2011	2012
WORKFORCE (LA 1)				
Average Crew	Number	75,000	77,000	76,000
Employees Working in Deck Department	Percent	7.4%	8.3%	8.0%
Employees Working in Engine Department	Percent	7.9%	8.4%	8.7%
Employees Working in Hotel Department	Percent	84.7%	83.3%	83.3%
DIVERSITY (LA 1)				
Labor Sourcing Region:				
North and Central America	Percent	8.7%	6.4%	6.8%
South America	Percent	6.1%	5.8%	5.2%
Europe	Percent	21.4%	20.2%	20.6%
Asia	Percent	60.6%	65.6%	65.2%
Australia	Percent	1.5%	0.6%	0.8%
Africa	Percent	1.7%	1.4%	1.4%
Gender Distribution—Female	Percent	18.2%	18.3%	17.2%
Gender Distribution—Male	Percent	81.8%	81.7%	82.8%
INJURIES AND FATALITIES (LA 7)				
Total Injuries	Number	1,965	1,978	2,199
Minor Injuries	Number	1,163	1,121	1,235
Serious Injuries	Number	461	487	551
Major Injuries	Number	341	370	413
Injuries as a Percent of Workforce	Percent	2.7%	2.6%	2.8%
Accidental Deaths	Number	4	1	5
Deaths as a Percent of Workforce	Percent	0.006%	0.001%	0.006%
TRAINING (LA 10)				
Total Training	Hours	5,994,240	6,055,315	4,744,007
Training—Deck	Hours	551,235	641,866	555,306
Training—Engine and Technical	Hours	497,568	578,987	472,722
Training—Hotel	Hours	4,840,897	4,834,462	3,715,979
Total Training	Hours/Employee	56	57	44
Training—Deck	Hours/Employee	71	72	64
Training—Engine and Technical	Hours/Employee	60	65	50
Training—Hotel	Hours/Employee	54	55	41
HEALTH AND SAFETY (PR 2)				
Total CDC VSP Inspections	Number	117	118	121
CDC VSP Inspections—Ships scoring 100%	Number	24	23	35
CDC VSP Inspections—Ships scoring 86–99%	Number	93	94	85
CDC VSP Inspections—Ships scoring < 86%	Number	0	1	1
OTHER STATISTICS (LA 2, LA 4, LA 6)				
Employee Turnover	Percent	24.6%	20.1%	20.8%
Employees Covered by Collective Bargaining Agreements (CBA)	Percent	24.4%	30.2%	30.6%
Employees Represented by Health and Safety Committees	Percent	82%	82%	100.0%

# Social Data—Shoreside

	UNIT	2010	2011	2012
WORKFORCE (LA 1)				
Average Number of Full-Time Employees	Number	10,200	9,800	9,400
Average Number of Part-Time Employees	Number	4,000	4,500	4,300
Shoreside Employee Status—Full-Time	Percent	72.5%	65.2%	63.0%
Shoreside Employee Status—Part-Time	Percent	27.5%	34.8%	37.0%
DIVERSITY (LA 1)				
Labor Sourcing Region:				
North and Central America	Percent	70.4%	75.9%	77.0%
South America	Percent	8.5%	0.8%	1.0%
Europe	Percent	17.8%	19.9%	18.5%
Asia	Percent	0.4%	0.8%	0.6%
Australia	Percent	2.9%	2.7%	2.9%
Gender Distribution—Female	Percent	58.7%	58.8%	57.9%
Gender Distribution—Male	Percent	41.3%	41.2%	42.1%
INJURIES AND FATALITIES (LA 7)				
Injuries	Number	233	112	149
Injuries as a Percent of Workforce	Percent	1.30%	0.80%	0.93%
Accidental Deaths	Number	0	0	0
Deaths as a Percent of Workforce	Percent	0%	0%	0%
TRAINING <sup>1</sup> (LA 10)				
Total Training	Hours	67,920	57,834	69,000
Training—Full Time	Hours	64,865	55,455	65,142
Training—Part Time	Hours	3,055	2,379	3,858
Total Training	Hours/Employee	4	4	4
Training—Full Time	Hours/Employee	5	6	6
Training—Part Time	Hours/Employee	1	0.5	0.7
OTHER STATISTICS (LA 2, LA 4, LA 6)				
Employee Turnover	Percent	30.8%	36.0%	37.7%
Employees Covered by Collective Bargaining Agreements (CBA)	Percent	13.7%	14.0%	11.9%
Employees Represented by Health and Safety Committees	Percent	67%	70%	71.2%

(1) Partial data only. Not all training data is available for the reporting periods.

# DECLARATION OF GRI 3.1 AND EXTERNAL ASSURANCE



Our Sustainability Report is based on the Global Reporting Initiative (GRI) Reporting Framework. The GRI G3.1 Guidelines on application levels guide a reporting company to state its reporting level indicating how much of the G3.1 Guidelines and other GRI Reporting framework components have been applied in preparing the report. Following these guidelines, we self-declare our report at level B.

The table below shows how to classify the level of a Sustainability Report using the G3.1 Guidelines.



\*Sector supplement in final version

\*\*Performance Indicators may be selected from any finalized Sector Supplement, but seven of the 10 must be from the original GRI Guidelines

\*\*\*Performance Indicators may be selected from any finalized Sector Supplement, but 14 of the 20 must be from the original GRI Guidelines

# ASSURANCE PRACTICES

With the exception of Carnival's greenhouse gas (GHG) inventory, Carnival has decided not to seek external assurance for this report.

Carnival contracted with LRQA Americas Sustainability, Inc. (LRQA) to verify Carnival's GHG inventory for fiscal 2011 (December 1, 2010 to November 30, 2011). Carnival's GHG inventory includes direct and indirect GHG emissions. LRQA is an independent, third-party verifier.

LRQA's verification was conducted in accordance with ISO 14064-3:2006, "Greenhouse gases—Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions." This verification provided limited assurance that Carnival's GHG inventory has been prepared in conformance with ISO14063-1:2006, "Greenhouse gases—Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals." The LRQA Assurance Statement is located on page 60 of this report. GHG emission data collection and calculations were performed in accordance with:

- Carnival's Greenhouse Gas Inventory Management Plan;
- ISO 14064-3:2006, Greenhouse gases—Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions; and
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition).

Emissions calculations were based primarily on default values' obtained from published industry documents and/or current database values maintained by Carnival. Direct emissions reported for ship operations also include the CO<sub>2</sub>e impact from fugitive releases of shipboard refrigerants.

Carnival has some GHG emission sources whose contribution to the consolidated total is not material and whose quantification is not technically feasible or cost effective. These "de minimis" sources include:

- fuel combustion emissions from emergency generators used in shore facilities (Direct—Scope 1);
- combustion emissions from burning waste in shipboard incinerators (Direct—Scope 1);
- fugitive release of sulfur hexafluoride (SF<sub>6</sub>) gas from shipboard circuit breakers (Direct—Scope 1);
- fugitive release of methane (CH<sub>4</sub>) gas from shipboard marine sanitation devices or advanced wastewater treatment plants (Direct—Scope 1);
- fugitive refrigerant gas releases from shore hotels and offices (Direct—Scope 1);
- electricity consumption from shore offices smaller than 8,000 square feet (Indirect—Scope 2);
- small watercraft at private islands (Direct— Scope 1); and
- releases of halons and CO<sub>2</sub> from shipboard firesuppression (emergency-use) systems (Direct— Scope 1).

(1) Default values for calculating CO<sub>2</sub> emissions from marine fuels are from IMO MEPC/Circ. 471: HFO = 3.114 t CO<sub>2</sub>/t fuel; MDO/MGO = 3.206 t CO<sub>2</sub>/t fuel. GWP values for other GHG emissions from marine fuel are from the IPCC Fourth Assessment Report: Methane = 25; Nitrous oxide = 298, where CO<sub>2</sub> = 1.0.



#### Assurance Statement

#### Terms of Engagement

This Assurance Statement has been prepared for Carnival Corporation & plc.

LRQA Americas Sustainability, Inc. (LRQA), a member of the Lloyd's Register group of entities, was commissioned by Carnival Corporation & plc (Carnival) to assure its Greenhouse Gas (GHG) Emissions Inventory and GHG Assertion for the fiscal year (FY) 2012 (December 1, 2011 to November 30, 2012).

The GHG Emissions Inventory includes direct GHG emissions and energy indirect GHG emissions. The GHG Assertion was prepared by Carnival and taken from a spreadsheet entitled "CDP 2012 Summary" which states that in FY 2012 Carnival emitted:

- Direct GHG emissions of 10,819, 814 tonnes CO<sub>2</sub> equivalent; and
- Energy indirect GHG emissions of 57,585 tonnes CO, equivalent.

#### Management Responsibility

The management of Carnival was responsible for preparing the GHG data and information disclosed in the GHG Emissions Inventory and GHG Assertion and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the GHG data and information, as presented in the GHG Emissions Inventory and GHG Assertion, in accordance with our contract with Carnival.

Ultimately, the GHG Emissions Inventory and GHG Assertion have been approved by, and remain the responsibility of Carnival.

#### LRQA's Approach

Our verification has been conducted in accordance with ISO14064-3:2006 *Specification with guidance for validation and verification of greenhouse gas assertions* to provide limited assurance that the GHG Emissions Inventory and GHG Assertion for Carnival have been prepared in conformance with ISO14064-1:2006 *Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals.* 

To form our conclusion, the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- Conducted site visits to the headquarter offices of three Carnival Operating Lines;
- Interviewed key personnel responsible for, and reviewed processes related to the management of GHG data, information and records, and for the preparation of the GHG Emissions Inventory and GHG Assertion; and
- Verified the historical GHG data and information related to the GHG Inventory for the fiscal year 2012.

#### Level of Assurance & Materiality

The opinion expressed in this Assurance Statement has been formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

#### LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would lead us to believe the total direct GHG emissions and energy indirect GHG emissions disclosed in the GHG Emissions Inventory and GHG Assertion for Carnival for FY 2012 are not materially correct, or that the GHG Inventory has not been prepared in accordance with ISO 14064-1:2006.

#### LRQA Recommendations

It is recommended that Carnival considers the following improvements to their GHG Emissions Inventory and data and information management systems:

- The automation of data migration and collation to the extent possible in order to minimize data transposition errors; and
- The provision of corporate level standardized guidance for the measurement and reporting of (i) fugitive refrigerant gas emissions and (ii) fuel consumption (in light of installation of mass flow meters), in an effort to ensure a consistent approach across operating lines.

Signed:

Dated: May 8, 2013

1 Am

Derek Markolf Lead Verifier

On behalf of LRQA Americas Sustainability, Inc. 1216 State Street, 5th Floor Santa Barbara, CA 93101

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# GLOSSARY



# А

# Audit

Systematic, documented, periodic and objective assessment of an organization's performance, management systems and processes.

# Available Lower Berth (ALB)

Guest beds available on a cruise ship, assuming two people occupy a cabin.

# Azipod

An electric propulsion unit in which a variable speed electric motor drives a fixed pitch propeller in a submerged pod outside the ship's hull. The pod may be configured to be rotated around its vertical axis, providing thrust in any direction. Ships with azipods do not need rudders, stern transverse thrusters or long propulsion shafts inside the ship's hull.

# В

#### Ballast Water

Seawater that is taken on board a ship and stored in tanks to control draft, list, trim and stability.

# **Bilge Water**

Water from equipment maintenance and minor leaks that collects in the lowest part of the ship.

#### Bionomics

The science of the relationships between organisms and their environments.

### **Black Water**

Wastewater from toilets, urinals and medical sinks.

### **Bunkered Water**

Potable water that is purchased from a municipal or private system at a port and stored on board in tanks.

# **By-Catch**

This term is usually used for fish caught unintentionally in a fishery while intending to catch other fish. By-Catch consists of a different species, undersized individuals of the target species, or juveniles of the target species.

#### С

# CFC-11 Equivalent

A measure used to compare various substances based on their relative ozone depletion potential. The reference level of 1 is the potential of CFC-11 and CFC-12 to cause ozone depletion.

# Chlorofluorocarbons (CFCs)

Commonly known by the trade name "freon," used primarily as a refrigerant in air-conditioning and refrigeration systems and equipment. CFCs are known to have destructive effects on the ozone layer. For this reason their use has now been banned by legislation.

# CO<sub>2</sub> (Carbon Dioxide)

A naturally occurring chemical compound composed of two oxygen atoms covalently bonded to a single carbon atom. It is a gas at standard temperature and pressure, and it exists in Earth's atmosphere in this state, as a trace gas at a concentration of 0.39 percent by volume.

### **Cold Ironing**

Cold ironing is the process of providing shoreside electrical power to a ship at berth while its main and auxiliary engines are turned off. The term came into existence during the time when ships were coal fired. Once the coal fired ship was in port and attached to a shore based power source the engines no longer needed to be stoked by coal and the fires would die down until the large iron engines grew cold. Hence, cold iron became cold ironing.

#### CO<sub>2</sub>e (Carbon Dioxide Equivalent)

A measure used to compare the emissions from various greenhouse gases based on their global warming potential (GWP). The  $CO_2$  equivalent for a gas is derived by multiplying the tonnes of the gas by the associated GWP.

#### D

# Direct Emissions (Scope 1 Emissions)

Emissions from sources that are owned or controlled by the reporting organization. For example, direct emissions related to combustion would arise from burning fuel for energy within the reporting organization's boundaries.

### Е

### Energy Saved

The reduced amount of energy needed to carry out the same processes or tasks. The term does not include overall reduction in energy consumption from reduced organizational activities.

# **Environmental Aspect**

Element of company activities that may have a significant impact on the environment directly and/ or indirectly.

# Environmental Impact

How an environmental aspect may affect the environment.

#### Environmental Management System (EMS)

An EMS refers to the management of an organization's environmental programs in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning and resources for developing, implementing and maintaining policy for environmental protection.

### F

# Footprint

The amount of environmental impact related to a specific resource.

#### G

# Global Reporting Initiative (GRI)

A network-based organization that produces a comprehensive sustainability reporting framework that is widely used around the world. GRI is committed to the framework's continuous improvement and application worldwide. GRI's core goals include the mainstreaming of disclosure on environmental, social and governance performance.

# Global Warming Potential (GWP)

A relative measure of how much heat a greenhouse gas traps in the atmosphere. It compares the amount of heat trapped by a certain mass of the gas in question to the amount of heat trapped by a similar mass of carbon dioxide. A GWP is calculated over a specific time interval, commonly 20, 100 or 500 years.

# Governance

The set of rules (laws and corporate regulations), organizational structures, processes and relationships that affect the way a company is directed and administered. The concept of governance also embraces the structure used to decide corporate objectives and the means to achieve and measure results.

# Gray Water

Wastewater that is generated from activities such as laundry, bathing, cooking and dishwashing.

#### Greenhouse Gas (GHG)

A gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect, which many believe is the cause of global warming. The primary greenhouse gases in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide and ozone. Greenhouse gases greatly affect the temperature of the Earth; without them, Earth's surface would be on average about 33 degrees C (59 degrees F) colder than at present. The greenhouse gases thought to be major contributors to global warming are carbon dioxide ( $CO_2$ ); methane and biomethane emissions ( $CH_4$ ); nitrogen oxide ( $N_2O$ ) and chlorofluorocarbons (CFC).

# Greenhouse Gas (GHG) Protocol Initiative

The Greenhouse Gas Protocol Initiative's vision is to harmonize greenhouse gas emission accounting and reporting standards internationally. It aims to provide a multi-stakeholder framework ensuring that different trading schemes and other climate-related initiatives adopt consistent approaches to GHG accounting.

### Н

# Heating, Ventilation and Air-Conditioning

(HVAC) System

The technology used for indoor environmental climate control.

# Heavy Fuel Oil (HFO)

A type of blended oil used in ship's engines, made from the residues from various refinery distillation and cracking processes.

L

# Indicator

A means used to measure the effects of sustainability management initiatives or the condition of environmental, social or governance issues.

# Indirect Emissions (Scope 2 Emissions)

Emissions that result from the activities of the reporting organization, but that are generated at sources owned or controlled by another organization. In the context of this indicator, indirect emissions

refer to greenhouse gas emissions from the generation of electricity, heat or steam that is imported and consumed by the reporting organization.

# Indirect Energy

Energy produced outside the reporting organization's boundary that is consumed to supply energy for the organization's energy needs (e.g., electricity, or for heating and cooling). The most common example is fuel consumed outside the reporting organization's boundary in order to generate electricity to be used inside the organization's boundary.

## Injury Severity Levels

Work-related crew member and contractor injuries are classified as major, serious, or minor, based on the following criteria:

- Major injury: Any fracture, loss of any body part, loss of vision (temporary or permanent), dislocation of a joint or a ruptured ligament or tendon, hypothermia or hyperthermia secondary to environmental exposure that requires medical treatment, an injury resulting in trauma that requires advanced life support or any other injury requiring hospitalization on board or on shore for more than 24 hours following the injury.
- Serious injury: Any injury, other than a major injury, which results in time off work for more than three consecutive days following the injury, or that results in disembarkation without return on board.
- Minor injury: Any injury that is not a serious or major injury and that results in time off work of 24 hours or more following the injury.

# International Labour Organization (ILO)

The United Nations' agency that seeks the promotion of social justice and internationally recognized human and labor rights.

# International Maritime Organization (IMO)

The United Nations' agency responsible for improving maritime safety and preventing pollution from ships.

#### International Organization for Standardization (ISO)

An international standard-setting body composed of representatives from various national standards organizations. An ISO Standard is an international specification that establishes a common framework of reference or a common technical language between suppliers and customers, thus facilitating trade and the transfer of technology.

# International Safety Management (ISM) Code

International code for the safe management and operation of ships and for pollution prevention.

### ISO 14001

Global standards for Environmental Management System developed by the ISO.

# International Ship and Port Security (ISPS) Code

A part of SOLAS that prescribes responsibilities of governments, shipping companies, shipboard personnel, and port/facility personnel to "detect security threats and take preventative measures against security incidents affecting ships or port facilities used in international trade."

# L

# Liquefied Natural Gas (LNG)

Liquefied natural gas or LNG is natural gas (predominantly methane,  $CH_4$ ) that has been converted to liquid form for ease of storage or transport.

### М

# Marine Sanitation Devices (MSD)

A system that employs filtration, maceration and chlorination technologies to treat black water.

# Maritime Labour Convention 2006 (MLC 2006)

An international treaty that provides comprehensive rights and protection at work for the world's seafarers. The convention sets out seafarers' rights to decent conditions of work on a wide range of subjects and aims to be globally applicable, easily understandable, readily updatable and uniformly enforced.

# MARPOL

The International Convention for the Prevention of Pollution from Ships. MARPOL is one of the most important marine environmental conventions, which was designed to minimize pollution of the seas.

# Metric Tonne

1 metric tonne = 2,204.62 pounds (lbs.) = 1,000 kilograms.

Ν

# NOx

Oxides of nitrogen that are a family of gases released from the combustion of fuel.

# 0

# Ozone Depleting Potential (ODP)

The relative potential of various gases to deplete the ozone in the atmosphere.

#### Ozone-Depleting Substance (ODS)

Any substance with an ozone depletion potential greater than zero that can deplete the stratospheric ozone layer. Most ozone-depleting substances are regulated under the Montreal Protocol and its amendments, and include CFCs, HCFCs, halons and methyl bromide.

# Ρ

# **Primary Source**

The initial form of energy consumed to satisfy the reporting organization's energy demand. This energy is used either to provide final energy services (e.g., space heating, transport) or to produce intermediate forms of energy, such as electricity and heat.

### Protected Area

A geographically defined area that is designated, regulated, or managed to achieve specific conservation objectives.

# R

# Refrigerants

Gases that are used in HVAC systems on board.

#### **Renewable Energy**

Renewable energy is derived from natural processes that are replenished constantly. This includes electricity and heat generated from solar, wind, ocean currents, hydropower, biomass, geothermal resources or biofuels, as well as hydrogen derived from renewable resources.

S

# Safety Management System (SMS)

ISM code-certified system that informs employees how to perform their duties in accordance with all safety and environmental laws.

# Safety of Life at Sea (SOLAS) Convention

The most important and comprehensive international treaty governing the safety of merchant ships.

# **Significant Air Emissions**

Air emissions that are regulated under international conventions and/or national laws or regulations, including those listed on environmental permits for the reporting organization's operations.

# Solid Waste

All used and discarded solid material produced on board during ship operations.

# SOx

Oxides of sulfur are a family of gases produced by the combustion of fuel which contains sulfur. The quantity of oxides of sulfur is proportional to the quantity of sulfur in the fuel.

# Stakeholder

Any individual or group, within or outside a company, that has an interest in or may be impacted by that company, and that accordingly has expectations, requires information or holds legitimate economic interests.

### STCW

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, which sets qualification standards for masters, Officers and watch personnel on seagoing merchant ships.

Т

# Total Water Withdrawal

The sum of all water drawn into the boundaries of the reporting organization from all sources (including surface water, ground water, rainwater, and municipal water supply) for any use over the course of the reporting period.

# Turnover

The ratio of the number of terminations to the average employee count during the reporting period.

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CORPORATE HEADQUARTERS Carnival Corporation & plc Carnival Place, 3655 NW 87th Avenue Miami, Florida 33178-2428 U.S.A. 305-599-2600 REGISTERED OFFICE Carnival Corporation & plc Carnival House 5 Gainsford Street London SE1 2NE, United Kingdom +44 20 7940 5381

# CONTACT US

For questions or to provide feedback regarding this Sustainability Report or its contents, please contact: Elaine Heldewier, Director Sustainability Programs or Karina Hilton Spiegel, Manager Sustainability Programs at Corporate Maritime Policy Carnival Corporation & plc., 3655 N.W. 87th Avenue, Miami, Florida 33178-2428 U.S.A. or email us at: Sustainability@Carnival.com