We invite you to cruise with us, enjoy the exhilaration of ocean travel and be a part of our sustainability journey. We have a portfolio of 10 of the world's most widely recognized cruise brands, which complement each other by geography, serve nearly every segment of the cruise industry and provide our guests with virtually endless holiday choices.
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Our reputation and success depend on having sustainable and transparent operations. We continually strive to ensure cruising is the most enjoyable vacation experience possible for our guests. We sustain this commitment by keeping our guests and crewmembers safe, by protecting the environment, by developing our workforce, by strengthening our stakeholder relations, by enhancing the port communities that our ships visit and by maintaining our fiscal strength.
CRUISING

BRAND HIGHLIGHTS

We introduced three new ships in 2016: Carnival Vista for Carnival Cruise Line, ms Koningsdam for Holland America Line and AIDAprima for our German-based AIDA Cruises. Carnival Vista was designed specifically for our fun-loving Carnival Cruise Line guests with an onboard brewery experience, first-in-the-industry IMAX® Theatre and exhilarating SkyRide aerial attraction. We celebrated her U.S. arrival with an onboard concert for Operation Homefront military families featuring country music superstar Carrie Underwood. And we were honored to have Miss USA, Deshauna Barber, herself a military officer, serve as the ship’s godmother. Holland America Line’s ms Koningsdam, christened in Rotterdam by Her Majesty Queen Maxima of the Netherlands, delivers a new premium experience where our guests can blend their own wine or dance the night away in our expertly engineered Music Walk showcasing Lincoln Center Stage, Billboard Onboard and B.B. King’s Blues Club. And last but not least, AIDAprima made its debut with a spectacular light show, fireworks and memorable naming ceremony witnessed by over 1 million people gathered in Hamburg, Germany. AIDAprima resonates with AIDA’s German guests by combining leading-edge environmental attributes with exceptional guest experiences, including racing water slides, a lazy river, climbing walls, an expansive spa and an ice rink for skating, hockey, curling and even a traditional Christmas market. All three of our new ships were delivered with the latest energy efficiency technologies. We also continue to invest in our existing fleet to further enhance guest experiences, including the recent remastering of Cunard’s Queen Mary 2 and the continued roll-out of Fun Ship 2.0 across the Carnival Cruise Line fleet.

TV PROGRAMS

To increase broad awareness of and demand for cruising as a great vacation option, we launched three original TV programs airing on major U.S. networks - ABC, NBC and the CW - during the popular family-oriented programming blocks. Each program’s episodes showcase our brands providing an exceptional vacation while highlighting ocean travel as a way to experience exciting global destinations and learn about other cultures. This successful programming comes on the heels of many impactful shows – including a reality-based television series in the UK called “The Cruise” that was filmed onboard Regal Princess, and P&O Cruises’ “Battlechefs,” filmed onboard Britannia. In Italy, “Bravo Chef” was taped onboard our Costa ships and a major motion picture, “Holidays in the Caribbean,” was filmed on Costa Fortuna. In North America, Carnival Cruise Line was featured on “Wheel of Fortune” and “The Ellen DeGeneres Show.”

MESSAGE FROM THE PRESIDENT & CEO

2016 was another very successful year for our company on many fronts. We continued to operate safely and responsibly, and to produce sustained earnings improvement. Most importantly, we delivered great cruise vacations to 11.5 million guests around the world. Our guests put their trust in us to provide them with holiday memories to last a lifetime. Thanks to the commitment and passion of our shipboard and shoreside team members, along with the support of our valued travel agent partners and a global network of suppliers, we continue to consistently exceed our guests’ expectations. Through our collective efforts, we overcame significant obstacles in 2016 – including the simultaneous negative impact from fuel and currency, a series of global geopolitical challenges such as the events in Turkey, Paris and Brussels, concerns with the Zika virus outbreak and macroeconomic factors such as Brexit – to achieve the most profitable year in our history, as well as a significant number of milestones that will contribute to our future success.

As always, we remain firmly committed to being a responsible corporate citizen and continue to make meaningful progress on our 2020 sustainability goals. With our strong, ongoing focus on environmental, safety, labor and community performance, I am pleased to report that we made significant progress on our 2020 carbon reduction goal. All of our 2016 accomplishments are building blocks, which leave us well-positioned to continue our strong leadership in the cruise industry.

To our employees, I extend a warm and sincere thank you. I am constantly inspired and amazed by their extraordinary dedication, commitment to excellence and shared vision of building upon our company’s great legacy. Our goal is to consistently exceed our guests’ expectations – and through the passion of our employees from ship to shore, we deliver time and time again. I invite you to read our 2016 sustainability report and share your thoughts with us at sustainability@carnival.com

ARNOLD W. DONALD - President & CEO, Carnival Corporation & plc

The following is a summary of key sustainability events, trends and actions within our cruising, commitment and community efforts throughout the year.
ENHANCED GUEST EXPERIENCE – OCEAN MEDALLION™

As part of our continuous efforts to enhance our cruise products and services, we developed the world’s first interactive guest experience platform capable of transforming vacation travel into a highly personalized and elevated level of customized service on a large scale. In January, we were privileged to be the first travel company to deliver the opening keynote address to attendees from around the world at the Consumer Electronics Show (CES) in Las Vegas, the world’s largest trade show. There we unveiled the Ocean Medallion™, a first-of-its-kind wearable device that enables every guest to have a personal digital concierge to maximize their vacation experience. The Ocean Medallion™ bridges the physical and digital worlds to deliver a new level of personalized service not previously considered possible. The quarter-sized, 1.8-ounce disc has no on/off button, needs no charging and can be accessorized with jewelry, clips, key chains and bands, or simply carried in a pocket. We plan to roll out this new guest experience in 2017.

PIONEERING THE USE OF LIQUEFIED NATURAL GAS (LNG)

We have seven new LNG cruise ships on order. These new vessels will be part of the first generation of cruise ships to be fully powered by LNG. Pioneering a new era in the use of low carbon fuels, these new ships will use LNG to generate 100 percent of their power both in port and on the open sea - an innovation that will significantly reduce exhaust emissions to help protect the environment and support our sustainability goals. In 2016, we delivered AIDAprima, the first cruise ship in the world with a dual-fuel engine that can be powered by LNG. The ship switches to LNG while in select ports in Europe, with LNG supplied by trucks on the pier. Switching from marine diesel fuel to LNG provides many air emission benefits:

- 0 Sulfur Dioxide emissions
- 85% reduction in nitrogen oxides
- 25% reduction in Carbon emissions
- 95-100% reduction in particulate matter

As part of our strategy, we signed a framework agreement with Shell Western LNG B.V. (Shell) to be our supplier for the fuel to power our first fully LNG-powered cruise ships. We look forward to a productive partnership with Shell, which has the experience and shared commitment to quality, safety and operational efficiency needed to help us bring this innovative LNG initiative to life.

PROTECTING OUR OCEANS

As a responsible corporate citizen, we recognize that our reputation and success depend on being transparent and responsible. In December 2016, Princess Cruises, one of our brands, entered into a plea agreement with the U.S. Department of Justice as a result of irresponsible actions by some employees who violated company policies and environmental law. Together with Princess we are using this experience to further improve how we operate to protect and preserve our oceans. We are committed to environmental stewardship and are very sorry for the actions taken by a few of our employees.

ARISON MARITIME CENTER

Our employees are the heart of our operations and our goal is to be a leader in providing them with high-quality training opportunities. We have training centers located in a number of locations worldwide, and they are an essential component of our training strategy. One of these training centers is the new Arison Maritime Center, home of the Center for Simulator Maritime Training Academy, also known as the CSMART Academy. The center opened in July 2016 and honors the legacy of the Arison family, who founded and grew Carnival Corporation into the world’s largest cruise company. The new 75 million euro facility is located in the Netherlands and consists of a seven-acre campus which includes the training center and an adjoining hotel. In this world-class facility, we deliver state-of-the-art maritime training for our bridge and technical teams through cutting-edge bridge and engine room simulators.

COMMUNITY

FATHOM – TRAVELdeep™

We launched our TRAVELdeep™ brand Fathom in April 2016 with an inaugural sailing to the Dominican Republic, to give travelers meaningful opportunities to participate with locals as they tackle community driven initiatives. In this short time, our Fathom guests have already made a meaningful impact in the Dominican Republic, including planting more than 30,000 seeds and trees to support reforestation efforts, providing nearly 25,000 hours of English-language lessons to help both children and adults learn conversational English, and producing nearly 1,000 water filters to provide families with clean drinking water and reduce illness. Through Fathom, we became the first cruise company in more than four decades to begin operating voyages from the U.S. to Cuba, an effort that included a change to a long-standing practice in Cuba that no Cuban-born individual could come or go to Cuba by sea. This moment led to worldwide media coverage and billions of positive media impressions.

DIVERSITY & INCLUSION

As we continue to build a diverse and inclusive workforce, we are honored to be recognized for the third consecutive year among the top companies as a best place to work for LGBTQ equality by the Human Rights Campaign. We were also recognized by Black Enterprise Magazine as one of the 50 best companies for diversity. Additionally, as part of our initiative to improve sustainability performance in our supply chain, we revised our Business Partner Code of Business Conduct & Ethics to include our efforts to further combat slavery and human trafficking.
2020 SUSTAINABILITY GOALS

ENVIRONMENTAL • SAFETY • LABOR & SOCIAL

CARBON FOOTPRINT
Reduce the intensity of CO₂e (equivalent carbon dioxide) emissions from our operations by 25% by 2020 relative to our 2005 baseline, measured in grams of CO₂e per ALB-km.

EXHAUST GAS CLEANING TECHNOLOGY
Continue to improve the quality of our emissions into the air by developing, deploying and operating Exhaust Gas Cleaning Systems across the fleet capable of reducing sulfur compounds and particulate matter from our ship’s engine exhaust.

AWWPS TECHNOLOGY
Increase Advanced Waste Water Purification System (AWWPS) coverage of our fleet wide capacity by 10 percentage points by 2020 relative to our 2014 baseline.

COLD IRONING CAPACITY
Increase Cold Ironing coverage of our fleet wide capacity in relation to future port capabilities.

WASTE REDUCTION
Continue to reduce waste generated by our shipboard operations by 5% by 2020 relative to our 2010 baseline, as measured by kilograms of non-recycled waste per person per day.

WATER EFFICIENCY
Continue to improve water use efficiency of our shipboard operations by 5% by 2020 relative to our 2010 baseline, as measured by liters per person per day.

DIVERSITY & ETHICS
Continue to build a diverse and inclusive workforce and provide all employees with a positive work environment and opportunities to build a rewarding career to further drive employee engagement.

GUEST AND CREWMEMBER HEALTH, SAFETY & SECURITY
Striving to be free of injuries, we continue to build on our commitment to protect the health, safety and security of our guests, employees and all others working on our behalf.

BUSINESS PARTNER CODE OF CONDUCT AND ETHICS
Further develop and implement vendor assurance procedures ensuring compliance with Carnival Corporation & plc’s Business Partner Code of Conduct and Ethics.

OUR COMMUNITY
Continue to work on initiatives and partnerships that support and sponsor a broad range of organizations for the benefit of our local and global communities throughout our brands, in particular Fathom.

WWW.CARNIVALCORP.COM
CARBON FOOTPRINT **AHEAD OF SCHEDULE**
- 24.8% reduction achieved relative to our 2005 baseline.
- First cruise ship in the world to be powered by LNG while in port by trucks.
- Seven LNG fueled new builds on order.
- Expanded partnership with Wärtsilä to drive further gains in engine efficiency.

EXHAUST GAS CLEANING TECHNOLOGY **ON TRACK**
- 59% of fleet equipped with Exhaust Gas Cleaning Systems.

AWWPS TECHNOLOGY **ON TRACK**
- Increased fleet wide capacity coverage by 3.3 percentage points.

COLD IRONING CAPACITY **ON TRACK**
- 40% of fleet equipped with cold ironing capabilities.
- Continue to use LNG for cruise ship cold ironing.

WATER EFFICIENCY **LAGGING**
- Decreased impact on ports visited by producing more water from sea water.

WASTE REDUCTION **ON TRACK**
- Continued recycling partnerships and programs.

GUEST AND CREWMEMBER HEALTH, SAFETY & SECURITY **ONGOING**
- Developed procedures to control and prevent the spread of Zika virus.
- Continued to identify and roll out best occupational health and safety practices across our brands.
- Continued to support research to test the efficiency of disinfection products against norovirus.
- Standardized security training.

DIVERSITY & ETHICS **ONGOING**
- Continued to build a diverse and inclusive workforce.
- Developed and disclosed a slavery and human trafficking statement to further support human rights and the global communities our employees are from.
- Revised corporate Health, Environmental, Safety and Security policy.
- Initiated the implementation of a diversity council.

BUSINESS PARTNER CODE OF CONDUCT AND ETHICS **ONGOING**
- Revised Business Partner Code of Conduct and Ethics.
- Commenced distribution of a Supplier Evaluation Questionnaire within our supply chain.

OUR COMMUNITY **ONGOING**
- Launched our impact travel experience - Fathom - TRAVELdeep™.
- Continued partnership with The Big Brothers Big Sisters program.
- Continued partnership with The Nature Conservancy.
- Donated $2 million to the Smithsonian National Museum of African American History & Culture over a five-year period.
CRUISING
About Carnival Corporation & plc • Corporate Governance & Ethics
OUR COMPANY

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) arrangement, 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 under the symbol CCL and as an American Depository Share on the NYSE.1

OUR HISTORY

Although the name Carnival Corporation didn’t come into existence until 1994, the foundation for our company was laid when our flagship brand, Carnival Cruise Line, was formed. Carnival Cruise Line got its start in 1972 with a single ship, the Mardi Gras, a converted ocean liner. The success of the Mardi Gras was instrumental in our growth. The entrepreneurial spirit and pioneering vision of our founder, the late Ted Arison, provided a solid foundation for our company’s future.

After achieving its position as “The World’s Most Popular Cruise Line”, in 1987 Carnival Cruise Line made an initial public offering of 20 percent of its common stock which provided the initial influx of capital that allowed our company to begin expanding through acquisition.

In 2003, agreements were finalized to combine Carnival Corporation with P&O Princess Cruises plc, creating the world’s first global cruise operator - Carnival Corporation & plc. Over the years, we have acquired a leadership position in virtually every market segment of the cruise industry.

CRUISING TO CUBA

In May 2016, Carnival Corporation & plc became the first U.S. cruise operator in over 40 years to bring U.S. cruise guests directly from the U.S. to Cuba. Our guests visit three beautiful and unique destinations on the island all in one week. Our Fathom brand takes them to Havana, Cienfuegos and Santiago de Cuba. They are experiencing a wide variety of activities covering an array of interests, ranging from an orientation of Cuba’s history, costumes and culture, to geography-inspired entertainment, casual and fun personal enrichment activities, and even conversational Spanish lessons. Expanding the Cuba experience to our other brands, in February 2017, Carnival Cruise Line was granted approval to begin sailing to Cuba in June 2017. These visits will consist of overnight stays in Havana as part of four and five day cruises.

1) Carnival Corporation & plc includes divisional brand Carnival Cruise Line, referred to in this report as “Carnival Cruise Line.”
SERVICES AND OPERATING STRUCTURE

Each of our brands is a leader in its respective market segment, has a well-known brand name and has a responsibility to operate sustainably as part of our strategy. We manage the company in a “Group” or “Operating Line” structure. During 2016, the following Carnival Corporation & plc Operating Lines operated and managed one or more of our cruise brands:

- Carnival Cruise Line.
- Carnival UK, which operates Cunard, P&O Cruises (UK) and shares responsibilities for Fathom’s operation.
- Costa Group, which operates AIDA Cruises and Costa Cruises.
- Holland America Group, which operates Holland America Line, P&O Cruises (Australia), Princess Cruises, Seabourn and shares responsibilities for Fathom’s operation.

In addition to our cruise operations, we own Holland America Princess Alaska Tours, the leading tour company in Alaska and the Canadian Yukon, which complements our Alaska cruise operations. Our tour company owns and operates hotels, lodges, glass-domed railcars and motorcoaches. We also operate a portfolio of leading port destinations and private islands in select geographies around the world.

Additional details relating to our company, Corporate Operating Structure and organization are disclosed in the Carnival Corporation & plc 2016 Annual Report to Shareholders and in our Annual Report on Form 10-K on the Carnival Corporation & plc website: www.CarnivalCorp.com

SCALE OF ORGANIZATION

We employ over 84,600 crew members on board our ships at any given time. Our shoreside operations employ approximately 10,500 full-time and 2,100 part-time/seasonal employees. As of January 19, 2017, we operated 102 cruise ships, with a total passenger capacity (based on double occupancy) of 221,000 guests.

We are among the largest, most profitable and financially strong leisure travel companies in the world with a market capitalization of over $38 billion at January 19, 2017. Our FY2016 revenues were approximately $16.4 billion and total assets as of November 30, 2016 were approximately $38.9 billion. In 2016, we took 11.5 million guests on vacation. Our products provide our guests with exceptional vacation experiences at an outstanding value.

We continue to grow our presence in established markets and increase our penetration in developing markets, such as Asia. We believe that we have significant opportunities to continue to profitably grow our presence in China due to its large and growing middle-class population, expansion of its international tourism and the government’s plan to support the cruise industry. Including the introduction of a Princess Cruises ship, the Majestic Princess built specifically for Chinese guests in 2017, 6% of our total capacity will be deployed in China.
FLEET AND ORGANIZATIONAL DYNAMICS

We are building new, innovative, purpose-built ships that are larger, more fuel efficient, have a greater number of balconies and present a wider range of onboard amenities and features. These ships further enhance the attractiveness of a cruise vacation while achieving greater economies of scale and resulting in improved returns on invested capital.

During FY2016, we added four new ships and removed one ship:

- **AIDAprima** was added to AIDA Cruises
- **Carnival Vista** was added to Carnival Cruise Line
- **ms Koningsdam** was added to Holland America Line
- **Seabourn Encore** was added to the Seabourn fleet and began cruising in FY2017
- **Ocean Princess** left the fleet

As of January, 2017, we have a total of 19 cruise ships scheduled to be delivered between 2017 and 2022. Some of these ships will replace existing capacity as less efficient ships exit our fleet. We continue to make substantial investments in our existing ship enhancement programs to improve our onboard product offerings and enrich our guests’ vacation experiences.

In an effort to extend our commitment to sustainability and to play a leading role in matters of environmental protection in the cruise industry, we are expanding our investment in the use of low carbon fuels, in particular, liquefied natural gas (LNG). We have seven next-generation cruise ships on order that will be the first in the industry to be powered at sea by LNG. **Pioneering a new era in the use of low carbon fuels, these new ships will use LNG to generate 100 percent of their power both in port and on the open sea - an innovation that will reduce carbon emissions to help protect the environment.**

In December 2016, Alan B. Buckelew, who has served as Carnival Corporation & plc’s Chief Operations Officer, based in Shanghai since 2014, returned to the U.S. in a new role as Chief Information Officer. With this change Michael Thamm, Group CEO, Costa Group and Carnival Asia, now oversees operations in China as part of his expanded role. Thamm has been Group Chief Executive Officer of Costa Group since 2012 and of Carnival Asia since December 2016. In this capacity, he is responsible for Costa and AIDA and management oversight of all Asia operations.

In December 2016, Jan Swartz was promoted to Group President, Princess Cruises and Carnival Australia to further drive coordination across the seven Carnival Corporation brands in the Australia/New Zealand region. Swartz’s portfolio, in addition to leading Princess Cruises, includes responsibility for the Carnival Australia shared services for the Carnival Corporation brands operating in and sourcing from Australia. She also directly oversees the P&O Cruises Australia brand.

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

---

**ALAN B. BUCKELEW**
Chief Information Officer
Carnival Corporation & plc

**JAN SWARTZ**
Group President
Princess Cruises and Carnival Australia

**MICHAEL THAMM**
Group CEO
Costa Group and Carnival Asia
OUR NEWEST SHIPS

New advancements and innovations in cruise ship design is helping our fleet become more comfortable and environmentally friendly.

AIDA

AIDAprimais the world’s first cruise ship that can be operated while in port with liquefied natural gas (LNG) which has a lower carbon profile and cleaner emissions compared to conventional marine fuels. Click here to learn more.

Carnival

Carnival Vistais the first Carnival Cruise Line ship to achieve the “ECO Notation” designation by classification society Lloyds Register. This notation recognizes its environmental design and operation. Click here for a virtual tour.

Holland America Line

ms Koningsdam debuts several innovative concepts and new public spaces and venues. The ship features Holland America Line’s first purpose-built staterooms for families and solo travelers. Click here to learn more.

Seabourn

Designed by hospitality design icon Adam D. Tihany, Seabourn Encore features modern design elements and innovations in keeping with Seabourn’s reputation for understated elegance. Click here for a first look.
ENHANCED GUEST EXPERIENCE – OCEAN MEDALLION™

We have successfully delivered innovative products & experiences to our guests for more than four decades. Our continuous innovation with ship design allows our guests to enjoy carefully crafted experiences while effortlessly en-route to their next port-of-call. And our leading port development efforts have opened new locations and experiences to our guests.

At the forefront of innovation and our continuous efforts to enhance our cruise products and services, we unveiled in January 2017, an interactive guest “Experience Platform” to enable elevated service levels through enhanced guest interactions before, during and after cruise vacations. The Ocean Medallion™ and its ecosystem will enable personalized and customized guest experience on a level not previously considered possible by interacting with thousands of sensors, kiosks, interactive surfaces and smart devices. With this innovation, from the moment our guests first engage with us, their experiences will seamlessly be powered by their preferences.

The Experience Platform leverages multiple technologies that work together to transform the guest experience and includes the following key elements:

- **Ocean Medallion™** - a revolutionary wearable device that enables a highly personalized vacation experience
- **Ocean Compass** - a digital concierge that works in conjunction with Ocean Medallion to create the ultimate vacation experience
- **xiOS** - an invisible network of interactive intelligent sensors and embedded devices mounted throughout the ship, home ports and destinations that uses a guest-centric, Internet of Things approach to enable a seamless guest experience

The new guest experience platform will debut on *Regal Princess* in November 2017, followed by *Royal Princess* and *Caribbean Princess* in early 2018.
# GRAND TOTALS

**FY2016 Business Dimensions & Direct Economic Value Generated and Distributed**

## BUSINESS DIMENSIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF GUESTS</strong></td>
<td>11.5 MILLION</td>
</tr>
<tr>
<td><strong>GUEST CAPACITY</strong></td>
<td>221,000</td>
</tr>
<tr>
<td><strong>NUMBER OF SHIPS</strong></td>
<td>102</td>
</tr>
<tr>
<td><strong>AVERAGE NUMBER OF EMPLOYEES</strong></td>
<td>97,200</td>
</tr>
</tbody>
</table>

## FINANCIAL DATA

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td>$16.4 BILLION</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td>$38.9 BILLION</td>
</tr>
<tr>
<td><strong>PAYROLL AND RELATED</strong></td>
<td>$2.0 BILLION</td>
</tr>
<tr>
<td><strong>INTEREST EXPENSE, NET OF CAPITALIZED INTEREST</strong></td>
<td>$0.2 BILLION</td>
</tr>
<tr>
<td><strong>OPERATING COSTS</strong></td>
<td>$13.3 BILLION</td>
</tr>
<tr>
<td><strong>DIVIDENDS</strong></td>
<td>$1.0 BILLION</td>
</tr>
</tbody>
</table>

1. As of November 30, 2016 Annual Report on Form 10-K
2. Capacity is based on two guests per cabin
3. Additional financial data can be found in the 2016 Annual Report on Form 10-K

## CONTACT US

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

Elaine Heldewier, Director Sustainability Programs
Karina Hilton Spiegel, Manager Sustainability Programs
Maritime Policy & Analysis at Carnival Corporation & plc
3655 N.W. 87th Avenue, Miami, Florida 33178-2428 U.S.

Email: Sustainability@Carnival.com
Although our Cruise Brands are different in terms of product, style and amenities, they share several traits – each is one of the most successful in its respective area, has a well-known brand name, and has a responsibility to operate sustainably as part of our strategy. Leadership, visibility and shared responsibility unite our cruise brands.

### OUR BRANDS at a glance

<table>
<thead>
<tr>
<th>Brand</th>
<th>Homeport(s)</th>
<th>Total # of Ships</th>
<th>Distinct Ports Visited</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AIDA</strong></td>
<td>Rostock, Germany</td>
<td>11</td>
<td>200+</td>
</tr>
<tr>
<td><strong>CARNIVAL</strong></td>
<td>Miami, FL, USA</td>
<td>25</td>
<td>120+</td>
</tr>
<tr>
<td><strong>COSTA</strong></td>
<td>Genoa, Italy</td>
<td>15</td>
<td>250+</td>
</tr>
<tr>
<td><strong>CUNARD</strong></td>
<td>Southampton, UK</td>
<td>3</td>
<td>190+</td>
</tr>
<tr>
<td><strong>FATHOM</strong></td>
<td>Seattle, WA, USA</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>HOLLAND AMERICA LINE</strong></td>
<td>Seattle, WA, USA</td>
<td>14</td>
<td>400+</td>
</tr>
<tr>
<td><strong>P&amp;O CRUISES</strong></td>
<td>Southampton, UK</td>
<td>7</td>
<td>200+</td>
</tr>
<tr>
<td><strong>P&amp;O AUSTRALIA</strong></td>
<td>Sydney, Australia</td>
<td>5</td>
<td>80+</td>
</tr>
<tr>
<td><strong>PRINCESS CRUISES</strong></td>
<td>Santa Clarita, CA, USA</td>
<td>17</td>
<td>350+</td>
</tr>
<tr>
<td><strong>SEABOURN</strong></td>
<td>Seattle, WA, USA</td>
<td>4</td>
<td>300+</td>
</tr>
</tbody>
</table>
As part of our supply chain initiatives to improve sustainability performance:

• We revised our Business Partner Code of Conduct and Ethics to include our commitment to comply with the United Kingdom’s Modern Slavery Act of 2015. This Act requires companies to disclose information regarding their efforts to combat slavery and human trafficking in their supply chain and within their business. Our employees are subject to and are expected to follow our Code of Business Conduct and Ethics. We also expect our business partners to adopt and incorporate these commitments into their own organizations.

• Our purchasing and sourcing departments began utilizing a Supplier Evaluation Questionnaire (SEQ) to assist our evaluation of business partner ethics, compliance, sustainability and other risks.

2020 GOAL & UPDATE:
Business Partner Code of Conduct and Ethics
Further develop and implement vendor assurance procedures ensuring compliance with Carnival Corporation & plc’s Business Partner Code of Conduct and Ethics.

As part of our supply chain initiatives to improve sustainability performance:

• We revised our Business Partner Code of Conduct and Ethics to include our commitment to comply with the United Kingdom’s Modern Slavery Act of 2015. This Act requires companies to disclose information regarding their efforts to combat slavery and human trafficking in their supply chain and within their business. Our employees are subject to and are expected to follow our Code of Business Conduct and Ethics. We also expect our business partners to adopt and incorporate these commitments into their own organizations.

• Our purchasing and sourcing departments began utilizing a Supplier Evaluation Questionnaire (SEQ) to assist our evaluation of business partner ethics, compliance, sustainability and other risks.

FY2016 CORPORATE GOVERNANCE & ETHICS PERFORMANCE

BOARDS OF DIRECTORS
Quarterly performance data, including relevant summaries and trends, are reported to our corporate and brand management, Board-level Committees and Boards of Directors. Specifically, the health, environment, safety and security (HESS) committees are briefed by management on the status, progress of and plans for HESS and sustainability related matters as well as on HESS audit results.

TRANSPARENCY
As part of our transparency efforts, we disclose key environmental and social data in our annual reports as well as in the performance summary on pages 80-83 of this report.

HESS POLICY
We revised our corporate Health, Environmental, Safety, Security (HESS) and Sustainability policy (see page 107) to further detail our commitment to risk mitigation, business partner compliance, prohibition of retaliation and to require employees to report any inability to comply with requirements (company, legal or statutory).
FINES AND SANCTIONS

- We did not receive any sanctions or significant fines for non-compliance with non-environmental laws and regulations.

- On December 1, 2016, Princess Cruises, one of our brands entered into a plea agreement with the U.S. Department of Justice with respect to environmental violations of federal laws by the Caribbean Princess. As part of the plea agreement, Princess will pay a $40 million fine. For more details please visit: www.princess.com/news/notices_and_advisories/cbresponse

The amount of environmental fines paid and sanctions is disclosed in the Performance Summary of the report on page 81.

BOARD MEMBER DIVERSITY

Our Boards are comprised of ten Directors, two with Executive functions and eight Non-Executive Directors. In 2016, a female Non-Executive Director joined the Boards, increasing the number of female Board members to three, representing 30% of board members. For profiles of all the current members, please visit our website at www.CarnivalCorp.com.

ARISON MARITIME CENTER

We opened the Arison Maritime Center, the new home of the Center for Simulator Maritime Training Academy, also known as the CSMART Academy. CSMART’s mission is to be a leader in developing and delivering the best professional training in the maritime industry. With its new scale, technology and equipment, and innovative training approach, the new facility is the most progressive maritime center of its kind in the world for training. It will enable us to continuously improve upon our industry-leading safety and excellence practices. See pages 34-35 for more details.

BOARDS OF DIRECTORS SPOTLIGHT

Sir John Parker – Chairman, HESS Committee

Sir John Parker has served on Carnival Corporation & plc’s Boards of Directors since 2003. Sir John’s qualifications to serve on the Boards include an extensive international background and wealth of corporate experience. He has served as CEO, Chairman or Non-Executive Director in over 20 major UK and global companies and chaired five FTSE 100 companies. He studied naval architecture and mechanical engineering at the Belfast College of Technology and Queens University in Belfast, Northern Ireland. He has also received honorary doctorates from a number of universities in the UK and Ireland and in 1983 was elected a Fellow of the Royal Academy of Engineering and was president of the Academy from 2011 to 2014. He was Knighted in 2001 for services to shipbuilding and the defense industries and in 2012 was made a Knight Grand Cross of the order of the British Empire (GBE) for services to industry and the voluntary sector.

Sir John first served on the Carnival Corporation & plc Boards of Directors Audit Committees. He was later instrumental in consultation with the Chairman Micky Arison in identifying the need for and the establishment of a Health, Environment, Safety and Security (HESS) Committees of the Carnival Corporation & plc Boards of Directors. He has been the Chair of the HESS Committees fo over 10 years and is also a member of the Nominating & Governance Committee of the Boards.

Throughout his years of service to the Boards of Directors, his vision and foresight have been a significant influence on the Carnival Corporation & plc management team, in many cases resulting in positive changes in the HESS area. Sir John was an early advocate for the development of the Arison Maritime Center and a driving force behind management’s decision to integrate best practices and procedures into a single corporate-wide safety management and audit tracking system. These examples are a reality today in large part due to Sir John’s leadership and highlight his significant contributions to the success of the Carnival Corporation & plc organization.
OUR COMMITMENT

We recognize our responsibility to provide industry leadership and to conduct our business as a responsible corporate citizen. We are committed to achieving and maintaining the highest standards of professional and ethical conduct. Adherence to the rule of law, ethical working practices, good corporate governance and transparency are extremely important to our stakeholders, and they are central to our sustainable business success.

Our 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 and the UK. They are regulated by these countries and by the international conventions that govern health, environmental, safety and security matters in relation to guests, crew members and the ships themselves.

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. The Summary of Key Regulations Governing Our Operations on pages 92-106 summarizes 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 we comply.

OUR STRATEGY

The daily operations of our company are executed by our employees under the direction and supervision of our President and Chief Executive Officer, Arnold W. Donald, and the CEOs and Presidents of each of our brands. Micky Arison is Chairman of the Boards. Our Boards of Directors are responsible for governance of our performance and strategies. We provide further details in the Corporate Governance section on our website and in the annual Proxy Statement at www.CarnivalCorp.com, including:

- 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.
- The process for determining the required qualifications and expertise of the members of the Boards of Directors.
- The processes for evaluating the performance of the Boards of Directors.
- Linkages between compensation for members of the Boards of Directors, Executives and Senior Managers, and the company’s performance.

We have policies and safeguards in place and promote high ethical standards. Our policies meet or exceed regulatory requirements. Our leadership is committed to our Code of Business Conduct and Ethics and our Business Partner Code of Business Conduct and Ethics, which require that every employee, members of the Boards of Directors, and business partners use sound judgment, maintain high ethical standards and demonstrate honesty in all business dealings. As part of our ethics program, we conduct periodic risk assessments and audits that cover our corporate entity, as well as our brands and business units. Risk assessment and audit results help us direct and focus our compliance resources and work plans to address identified compliance risk.

Integrity is a fundamental value for all business units. Our employees are informed about our Code of Business Conduct and Ethics when they are hired and are required to complete training to aid in their understanding of the company’s expected standards of behavior.
MISSION
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.

OUR VALUES
Given our global reach and impact, we are committed to the following health, environment, safety, security and sustainability core values:

• Protecting the health, safety and security of our passengers, guests, employees and all others working on our behalf, thereby promoting an organization that always strives to be free of injuries, illness and loss.

• Protecting the environment, including the marine environment in which our vessels sail and the communities in which we operate, striving to prevent adverse environmental consequences and using resources efficiently and sustainably.

• Complying with or exceeding all legal and statutory requirements related to health, environment, safety, security and sustainability throughout our business activities.

• Assigning health, environment, safety, security (HESS) and sustainability matters the same priority as other critical business matters.

Our 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. Senior management reviews this HESS Policy at least annually. If changes are warranted, it will be updated; otherwise the policy remains unchanged. The full text of our HESS Policy can be found on page 107, as well as on our website at www.CarnivalCorp.com.
COMMITMENT
Risk Management • Safety • Health • Security • Environmental Management
Energy & Emissions • Water Management • Waste Management • Biodiversity
Risk management is ingrained in our corporate culture. Effective risk management strategies allow us to identify impacts, risks and opportunities, thereby helping us to mitigate risks while executing our business strategies.

2020 GOAL & UPDATE:
Business Partner Code of Conduct and Ethics
Further develop and implement vendor assurance procedures ensuring compliance with Carnival Corporation & plc’s Business Partner Code of Conduct and Ethics.

As part of our supply chain initiatives to improve sustainability performance:

- We revised our Business Partner Code of Conduct and Ethics to include our commitment to comply with the United Kingdom’s Modern Slavery Act of 2015. This Act requires companies to disclose information regarding their efforts to combat slavery and human trafficking in their supply chain and within their business. Our employees are subject to and are expected to follow our Code of Business Conduct and Ethics. We also expect our business partners to adopt and incorporate these commitments into their own organizations.

- Our purchasing and sourcing departments began utilizing a Supplier Evaluation Questionnaire (SEQ) to assist our evaluation of business partner ethics, compliance, sustainability and other risks.

FY2016 RISK MANAGEMENT PERFORMANCE

HESS AUDITS
Quarterly, the Boards of Directors Health, Environment, Safety and Security (HESS) Committees are briefed by management on the status, progress of and plans for HESS and sustainability-related matters, as well as on HESS audit results. HESS audit results are used to determine compliance, improve effectiveness and efficiency, analyze trends, support new-build and retrofit decisions, and promote best management practices.

FLEET CAPTAIN AND FLEET ENGINEER PROGRAM
We continue our Fleet Captain and Fleet Chief Engineer program, which provides regular training and mentoring for our shipboard staff, provided by our top shipboard officer performers who rotate through the program.
FLEET OPERATIONS CENTER
We opened the second of three planned state of the art Fleet Operations Centers (FOC) in Seattle, U.S. This FOC is equipped with the most advanced ship to shore communications technologies available. The first FOC was opened in Hamburg, Germany in 2015. The third FOC will be located in Miami, U.S. and is expected to open by the end of 2017. These centers are designed to assist our captains, chief engineers, and deck and engineering officers with digital support, control and planning of all nautical and technical operations. The centers are staffed 24 hours a day, allowing for improved communications between the ship and shore, and providing immediate support to our ships for route planning, maritime safety and risk management.

AUDITING
Our ships are regulated by various international, national, state and local laws, regulations and treaties enforced in the jurisdictions in which they operate. Compliance with these laws and regulations is verified through inspections, surveys and audits:

• Independent third-party regulatory compliance is performed periodically through inspections, surveys and audits conducted by representatives from each ship’s country of registry, Port State and Classification Societies.

• Internal regulatory compliance audits are conducted annually on each brand’s head office and 100% of our fleet by Carnival Corporation & plc’s Risk Advisory and Assurance Services department. All audit observations, findings and non-conformities are reported to the brands and to relevant corporate groups for review and resolution.

• Internal regulatory compliance audits are also performed on a rotational basis across our ports, hotels and land transport assets.

• Specific internal focus reviews designed to mitigate identified risks are performed based on a combination of incidents root cause analysis, prior audit results and discussion with management.

TRACKING AND DATA-ANALYSIS PLATFORM
We implemented a state of the art tracking and data-analysis platform that enables real-time information sharing between our ships and shoreside teams trained to support fleet operations. The proprietary system significantly improves communication from ship to shore, providing new capabilities for enhancing the safe passage of ships at sea while improving operational efficiencies and supporting overall environmental initiatives. The platform manages risks by providing the company visual representations of ships routing, real-time navigational notification, integrated weather data and traffic information.

ARISON MARITIME CENTER
We opened the Arison Maritime Center, the new home of the Center for Simulator Maritime Training Academy, also known as the CSMART Academy. CSMART’s mission is to be a leader in developing and delivering the best professional training in the maritime industry. This world-class facility equipped with the latest technology and equipment provides rigorous safety training for bridge and engineering officers responsible for the navigation and operation of the world’s largest fleet of cruise ships. CSMART participants receive a maritime training experience that fosters critical thinking, problem solving, ethical decision making and skill development. See pages 34-35 for more details.
OUR COMMITMENT

Like companies in any industry, we face a number of challenges and opportunities related to our performance, including the regulatory environment, global political and socioeconomic landscape and the advancement of science and technology. We take an active approach to identifying risks and opportunities and use a variety of strategies to manage and take advantage of them. We work to identify the best approaches to managing these issues, while simultaneously focusing on our sustainability performance and addressing the interests of our stakeholders.

OUR STRATEGY

Risk management is embedded throughout our organization. Our strategy to manage our risks and seek out opportunities consists of a system of internal controls comprised of our management systems, organizational structures, audit processes, standards, and our Code of Business Conduct and Ethics. Risks are managed at every level of the organization and discussed openly with leadership in order to minimize the impact of foreseen and unforeseen events. We also have dedicated departments with responsibility for advising and assisting upper management and the Boards of Directors on corporate risk management issues and for providing assurance of compliance with our health, environment, safety, security and sustainability policies and procedures.

Our key impacts, risks and opportunities are addressed throughout this report. The following is a partial list of our impacts, risks and opportunities:

- Protecting the health and safety of our guests and crew.
- Ensuring the security of our guests, crew and ships.
- Building and maintaining trust and integrity in our supply chain.
- Preserving the natural environment.
- Remaining transparent in our sustainability performance accountability and reporting.
- Recruiting, training and retaining qualified employees.
- Operating in a changing geopolitical climate.
- Improving our performance through technological solutions and initiatives.
- Conserving fuel and minimizing engine emissions.
- Climate change - reducing greenhouse gas (GHG) emissions.
- Operating in an evolving regulatory landscape.
- Improving natural resource management.
- Strengthening stakeholder engagement.
- Partnering with communities/ports-of-call.

Our health, environment, safety, security and sustainability principles focus on prevention, implementation, detection, feedback and improvement. We plan and establish objectives and processes necessary to achieve the required and expected results. We then implement the established plan and processes. Studying the actual results of implementation and comparing against the expected results, we then take action on significant differences between actual and planned results. Finally, we analyze these differences to determine their root causes and then determine where to apply changes that will improve the process or results.

Risks and opportunities are identified by management using a holistic risk framework and a risk management capability model aligned with the organization’s strategy and Board/management priorities. This framework is part of the Enterprise Risk Management (ERM) program, which is facilitated by the Risk Advisory and Assurance Services (RAAS) department.

Risk prioritization occurs by actively engaging management and the Boards of Directors to determine which risks within the ERM risk framework are appropriate for further evaluation. Therefore, the ERM program acts as a catalyst for supporting the business to recognize and manage risks that could affect the ability to achieve objectives, as well as to identify the capabilities needed to effectively manage those risks, which in turn increase the chance of success. It is through this evaluation process that opportunities to manage risks are identified.

Pursuant to this program, the RAAS department works closely with management to perform annual assessments, identify risks and evaluate controls to ensure compliance with company policies and procedures, as well as laws and regulations. Management reviews the assessments and updates with the Audit Committees.
Safety is paramount to our business and our Fleet Operation Centers (FOC) are an essential component of our safety strategy. A first in the cruise and commercial maritime industry, our FOCs are designed to assist our captains, chief engineers, and deck and engineering officers with digital support, control and planning of all nautical and technical operations. We currently have two FOCs in operation. The first FOC was opened in Hamburg, Germany in 2015 and the second was opened in Seattle, U.S. in 2016. Both centers provide real-time support for our fleet of 102 ships. A third FOC will be added to the global network by the end of 2017 and will be located in Miami, U.S.

The centers are staffed 24 hours a day, allowing for improved communications between the ship and shore, and providing immediate support to our ships. The FOCs are also equipped with a state of the art tracking and data-analysis platform that enables real-time information sharing between our ships and shoreside teams trained to support fleet operations. The system provides new capabilities for enhancing the safe passage of ships at sea while improving operational efficiencies and supporting overall environmental initiatives. The system also manages risks by providing the company with visual representations of ships routing, real-time navigational notifications, integrated weather data and traffic information.

The advanced system captures thousands of data points and provides real-time analytics for distinct parameters for navigational safety from each ship, and focuses on the following strategic areas to optimize safety, efficiency and overall fleet performance:

- **Nautical Operations & Safety** – including the capability to see real-time radar visuals, stability conditions, automation, the Safety Management and Command System, and webcams from each ship, along with GPS location, routing, ship conditions and weather data.
- **Procedural Optimization & Efficiency** – including speeds, navigational data and engine conditions.
- **Environmental Performance** – including fuel and energy usage, emissions levels and water and waste management.

Our teams have done a remarkable job in developing the FOCs and the data analysis and tracking platform. Together they enable us to further enhance safety and improve operational excellence using real-time data in ways that have never been done in the cruising and commercial maritime industries.
Carnival Corporation & plc’s employees are the heart of the company’s operation. We have training centers located in a number of geographical locations worldwide, and they are an essential component of our training strategy. One of these training centers is the Arison Maritime Center, the new home of the Center for Simulator Maritime Training Academy, also known as the CSMART Academy. This center opened in 2016 and honors the legacy of the Arison family, who founded and grew Carnival Corporation & plc into the world’s largest cruise company.

The new 75 million euro facility is located in the Netherlands. The centerpiece of the seven acre campus is a new and more than two-times-larger CSMART Academy that began operations in 2009. With its new scale, technology and equipment, and innovative training approach, the new facility is the most progressive maritime center of its kind in the world for training and continually improving industry-wide safety and excellence.

**THE NEW CSMART ACADEMY**

The new CSMART Academy features state-of-the-art equipment and instructional tools to provide deck, engineering and environmental officers with a superior maritime training experience that will foster critical thinking, problem solving, decision making and confidence. The CSMART Academy offers four full-mission bridge simulators, eight part-task bridge simulators, four full-mission engine rooms with 12 virtual engine rooms and 24 part-task engine simulators. Additionally, there are 16 full-service instructional classrooms and eight de-briefing rooms of various sizes. The simulators provide a wide array of programming and simulated exercises for various maritime scenarios. Next to 12 cruise ship models, the simulators contain 60 sailing areas and ports around the world, including Los Angeles, New York, Miami, Singapore, Stockholm and Glacier Bay, Alaska that are specific for our cruise vessels.
CSMART HOTEL

The CSMART Academy has its own hotel to accommodate participants during their training. The CSMART Hotel is located next to the training center and has a capacity of 176 rooms.

BRIDGE SIMULATORS

The CSMART Academy’s new full-mission bridge simulators are modeled after the newly designed bridge of the ms Koningsdam ship from our Holland America Line brand, which began sailing in 2016. The simulators underwent more than 15 months of intensive development to ensure the visuals and operational characteristics closely model today’s technologically advanced cruise ships, providing an authentic shipboard experience for participants to build skills in navigating complex control and automation systems. The simulators can virtually transport officers to 60 ports around the world to gain real-world education and training in the intricacies and challenges of navigation. The simulators provide a wide array of scenarios and sea conditions including ship traffic, aircraft interference, weather events and wildlife circumvention.

ENGINE ROOM SIMULATORS

The full-mission engine control room simulators facilitate exercises in all phases of engine control room and engine room operation. They also feature four ground-breaking interactive multimodal machinery outstations that represent the systems and equipment critical to engine room operations. The full-mission engine room simulators are based on actual ship layouts and systems, scaled to size and representing a diesel electric engine room comprising six diesel generators and two propulsion motors, along with ancillary and auxiliary equipment. These simulators allow trainees to navigate their way around the actual engine room of a ship to operate and repair equipment, with the genuine sights, sounds and even temperatures found in a cruise ship’s engine room. Engineering Officers also work on the all-important communications with the Chief Engineer overseeing the team in the engine control room.

PROFICIENCY TRAINING AND ASSESSMENT PROGRAM

The new Arison Maritime Center provides the additional space needed to implement the industry’s first Proficiency Training and Assessment (PTA) program. Launched in 2017, the weeklong program is based on a specially developed curriculum that annually refreshes and then evaluates each of the maritime officers from each of our brands.

The PTA program is a new concept in the cruise industry. In other safety-critical industries such as aviation and nuclear power, similar programs have been in place for some time. The program is ultimately designed to ensure that officers are kept well-informed of emerging changes to best practices, equipment and regulations while they are also assessed on the knowledge required for the performance of their duties.

PIONEERING THE TEAM-BASED APPROACH

Referred to as function-based bridge and engine room management, the approach is based on roles rather than ranks, with the officers operating as a coordinated team, with each officer assigned a role for specific functions. The system builds on the airline industry model by using navigator and co-navigator roles. The navigator, who is steering the ship, is required to verbally communicate intentions to the co-navigator, who has prior experience in the navigator role and whose tasks include monitoring, cross-checking and supporting the navigator. As needed, they are supported by the operations director, which is the Captain or his or her highest ranking officer, who maintains an overview and provides guidance and who can step in at any time depending on the circumstances. There is also an administrator to manage alarms and internal communications. A helmsman and a lookout complete the team.

As part of the team-based approach, the CSMART Academy introduced new ways of communicating intentions designed to reduce confusion. In a departure from past protocol, this includes encouraging team members of all ranks and seniority to speak up to challenge or question a decision. It also includes a concept called “Thinking Aloud,” used by the navigator to verbalize intentions, reasons and expected outcomes.

For more information on the Arison Maritime Center, visit our website at www.csmartalmere.com
SAFETY

Safety is paramount to our business’ success and we focus on delivering safe operations fleet-wide every day. We are fully committed to the safety of our guests, employees and all others working on our behalf. We take this responsibility seriously and continuously evaluate ways to further improve and build a culture where safety is always intrinsic in everything we do.

2020 GOAL & UPDATE:
Guest and Crewmember Health, Safety & Security

Striving to be free of injuries, we continue to build on our commitment to protect the health, safety and security of our guests, employees and all others working on our behalf.

We continue to build on our commitment to protect the health, safety and security of our guests, employees and all others working on our behalf by continuing to learn and share best safety practices via a number of cross brand safety focus groups that meet regularly both ashore and onboard our ships. These include groups that leverage our combined knowledge in the Occupational Health & Safety of both our guests and crew members, Marine & Nautical Safety, Technical Safety and the Safety and Reliability of Life Saving Systems.

FY2016 SAFETY PERFORMANCE

MONITORING
Management monitors safety performance through a weekly company-wide safety performance dashboard and monthly meetings designed to evaluate trends and assess performance.

EMERGENCY RESPONSE EFFICIENCY
To improve the efficiency of accounting for personnel in emergency situations, we began to equip our fleet with electronic mustering systems, which are designed to deliver a faster and more efficient mustering process and provide accurate, real time measurement of assembly and evacuation.

INVESTMENTS
As part of our commitment to safety, we have invested over $500 million over the past years to further improve the safety and reliability of our ships.

SAFETY MANAGEMENT SYSTEM
We completed the integration of our brands’ best practices and procedures into a single corporate-wide safety management system to ensure a consistent safety management approach across all of our brands.
FIRE PREVENTION
The majority of our fleet has been upgraded with the latest engine room fire prevention, detection and suppression technologies and a second phase of risk reduction measures was rolled out across our fleet. These measures include:
- Video analytics software to detect smoke, fuel mist and flame
- Fuel vapor hydrocarbon detection systems.
- Double-walled flexible fuel hoses designed to provide advanced warning of leaks.
- Ensuring important power and signal cables are routed away from potential fire sources.

GUEST AND CREW TENDERS
In order to enhance the level of operational safety of tenders, they were equipped with the following:
- Audio broadcasting systems
- Automatic Identification Systems (AIS)
- Depth Finders
- Engine compartment Smoke Detectors
- Additional Safety Signage

AUDITING
Our ships are regulated by various international, national, state and local laws, regulations and treaties enforced in the jurisdictions in which they operate. Compliance with these laws and regulations is verified through inspections, surveys and audits as follows:
- Independent third-party regulatory compliance is performed periodically through inspections, surveys and audits conducted by representatives from each ship’s country of registry, Port State and Classification Societies.
- Internal regulatory compliance audits are conducted annually on each brand’s head office and 100% of our fleet by Carnival Corporation & plc’s Risk Advisory and Assurance Services department. All audit observations, findings and non-conformities are reported to the brands and to relevant corporate groups for review and resolution.
- Internal regulatory compliance audits are also performed on a rotational basis across our ports, hotels and land transport assets.
- Specific internal focus reviews designed to mitigate identified risks are performed based on a combination of incidents root cause analysis, prior audit results and discussion with management.

TRACKING AND DATA-ANALYSIS PLATFORM
We implemented a state of the art tracking and data-analysis platform that enables real-time information sharing between our ships and shoreside teams trained to support fleet operations. The proprietary system significantly improves communication from ship to shore, providing new capabilities for enhancing the safe passage of ships at sea while improving operational efficiencies and supporting overall environmental initiatives. The platform manages risks by providing the company visual representations of ships routing, real-time navigational notification, integrated weather data and traffic information.

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FLEET OPERATIONS CENTER
We opened the second of three planned state of the art Fleet Operations Centers (FOC) in Seattle, U.S. This FOC is equipped with the most advanced ship to shore communications technologies available. The first FOC, was opened in Hamburg, Germany in 2015. The third FOC will be located in Miami, U.S. and is expected to open by the end of 2017. These centers are designed to assist our captains, chief engineers, and deck and engineering officers with digital support, control and planning of all nautical and technical operations. The centers are staffed 24 hours a day, allowing for improved communications between the ship and shore, and providing immediate support to our ships for route planning, maritime safety and risk management.
WE TAKE OUR RESPONSIBILITY TO ENSURE THE SAFETY OF OUR 11.5 MILLION GUESTS ANNUALLY VERY SERIOUSLY AND CONTINUOUSLY EVALUATE WAYS TO FURTHER IMPROVE AND BUILD A CULTURE WHERE SAFETY IS ALWAYS INTRINSIC IN EVERYTHING WE DO.
OUR COMMITMENT

Part of our company vision is to deliver safe and enjoyable vacations for our guests while ensuring the safety of our crew who work and live on board our ships. We have developed and implemented Standardized Safety Policies and Procedures that go beyond compliance with the International Maritime Organization’s Safety of Life at Sea (SOLAS) requirements. All of our occupational health and safety management systems are based on and incorporate the principles and practices delineated in OHSAS 18001:2007, the world’s most recognized occupational health and safety management system standard. In fact, several of our brands have obtained voluntary third-party certification in accordance with the OHSAS 18001 standard. We continually update our safety standards and practices by leveraging the expertise across our brand teams to introduce improved training procedures, incorporate new knowledge and learnings, identify and implement best management practices and evaluate new technologies.

Our maritime classification societies establish and maintain rules and regulations for the construction and maintenance of our ships. Our vessels and safety equipment are regularly inspected by each ship’s classification society, flag administration, port state control inspectors and internal auditors to verify that safety standards are met. Our ships are equipped with automated fire detection and suppression systems in all staterooms, galleys, machinery spaces, control rooms and public areas. Water mist and CO₂ suppression systems on our ships are designed to contain, suppress and extinguish fires. We continue to invest in our fire safety systems, leveraging proven technologies that help us to ensure that fires are prevented whenever possible, and promptly detected and extinguished if they do occur. We also look into new, innovative technology and will often trial such developing ideas onboard our ships.

OUR STRATEGY

CREW
Because our crew work and live on board our ships, we maintain a 24/7 responsibility for the safety of our employees. Our Safety Management Systems (SMS), workplace safety committees and focused shipboard and shoreside training programs are in place to ensure the safest possible working environment for our crew.

GUESTS
We do not underestimate the challenge of ensuring the safety of our 11.5 million guests annually. International, national, flag state administration, and most importantly, our own regulations via our Safety Management System require us to provide a safe physical environment on board for our guests and ensure they are informed about what to do in an emergency situation.

Our safety strategy is based on injury and accident prevention, implementation of related procedures and processes, performance measurement, and continuous improvement. Our SMS establish accountability for safety throughout the organization and incorporate both regulatory and company management safety requirements.

Our safety practices comply with or exceed international ship safety standards, employ state-of-the-art technologies in ship design and operations, require conducting rigorous staff safety training and proficiency drills, utilize a variety of guest communication tools, administer ongoing ship audit and inspection programs and ensure all safety equipment is maintained. We examine new technology that has the potential to positively influence the safety environment of the guests.

The vast majority of our workforce is represented through formal joint management and worker health and safety committees. During regularly scheduled meetings, shipboard safety committees review and address specific workplace safety topics. These committees play a key role in reducing shipboard accidents through hazard assessments, accident reviews and inspections. These sessions also serve as a forum for promoting safety awareness and for raising, discussing and identifying solutions for shipboard safety issues. Safety representatives in brand shoreside departments communicate and share experiences and best practices throughout their respective fleets and across fleets through cross-brand safety working groups.
HEALTH

We strive to deliver exceptional vacation experiences wherever we travel. Our crew embodies this as the face and spirit of our brands. Integral to achieving this is the health and well-being of our guests, crew and port employees.

2020 GOAL & UPDATE:
Guest and Crewmember Health, Safety & Security

Striving to be free of injuries, we continue to build on our commitment to protect the health, safety and security of our guests, employees and all others working on our behalf.

• In collaboration with the Cruise Lines International Association (CLIA) Gastrointestinal Illness Task Force, we continued to support a research project with North Carolina State University to test the efficacy of disinfection products directly against human norovirus. In 2016, this included developing test protocols and testing a range of hand sanitizing products. The project has been conducting groundbreaking testing and uses a novel surrogate virus and other state of the art viral research techniques.

• We developed procedures to control and prevent the spread of ZIKA virus.

FY2016 HEALTH PERFORMANCE

ZIKA VIRUS
In response to the Zika virus outbreak in the Caribbean, Central and South America, we immediately introduced prevention measures including provision of health advice to passengers, crew, medical staff and port employees. We also ensured provision of appropriate insect repellents on board and during shore excursions, and the application of mosquito prevention strategies both on board and in our ports.

We shared our prevention measures with our industry association CLIA, which were broadly adopted across the cruise industry. As the outbreak evolved, the preventive guidelines were revised and by end of 2016 there were no significant health impacts reported on our ships or the ports we own.

INSPECTIONS
13 of our ships received a score of 100 from the Center of Disease Control (CDC) Vessel Sanitation inspections.

HEALTH RECORDS
We continued to develop and implement a standard electronic health record (EHR) platform across our fleet, to enhance many aspects of our medical operations and services. The implementation of this platform is over 50% complete and is expected to be fully implemented fleet wide by mid-2018.
HEALTH RECORD SYSTEM TRAINING
In support of the newly implemented global health record system, known as eSeaCare, onboard ships across the company, a training package was developed to support new and existing medical staff. The eSeaCare training package consists of five modules focusing on system overview and overall introduction, outpatient processing, inpatient processing, master service billing and communicable diseases.

PROCEDURES
Throughout the year we contributed to the review of a number of health procedures developed by various organizations. Some of these include:

- SHIPSAN health and sanitation manual. SHIPSAN, is an European joint action for safeguarding health and preventing the spread of disease. We continued to support their pilot inspection program, which is focused on an integrated strategy and sustainable public health program.

COMMUNICATION
As members of the Cruise Lines International Association (CLIA), we regularly discuss health matters and communicate with all member lines to share best practices. A member of our Health Policy team acts as the co-vice-chair of the CLIA Gastrointestinal Illness Task Force. We participated in the following CLIA health programs and initiatives:

- Conducted an assessment of new and emerging prevention technologies to further develop strategies for the prevention and control of gastrointestinal outbreaks.
- Continued to support a research project to test the efficacy of disinfection products against human norovirus.
- Shared our Zika prevention procedures with the industry.

COLLABORATION
We participated in the Global Health Security Agenda (GHSA) Roadmap Workshop for the Caribbean region. This was conducted by the United States Agency of International Development’s Health Finance and Governance project in coordination with Caribbean Community Market, the Caribbean Public Health Agency and the Pan-American Health Organization. It included drafting a five-year GHSA roadmap for the Caribbean, which focuses on strengthening health security across the region and supporting Caribbean nations in their efforts to meet the requirements of the International Health Regulations.

PORT HEALTH
We continue to develop and implement comprehensive health standards and procedures at the ports we own and operate. These ports include Puerta Maya, Cozumel, Mexico; Grand Turk Cruise Center, Turks & Caicos Islands; Amber Cove Cruise Center, Puerto Plata, Dominican Republic; and Mahogany Bay Cruise Center, Roatán, Honduras. The following is a summary of our main port health accomplishments in 2016:

- Updated the public health procedures for all ports.
- Opened Amber Cove’s in-house water quality laboratory, thereby achieving a goal of implementing water quality laboratories in all ports.
- Implemented Zika prevention guidelines.
CONTROLLING THE ZIKA VIRUS OUTBREAK

In January 2016, the U.S. Centers for Disease Control and Prevention (CDC) issued a Zika virus travel health advisory for the Caribbean, Central and South America in response to the virus outbreak. The virus is spread by the Aedes aegypti mosquito and while the associated illness is usually mild and self-limiting, a higher incidence of birth defects such as microcephaly from infections during pregnancy has been established. There is also a suspected link to a serious neurological condition called Guillain-Barré syndrome.

The active transmission of Zika virus in many locations where our ships operate and where employees live became a major topic of concern. In response to the outbreak, we immediately introduced prevention measures including provision of health advice to passengers, crew, medical staff and shore based employees. We also ensured provision of appropriate insect repellents on board and during shore excursions, and the application of mosquito prevention strategies both on board and in our ports.

Details of these steps were shared with the Cruise Lines International Association and subsequently broadly adopted across the industry. The guidance was updated as the outbreak situation evolved, and by the end of 2016 there were no significant health impacts reported on our ships and the ports we own and operate.
OUR COMMITMENT

We have continued to develop and introduce comprehensive health standards that go beyond regulatory requirements to help protect the health of our guests, crew and port employees. These standards are implemented and enforced by each of our brands and port facilities that we own and operate. As part of our commitment, we also lead and participate in health related cruise industry task forces and working groups.

We have taken a proactive role in addressing the quality of shipboard medical care. All of our medical personnel are expected to meet the qualification standards outlined in our medical procedures. Our on board facilities are designed to be able to provide emergency medical care for guests and crew, stabilize patients and initiate reasonable diagnostic and therapeutic intervention and facilitate the evacuation of seriously ill or injured patients when deemed necessary.

OUR STRATEGY

Our public health programs are developed from worldwide health and sanitation regulations, best practices and guidance. Our programs are audited both internally by public health specialists and externally by officers from health authorities worldwide. We coordinate cross brand Medical and Public Health Working Groups, which help to drive our ongoing health strategies and focus on continuous improvement. Through these forums we are able to leverage the extensive health expertise and experience that exists within our individual brands. In the U.S., we collaborate with the Centers for Disease Control and Prevention (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 unannounced ship inspections. We continue to work with the CDC throughout a ship’s life to maintain safe standards through regular inspections, crew training and guest education.

We have supported the Global Health Security Agenda (GHSA), which is an international initiative of nearly 50 countries intended to enhance global capacities to prevent, detect, and rapidly respond to infectious disease threats and to achieve measurable health targets. The overall aim of the agenda is to accelerate progress toward a safer world and promote global health security as a priority.

One of our top priorities remains promoting the prevention of gastrointestinal illness on board our ships and port facilities we own and operate. Our fleet wide Outbreak Prevention and Response Plan guides our actions to prevent and respond to outbreaks of illness on board our ships. The strategy detailed in the plan addresses health screening and surveillance measures, communication and provision of health advice, isolation of ill guests and crew, medical treatment, reporting to health authorities and use of proven sanitation and infection control measures.

Additionally, we collect health data on all cases of gastrointestinal illness and report this information to international health agencies. This helps with identification of types of infection, potential sources, and the likely methods of transmission, thereby allowing us to implement effective risk mitigation strategies.
Criminal activities are always a potential threat to our business given our global footprint and reach. Therefore, we are focused on maintaining a high level of security for our guests, crew and assets. We take every possible action to foresee and guard against such risks. These efforts start long before any passenger boards our vessels or any voyage sails.

We adopted one of our brand’s best management practices for security training as the standard for our corporation. Carnival Cruise Line was the first company worldwide to be certified as an approved training provider to instruct Model Course 11-01 as required by Cruise Vessel Security and Safety Act.

2020 GOAL & UPDATE:
Guest and Crewmember Health, Safety & Security
Striving to be free of injuries, we continue to build on our commitment to protect the health, safety and security of our guests, employees and all others working on our behalf.

We committed to implement a global travel risk management program, travelSEACURE. This program aims to support all employees, both shoreside and on board, with security, health and unforeseen event assistance while on business travel.

ADVANCED KEY CONTROL TECHNOLOGY
One of our brands implemented an enhanced key control security system. This state-of-the-art system provides several security benefits including the prevention of unauthorized access and mitigating risks associated with lost keys.

MAN OVERBOARD
We continue to research, test and pilot man overboard detection systems. These systems are designed to support shipboard personnel to improve response time to an incident involving a person falling or jumping overboard. However these technologies are immature and do not yet meet the requirements needed to achieve reliable detection without false alarms under maritime conditions. We are working with manufacturers to further develop the technology.

travelSEACURE
We committed to implement a global travel risk management program, travelSEACURE. This program aims to support all employees, both shoreside and on board, with security, health and unforeseen event assistance while on business travel.

TRACKING AND DATA-ANALYSIS PLATFORM
We implemented a state-of-the-art tracking and data-analysis platform that enables real-time information sharing between our ships and specialized shoreside teams designed to support fleet operations. The proprietary system significantly improves communication from ship to shore, providing new capabilities for enhancing the safe passage of ships at sea while improving operational efficiencies and supporting overall environmental initiatives. The platform manages risks by providing the company visual representations of ships routing, real-time navigational notifications, integrated weather information and traffic information.

SHARING INFORMATION
In an effort to strengthen security for our guest and crew we trialed the INTERPOL I-Checkit program. This program improves cross-border information sharing among law enforcement officials.
COMBATING SEXUAL ASSAULT
The rate of crime on cruise ships is substantially lower than corresponding rates on land; however on occasion we do have incidents. To improve our response to any and all allegations of sexual wrongdoing, one of our brands entered into a partnership with the Rape, Abuse & Incest National Network (RAINN), a leading anti-sexual violence organization.

FLEET OPERATIONS CENTER
We opened the second of three planned state of the art Fleet Operations Centers (FOC) in Seattle, U.S. This FOC is equipped with the most advanced ship to shore communications technologies available. The first FOC, was opened in Hamburg, Germany in 2015. The third FOC will be located in Miami, U.S. and is expected to open by the end of 2017. These centers are designed to assist our captains, chief engineers, and deck and engineering officers with digital support, control and planning of all nautical and technical operations. The centers are staffed 24 hours a day, allowing for improved communications between the ship and shore, and providing immediate support to our ships for route planning, maritime safety and risk management.

OUR COMMITMENT
The security of our guests and crew is of paramount importance. 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 International Maritime Organization (IMO). All of our ships meet or exceed the requirements of the ISPS Code. The code defines security standards, requirements, arrangements and procedures for ships, ports, and governments. It also 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. Our ships meet or exceed the requirements of the U.S. Maritime Transportation Safety Act (MTSA) and domestic regulations in other countries we visit. We have developed and issued a comprehensive set of security procedures that go beyond regulatory requirements to further ensure the security of our guests, crew and ships.

OUR STRATEGY
Our security professionals most of whom come from a military or law enforcement background maintain close working relationships with law enforcement, coast guards, naval authorities and governmental agencies around the world. They participate in and many times lead government/private sector and industry maritime security working groups. Some of these relationships include the U.S. Department of Defense, U.S. State Department, Federal Bureau of Investigation (FBI), UK Foreign & Commonwealth Office (FCO) and International Criminal Police Organization (INTERPOL). Specifically, our Security leaders serve on various roles/capacities on the following organizations as the Chairman of the U.S. Department of State’s Overseas Security Advisory Council’s Maritime Security Working Group, as member of the FBI’s Domestic Security Alliance Council’s (DSAC) Intelligence and Threats Committee and as one of only twenty five security leaders serving on the DSAC’s Leadership Council.

These relationships result in information-sharing arrangements and collaborative efforts that are essential to our proactive security program. Further, our security professionals monitor numerous information and intelligence platforms to detect issues before they impact our passengers, crew, or vessels. Many of the ports that our vessels call on are assessed by our security professionals on a scheduled basis beyond any requirements set forth by applicable laws, rules, or code.

Our security processes are designed to minimize security-related risk while allowing the smooth flow of guests, crew and supplies. 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. 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, x-ray machines and explosives detection equipment. We also are constantly assessing and evaluating new technologies for future projects and security enhancements.

Our security processes guard against criminal activity threats. Each ship in our fleet must report alleged criminal activity. Depending on jurisdictional considerations and the severity of alleged offenses, we coordinate investigative efforts with appropriate law enforcement authorities.
ENVIRONMENTAL MANAGEMENT

Across our 10 brands, we host 11.5 million guests a year and visit over 700 ports of call around the world. The health and vitality of the oceans, seas, and communities through which we travel is absolutely essential to our business. That makes protecting the environment and biodiversity one of our most critical areas of focus. Our employees not only take great pride in making sure our guests’ vacation exceeds their expectations, but are also deeply committed to protecting the oceans and seas.

2020 GOALS & UPDATE

We continue to make progress on the majority of our environmental 2020 sustainability goals. These goals include:

- reducing emissions
- installing exhaust gas cleaning systems (EGCS)
- increasing cold ironing capacity
- increasing advance waste water purification system (AWWPS) capacity
- increasing water efficiency and reducing waste

A detailed progress for each environmental goal is found on pages 48-63.

FY2016 ENVIRONMENTAL MANAGEMENT PERFORMANCE

NEW PARTNERSHIPS

We are leading the way to cleaner emissions from cruise ships with the support of and collaboration with key partners:

- A Liquefied Natural Gas (LNG) supply agreement with Shell Western LNG B.V. for our new LNG-powered ships.
- A unique and holistic maintenance and energy efficiency agreement with Wärtsilä designed to lower diesel engine maintenance costs and increase engine efficiency.

ENVIRONMENTAL COMPLIANCE

On December 1, 2016, Princess Cruises, one of our brands entered into a plea agreement with the U.S. Department of Justice with respect to environmental violations of federal laws by the Caribbean Princess. For further details please visit: www.princess.com/news/notices_and_advisories/cbresponse

ENVIRONMENTAL PERFORMANCE DATA ASSURANCE

We continue to expand third party assurance of our environmental data to include additional environmental indicators. For further details, refer to the assurance statement on pages 108-110.

OUR COMMITMENT

We are committed to protecting the environment. Through our Business Partner Code of Business Conduct and Ethics we communicate our expectations that our business partners will join us in following the same standards. Our impacts 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 diverse supply chain (see illustration on page 47 for more details). We recognize that some of these factors can affect the biodiversity of the areas where we operate. In this report we discuss the following aspects of our environmental footprint:

- Energy and Emissions
- Water Management
- Waste Management
- Biodiversity
OUR STRATEGY

Our environmental management strategy is based on the values and objectives set forth in our Health, Environment, Safety, Security & Sustainability Policy and our 2020 sustainability goals. We carefully manage environmental activities and address environmental stewardship at every level of our organization.

In 2015, we reached a significant milestone in our sustainability journey by announcing 2020 sustainability goals to further drive, improve and support our strategies.

There are multiple drivers of our strategy, including regulatory changes, stakeholder influence and economic efficiencies specifically as it relates to our dependence on fossil fuels, technology, partnerships, transparency and communication.

We evaluate environmental risks, develop standards and procedures and put high emphasis on our associated environmental leadership and performance. In addition, our enterprise risk management program includes climate change risks.

The management teams of our brands identify and manage environmental aspects and impacts, supervise the environmental performance of the ships and ensure compliance with environmental statutory requirements, best management practices and company environmental procedures. Most importantly, the dedicated ships’ Officers and crew carry out our policies and procedures on board.

In order to support our environmental strategies, each brand has implemented an Environmental Management System (EMS) in accordance with the International Organization for Standardization (ISO) Standard 14001 and some also have ISO 9001 Quality Management Systems. An independent, third-party organization audits and certifies the EMS of each of our brands in accordance with ISO 14001. We have also developed a greenhouse gas inventory management plan (GHG IMP) in accordance with the requirements of the ISO 14064-1:2006 and The Greenhouse Gas Protocol, which enables Lloyd’s Register Quality Assurance Inc., our third-party GHG verifier, to certify our GHG emissions inventory to that standard.

Each ship in our fleet has a full-time Environmental Officer (EO), who oversees environmental compliance and implementation of procedures (for more details see the EO section in the Appendix).

We have invested in a number of environmental initiatives based on our impacts. We are also actively involved in research and development projects for our existing ships and for new ships under development.

We have dedicated departments that evaluate technologies 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 the maritime environment. In order to expedite the process, ships within the fleet are regularly selected to test systems/technologies and run pilot programs.

We partner with a variety of environmentally focused organizations. The goals of these partnerships vary depending on the type of organization. For information on these partnerships, please visit Our Partners section on pages 111-113.
ENERGY & EMISSIONS

Climate change has the potential to seriously impact the ecosystems, communities and local economies that we all depend on. Cruise travel, just like other travel options, produces greenhouse gas (GHG) emissions, but we are doing a lot to reduce our carbon footprint.

2020 GOAL & UPDATE:
Carbon Footprint

Reduce the intensity of CO₂e (equivalent carbon dioxide) emissions from our operations by 25% by 2020 relative to our 2005 baseline, measured in grams of CO₂e per ALB-km.

We have achieved a 24.9% reduction relative to our 2005 baseline and are ahead of schedule to meet our target.

Continuing our carbon footprint reduction we:

• Delivered the first cruise ship in the world to be powered by liquefied natural gas (LNG) from pier side trucks while in port.
• Ordered three additional ships bringing the total to seven LNG fueled new next-generation cruise ships to be delivered.
• Expanded our partnership with Wärtsilä to include a long-term diesel engine maintenance agreement which also includes an energy-efficiency component.
• Signed an agreement with Shell to supply LNG to our ships.
2020 GOAL & UPDATE:
Exhaust Gas Cleaning Technology
Continue to improve the quality of our emissions into the air by developing, deploying and operating Exhaust Gas Cleaning Systems across the fleet capable of reducing sulfur compounds and particulate matter from our ship’s engine exhaust.

We continue to improve the quality of our emissions into the air by installing and operating Exhaust Gas Cleaning Systems across the fleet. These systems significantly reduce sulfur compounds and particulate matter from our ship’s engine exhaust.

- 59% of our fleet is equipped with Exhaust Gas Cleaning Systems.

2020 GOAL & UPDATE:
Cold Ironing Capacity
Increase Cold Ironing coverage of our fleet wide capacity in relation to future port capabilities.

We continue to improve the quality of our emissions into the air by continuing to increase the cold ironing coverage of our fleet wide capacity.

- 40% of our fleet is equipped with cold ironing capabilities.
- Continue to use LNG for cruise ship cold ironing.

FY2016 ENERGY & EMISSIONS PERFORMANCE

LNG
As part of our commitment to reducing our air emissions and improving air quality in the environments we visit, we are pioneering the use of LNG, the world’s cleanest fossil fuel, in port. We also executed:

- A framework agreement with Shell Western LNG B.V to supply marine LNG to our ships.
- An agreement with Meyer Werft for three new 180,000-ton cruise ships bringing the total to seven next-generation cruise ships on order that will be powered by LNG in port and at sea.

OPERATIONAL EFFICIENCY
We have expanded our partnership and continuous improvement efforts with Wärtsilä to maintain the highest possible levels for cruise ship diesel engine safety and reliability by entering into a comprehensive, 12-year strategic agreement. The scope of the agreement includes all engine maintenance and monitoring for 79 vessels within our fleet of 102 vessels. The agreement is designed to reduce overall maintenance costs while at the same time increasing engine efficiency. As part of the agreement, engine-level efficiency and fuel consumption will be measured on a regular basis, providing improved transparency into engine performance that will result in further improvements to engine operations. The data provided will also allow for tailored optimization of the combustion process which will also improve the quality of our air emissions.

DIRECT & INDIRECT EMISSIONS
We quantify, report and verify our GHG emissions, including our direct (Scope 1) and indirect (Scope 2) emissions. Our direct GHG emissions were 99.5 percent of our total emissions. The emissions due to our ships’ fuel consumption represented the bulk of the direct GHG emissions (97.0 percent). Our indirect GHG emissions represents only .5 percent of total emissions, the bulk of which were attributed to electricity purchased to power our shore-based buildings. The graphic on page 53 depicts our energy use and related emissions.
SCOPE 3 EMISSIONS
We report our Scope 3 emissions in the CDP formerly known as the Carbon Disclosure Project since 2009. Scope 3 emissions are derived from the energy used in other upstream and downstream indirect emissions like business travel, passenger transportation from airports, fuel transport, waste disposal and deliveries of supplies. See Climate Change CDP Report for more information.

THE NATURE CONSERVANCY
We continue our partnership with The Nature Conservancy (TNC) with a $2.5 million investment commitment over a five year period which started in 2014. Our commitment supports important research for marine conservation in particular coastal blue carbon research. Blue carbon is the carbon stored and sequestered in coastal ecosystems such as mangroves, seagrass meadows or salt marshes. These valuable ecosystems hold vast carbon reservoirs. They capture carbon and then store it in their sediments, which helps mitigate climate change.

TRACKING AND DATA-ANALYSIS PLATFORM
We implemented a state-of-the-art tracking and data-analysis platform that enables real-time information sharing between our ships and specialized shoreside teams designed to support fleet operations. The proprietary system significantly improves communication from ship to shore, providing new capabilities for enhancing the safe passage of ships at sea while improving operational efficiencies and supporting overall environmental initiatives. The platform manages risks by providing the company visual representations of ships routing, real-time navigational notifications, integrated weather information and traffic information.

EXHAUST GAS CLEANING TECHNOLOGY UPDATE
In 2013, we announced our plans to install exhaust gas cleaning systems (EGCS) on our ships. These systems remove sulfur compounds and particulate matter from our ships’ engine exhaust at any operating state of a ship – at sea, during maneuvering and in port. Due to the limited availability of EGCS for marine application, we decided to lead the way by developing the technology to successfully function in the restricted spaces available on cruise ships and by making the necessary investments, which includes $400 million to date, leading to a significant development in shipboard environmental technology.

As of FY2016, 59% of our ships are equipped with EGCS. These EGCS are open loop systems that use sea water for removing sulfur from engine exhaust. To further enhance our emissions profile we have also started to install a catalytic filter on the engine exhaust before the EGCS and also a filter before the sea water is returned to the sea. Our standard EGCS removes 99% of sulfur and well over 50% of the particulate matter, including elemental and organic carbon. The Catalytic filter and other systems further reduce the particulate matter by over 30% and also reduce nitrogen oxides by 10%. All EGCS comply with international regulations and are certified by a classification society. In addition, all systems are equipped with continuous monitoring equipment to automatically record all required parameters.
PIONEERING LIQUEFIED NATURAL GAS (LNG)

We are pioneering the use of liquefied natural gas (LNG), the world’s cleanest fossil fuel. In May 2016, our AIDA brand ship, AIDAprima, began bunkering LNG via truck in Germany. She is the first cruise ship in the world that regularly uses dual-fuel engines for an energy supply with LNG while in ports on her Northern European deployment. Her sister ship AIDAPERLA is scheduled to be delivered in 2017 with the same technology.

In 2016, we signed an agreement with Meyer Werft for three new 180,000-ton cruise ships bringing the total to seven next-generation cruise ships on order that will be powered by LNG at sea. Pioneering a new era in the use of low carbon fuels, these new ships will use LNG to generate 100% of their power both in port and on the open sea - an innovation that will reduce exhaust emissions to help protect the environment.

We also signed a framework agreement with Shell Western LNG B.V. to supply marine LNG to our ships. Under the framework agreement, Shell will initially supply our AIDA Cruises and Costa Cruises brands. The ships will utilize Shell’s infrastructure in cruise ports to refuel with LNG throughout their itineraries.

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<th>SWITCHING FROM MARINE DIESEL TO LNG</th>
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<td>Sulfur Dioxide Emissions</td>
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<td>Reduction in Carbon Emissions</td>
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AIDAprima supplies directly with LNG by trucks in Hamburg, Germany.
OUR COMMITMENT
We believe in communicating transparently about climate change. We actively participate in and contribute to the process of determining our industry’s role in addressing climate change. We have publicly disclosed our carbon footprint since 2006 and are taking specific and proactive steps to reduce this footprint. Energy is vital to our business so that guests can enjoy our facilities and our amenities on our ships while at sea and in port. Fuel is the primary source of energy consumed for the propulsion of our fleet and our on board hotel power requirements. Our shipboard fuel consumption contributes to more than 97% of our direct (Scope 1) and indirect (Scope 2) carbon emissions and is therefore the most significant contributor to our carbon footprint. See the graphic on page 53 for further details.

OUR STRATEGY
In order to manage our emissions footprint, we must manage the source of our emissions. Shipboard fuel consumption is the most significant contributor to our carbon footprint. Therefore, we have implemented multiple energy-savings initiatives.

We established a Corporate Energy Conservation group charged with reducing our overall energy consumption. The goal of this group is to identify both current and long-term opportunities for saving fuel.

We are actively involved in new shipbuilding research and development for new abatement technologies and new equipment to improve energy efficiency. We continue to work on practical and feasible energy reduction and conservation initiatives to help us reach our target. We are 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 multi million-dollar investments and a multi-pronged strategy.

These include abatement technologies and equipment to further reduce engine emissions such as:
• Air Lubrication Systems using air bubbles to reduce friction between the ship’s hull and the water.
• Exhaust Gas Cleaning Systems (EGCS) that use proprietary technology to remove sulfur oxides and particulate matter from engine exhaust.
• Alternative Fuels - Cruise industry first use of Liquefied Natural Gas (LNG), one of the world’s cleanest burning fossil fuels.

We quantify, monitor, report and verify our GHG emissions. We developed a GHG Inventory Management Plan (GHG IMP) in 2010 in accordance with the requirements of ISO 14064-1:2006 and The Greenhouse Gas Protocol. Our GHG emissions are independently verified by a third-party.

Lloyd’s Register Quality Assurance Inc. (LRQA) certified our scope 1 and scope 2 GHG emissions inventory. For more information on our third-party verification visit our Assurance Statement on pages 108-110.

We continue to train and certify employees responsible for refrigeration and air-conditioning plants, use recovery units certified to meet refrigerant recycling and recovery requirements and implement programs to reduce Ozone Depleting Substances (ODS) releases.
We are working to reduce the intensity of CO$_2$e emissions from our operations by 25% by 2020 relative to our 2005 baseline, measured in grams of CO$_2$e per ALB-km.

- **Ship Fuel Direct GHG Emissions**: Fuel to propel the ships and run the ships generators to provide electricity.
- **Ship Refrigerant Direct GHG Emissions**: Refrigerants to cool appliances such as refrigerators and AC units on the ships.
- **Ship Indirect GHG Emissions**: Electricity purchased at the port of call for power while docked. (Cold Ironing)
- **Shore Direct GHG Emissions**: Fuel for company cars and building generators.
- **Shore Indirect GHG Emissions**: Electricity purchased and used to power the corporate and brand headquarters buildings and the land-based hotels.

**INDIRECT GHG EMISSIONS**

- Location and Market-Based Shore Indirect GHG Emissions: 0.1%
- Location and Market-Based Ship Indirect GHG Emissions: 0.4%

**DIRECT GHG EMISSIONS**

- Ship Refrigerant GHG Emissions: 0.3%
- Ship Fuel GHG Emissions: 97.0%
- Shore Direct GHG Emissions: 0.3%
- Shore Indirect GHG Emissions: 0.5%
WATER MANAGEMENT

Water is essential to our operations as it is part of the guest experience. Guests enjoy using our swimming pools, spas and water park amenities during their cruise. We are committed to finding innovative ways to improve our water use efficiency and decreasing our demand for water at the communities we visit without affecting the guest experience.

2020 GOAL & UPDATE:
Water Efficiency
Continue to improve water use efficiency of our shipboard operations by 5% by 2020 relative to our 2010 baseline, as measured by liters per person per day.

We decreased our impact on ports visited by producing 4% more water from sea water relative to our baseline, equaling 77% of our total water usage while water use efficiency rate remained constant.

FY2016 WATER MANAGEMENT PERFORMANCE

WATER BUNKERED
We purchase approximately 23% of our water from the ports or the water suppliers in the ports we visit.

WATER PRODUCED
We produce approximately 77% of the water we use on board our ships from sea water.

WATER EFFICIENCY
• We continue to implement measures to improve our water use efficiency and decrease our impacts.
• Our water use rate is 61 gallons per person per day vs the U.S. National average of 90 gallons per person per day.

PORT-WATER QUALITY LAB
Opened Amber Cove’s in-house water quality lab, thereby achieving our goal of implementing water quality lab’s in all of the ports we own and operate (i.e. Puerta Maya, Cozumel, Mexico; Grand Turk Cruise Center, Turks & Caicos Islands; Amber Cove Cruise Center, Puerto Plata, Dominican Republic and Mahogany Bay Cruise Center, Roatán, Honduras).
OUR COMMITMENT

The oceans are our main water source. We produce approximately 77% of the water we use on board our ships from sea water and the remaining 23% is purchased from the ports or the water suppliers in the ports we visit. Before our ships visit a port, we determine whether potable water is available and abundant. In ports or regions experiencing water scarcity or restrictions, our water sourcing patterns are modified in order to only bunker water from ports where water is abundant, of high quality and cost effective to purchase. Due to our ships’ holding capacities and equipment, we adapt our water sourcing patterns in order to avoid impacting local water supplies in times of water shortages. Consequently, our ship operations pose minimal water sourcing impacts to the port communities where we purchase water.

OUR STRATEGY

Improving water use efficiency is essential for us to remain economically sustainable, as it is more cost effective to use less water than to continuously purchase or desalinate and treat water. Over time, we have increased the percentage of water we produce on board relative 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.

We encourage our guests to assist us in our water use efficiency efforts by making them aware of options available on board to conserve water such as reusing towels and sheets. Our crew is trained on water efficiency practices as part of our environmental training program.

We are continuously replacing systems that are highly dependent on water with more efficient water management options. Examples include efficient laundry machines and dishwashers among others. In addition, to improve our water use efficiency, we have installed sink aerators and low-flow shower heads in cabins and public areas. Our water procurement at the ports we visit is determined based on water quality, availability, reliable and abundant supply and cost. If there is a water scarcity risk issue, such as droughts, we will change our water procurement so as to not purchase water at the expense of the local community and environment.

Water quality is an essential component of our water management plan. Water quality is managed and monitored onboard the ships based on the U.S. Center of Disease Control Vessel Sanitation Program (VSP) guidelines. For the ports we own and operate (i.e. Puerta Maya Cozumel, Mexico; Grand Turk Cruise Center, Turks & Caicos Islands; Amber Cove Cruise Center, Puerto Plata, Dominican Republic and Mahogany Bay Cruise Center Roatán, Honduras) water quality is managed and monitored in accordance with local health requirements and port specific procedures developed based on VSP and the World Health Organization (WHO) guidelines. In addition, Water treatment systems have been installed in all ports as well as onsite water quality laboratories.

In addition, water related risks and opportunities are identified by management using a holistic risk framework and a risk management capability model aligned with the organization’s strategy and management priorities. This framework is part of our Enterprise Risk Management program. Water risks are incorporated in to our risk universe and are regularly evaluated.

We continually monitor new regulations that are being proposed and engage with regulators and interested stakeholders either directly or through industry trade organizations like Cruise Line International Association (CLIA) to address their concerns and to discuss feasible solutions whenever such regulatory issues arise.
WASTE MANAGEMENT

As a global company serving more than 11 million guests around the world, we generate waste every day. We are committed to reducing the volume of waste we generate as well as to properly dispose of it.

2020 GOALS & UPDATE:

Waste Reduction
Continue to reduce waste generated by our shipboard operations by 5% by 2020 relative to our 2010 baseline, as measured by kilograms of non-recycled waste per person per day.

As part of our initiatives to continue to reduce waste generated by our shipboard operations, we continue to work with waste vendors and ports.

AWWPS Technology
Increase Advanced Waste Water Purification System (AWWPS) coverage of our fleet wide capacity by 10 percentage points by 2020 relative to our 2014 baseline.

We increased fleet wide capacity coverage of Advanced Waste Water Purification Systems (AWWPS) by 3.3 percentage points compared to our 2014 baseline.

FY2016 WASTE MANAGEMENT PERFORMANCE

WASTE MANAGEMENT ACCOUNTING PRACTICES
In FY2016, we commenced a comprehensive evaluation of our waste management accounting practices and introduced a new approach for sustainability reporting purposes. Operating on a global scale presents challenges for reporting waste consistently since countries have different definitions and categories of waste, as well as different reporting requirements. With the goal of continuous operational improvement, we refocused our efforts to standardize waste definitions and units of measure across our global brands. This approach allows for consistent trend analysis and reporting. We are currently testing quality controls and FY2016 waste data will be available in the next performance summary. For regulatory reporting purposes, we comply with the requirements of the particular country where waste is landed.

FOOD DISCHARGE AT SEA
We continually evaluate procedures and operations to minimize the volumes of discharges at sea.

REUSING
We continually seek new opportunities to reuse materials and equipment on board or find others who can use items that are in good condition that we no longer need.
FY2016 WASTE MANAGEMENT PERFORMANCE  continued...

RECYCLING
We strive to recycle as many items as possible.

DISPOSAL ASHORE
We manage the amount and process of waste landed ashore.

INCINERATION ON BOARD
Shipboard incineration reduces the volume of waste on board and waste landed ashore.

OUR COMMITMENT
Wastes generated by our operations and activities of our guests and crew mirror the waste generated by hotels and resort complexes worldwide. Our shipboard waste is disposed of in strict accordance with our environmental procedures that are designed to meet or exceed internal, national, regional and local environmental regulatory requirements and industry standards. The quantity of waste (solid and liquid) generated at our shoreside facilities is not material when compared to our ship waste generation as our shipboard waste generation represents the majority of our total waste.

OUR STRATEGY
All of our ships have a waste management plan that specifies how we manage each type of waste on board. Our waste management strategy consists of a multi-level approach that includes eliminating and minimizing waste, disposing waste ashore, incinerating waste on board and discharging liquid waste and food waste, all performed in accordance with regulatory requirements and in some instances exceeding regulations. As part of our strategy we also seek for new opportunities to reuse materials and equipment on board or find others who can use items that are in good condition that we no longer need. We also work to reduce the volume of non-eco friendly waste. In addition, shoreside waste facilities are evaluated prior to offloading the waste from the ships where they are reused, recycled, incinerated or landfilled. Our waste streams are detailed on pages 116-117.

Our strategy to minimize our waste streams consists of working with our supply chain to minimize packaging as well as increasing the volume and types of recycled materials landed ashore. A challenge that limits the volume of recycling material that could be recycled is the lack of recycling infrastructure at certain ports of call we visit worldwide. Our approach is to hold the recycling materials on board when possible until a port that offers recycling services is reached within the itinerary. As part of our strategy we also encourage our guests to assist us in our waste management efforts by making them aware of options available on board to segregate waste for recycling ashore. Our crew is trained on waste management practices as part of their environmental training program. In addition, comprehensive training is provided to all personnel directly involved in waste management operations.

We are committed to increase the fleet wide capacity coverage of Advanced Waste Water Purification Systems (AWWPS) for the treatment of black and gray water. These systems utilize technologies designed to produce a higher treated sewage quality that may meet or surpass standards for secondary and tertiary effluent and reclaimed water. In addition, all the ports we own and operate (i.e. Puerta Maya Cozumel, Mexico; Grand Turk Cruise Center, Turks & Caicos Islands; Amber Cove Cruise Center, Puerto Plata, Dominican Republic and Mahogany Bay Cruise Center, Roatán, Honduras) are equipped with AWWPS to treat the sewage generated at each of the port facilities.

We also continually monitor new regulations that are being proposed and engage with regulators and interested stakeholders either directly or through industry trade organizations like the Cruise Line International Association (CLIA) to address their concerns and to discuss feasible solutions whenever such regulatory issues arise.
BIODIVERSITY
Our lives depend on the earth's biodiversity. We are honored to take your on board our ships to see and explore the biodiversity of the oceans and the communities we travel to.

2020 GOAL & UPDATE:
Carbon Footprint
Reduce the intensity of CO₂e (equivalent carbon dioxide) emissions from our operations by 25% by 2020 relative to our 2005 baseline, measured in grams of CO₂e per ALB-km.

We have achieved a 24.8% reduction relative to our 2005 baseline and are ahead of schedule to meet our target.

AWWPS Technology
Increase Advanced Waste Water Purification System (AWWPS) coverage of our fleet wide capacity by 10 percentage points by 2020 relative to our 2014 baseline.

We increased fleet wide capacity coverage of Advanced Waste Water Purification Systems (AWWPS) by 3.3 percentage points compared to our 2014 baseline.

FY2016 BIODIVERSITY PERFORMANCE

FATHOM - TRAVELdeep™
Fathom’s guests joined local community members on highly impactful sustainability projects in Puerto Plata, Dominican Republic. Some of the projects impacting biodiversity included:
• reforestation and nurseries
• cacao and Women’s Chocolate Cooperative
• water filter production
For more details on these projects please refer to pages 60-61 and for overall Fathom projects visit www.fathom.org

THE NATURE CONSERVANCY PARTNERSHIP
We continued our partnership with The Nature Conservancy (TNC) with a $2.5 million financial commitment over a five year period, which started in 2014. Our partnership is creating a sustainable future for the world’s oceans by creating the innovative tools and resources needed to engage stakeholders and balance economic development with ocean protection efforts through the Mapping Ocean Wealth (MOW) initiative. MOW initiative accomplishments are summarized on pages 62-63.
FY2016 BIODIVERSITY PERFORMANCE continued...

WILDLIFE TRAFFICKING ALLIANCE PARTNERSHIP
We partner with the U.S. Wildlife Trafficking Alliance to support their programs to reduce the demand for illegal wildlife products.

CAGE FREE EGGS
We continue to expand our sourcing of cage free eggs. Our goal is to be 100% cage free by 2025.

PORT ENVIRONMENTAL PROJECTS
Our Mahogany Bay port located in Roatan, Honduras supports various sustainability projects. Some of the projects include:

- **Mangrove Reforestation Project**: since 2015 a total of 155 mangrove trees have been replanted in the south pier area.
- **Reforestation Project**: in 2016 108 trees were planted. These trees were planted within the port facility and the majority were mahogany trees.
- **Coastal Cleanup Project**: since 2014 the port adopted the Brick Bay community and has organized annual clean-ups. In 2016, approximately 1,600 bags containing waste and debris were collected.

OUR COMMITMENT
To minimize our impact on biodiversity, we work diligently to manage our waste responsibly, protect marine life and collaborate with our supply chain to ensure ethical practices. We also implement systems and new technologies to minimize waste water discharges and improve the quality of our air emissions. Furthermore, we partner with conservation and protection organizations in order to support programs and initiatives related to our operation.

OUR STRATEGY
Our strategy includes a number of elements that collectively help to prevent, manage and lessen our impact on biodiversity. Within our supply chain, we work with suppliers on sustainable food sourcing and our tour operators on sustainable practices. We have also included a sustainability section within our Business Partner Code of Conduct and Ethics and Tour Operator manual that focuses on environmental protection. In addition, every year we organize coastal cleanups with some of the communities at various ports of call we visit. These clean-ups remove waste and debris from marine ecosystems.

Because of our direct dependency on the health of the oceans, we have developed and implemented marine mammal protection programs and training. In particular, we have developed a comprehensive whale strike prevention training program and follow reporting requirements prior to entering the Right whale sensitive and protected areas for North Atlantic and North Pacific Right whales. These species are listed in the IUCN’s Red List, which is the Global Reporting Initiative’s designated list for threatened species.

We comply with or exceed international, national and local environmental laws and regulations everywhere our ships sail. We also implement operational requirements that exceed compliance with regulations. As part of our strategy, we also partner with organizations that are critical for marine conservation and research. Since 2014, we partnered with The Nature Conservancy (TNC) with a $2.5 million financial commitment over a five year period. TNC is one of the world’s leading conservation organizations, working across all sectors of industry and society to help advance its mission to protect the natural world and develop relationships that best align to produce clear conservation benefits with lasting, measurable outcomes. Our partnership is supporting TNC’s Mapping Ocean Wealth (MOW) program. This program creates maps that show the extent and distribution of benefits that habitats like coral reefs and mangroves provide, including fish production, flood mitigation, erosion control and recreation. MOW’s 2016 performance highlights are listed on pages 62-63.
17 FATHOM TRIPS IN 2016 BRING CHANGE TO PUERTO PLATA, DOMINICAN REPUBLIC
REFORESTATION AND NURSERIES PROJECT

Participation by 1,500+ guests have led to...

- **21,000+** seeds planted in our nurseries to begin their growth
- **10,000+** seedlings transplanted from our nurseries into the Dominican soil
- **7+** total acres of land reforested

With time this will lead to more nutrient-rich soil, a reduction in soil loss, and improved localized air and water quality. We are reforesting with native trees that will reestablish the endemic flora—tropical rain forests—that ought to be found on the island.

We are supporting the Dominican Ministry of the Environment in its efforts to reduce human settlements in protected areas, and we are working with private landowners to increase education about conservation and reforestation.

CACAO AND WOMEN’S CHOCOLATE COOPERATIVE (CHOCAL)

Participation by 2,000+ guests have led to...

- **4,000+** pounds of nibs cleaned, which translates to **127,000+** finished chocolate bars
- **89,000+** products wrapped, packaged, and prepared for sale
- **16,000+** cacao seeds planted in the nursery that services Chocal

Guests’ direct impact helps this company grow and thrive, as traveler participation increases both sales and production. As Chocal grows, additional critical income opportunities become available in the region, and the overall well-being of Chocal’s own employees increases.

The cacao seeds planted will become seedlings, and those seedlings will be distributed at a reduced cost to farmers in the area. Eventually some of the cacao harvested from those trees will find its way back to Chocal, where it will become delicious chocolate.

WATER FILTER PRODUCTION

Participation by 800+ guests have led to...

- **900+** water filters produced
- **benefiting an estimated 4,000+** individuals who don’t have access to safe drinking water

The recipients of these filters will experience a significant reduction in instances of waterborne illnesses, as well as cost savings from not having to purchase expensive bottled water. Indirect benefits will include better work and school attendance.
PARTNERSHIP WITH THE NATURE CONSERVANCY

In 2016, we continued our partnership with The Nature Conservancy (TNC) with a $2.5 million financial commitment over a five year period, which started in 2014. TNC is one of the world’s leading conservation organizations, working across all sectors of industry and society to help advance its mission to protect the natural world and develop relationships that best align to produce clear conservation benefits with lasting, measurable outcomes.

Our partnership has been supporting TNC’s Mapping Ocean Wealth (MOW) program. This program creates maps that show the extent and distribution of benefits that habitats like coral reefs and mangroves provide, including fish production, flood mitigation, erosion control and recreation.

MAPPING OCEAN WEALTH (MOW) 2016 PERFORMANCE HIGHLIGHTS:

- **MOW’s Mapping Portal**
  Continued to populate the Ocean Wealth mapping portal with new data to support planning initiatives around the world. Specific progress includes a new map of coral reef fish production for the Bahamas that is being used to design new marine managed areas in the Bahamas to help the country reach its goals under the Caribbean Challenge Initiative.

- **Coral Reef Map**
  Developed a global map of coral reef tourism, revealing a staggering $36 billion in annual tourism value generated by on-reef (snorkeling and diving) and reef-adjacent tourism activities such as kite-surfing and beach visits near reefs.

- **Working with U.S. National Oceanic and Atmospheric Administration (NOAA)**
  Incorporated MOW’s result into a Reef Resilience training sponsored by NOAA’s Coral Reef Conservation Program to help coral reef managers from the Pacific and Caribbean learn how to incorporate ecosystem services information in management decisions and outreach initiatives in their jurisdictions. Managers received hands-on training with the MOW data portal, and explored ways that the spatially-explicit information could help with mitigation of local impacts.

- **Annual Meeting**
  MOW’s annual meeting was hosted at Carnival’s headquarters in Miami, U.S. The meeting included research updates in the areas supporting tourism, the coastal ocean’s CO₂ sequestration capacity and coastal protection.

ATLAS OF OCEAN WEALTH

We are also pleased to be a sponsor of the TNC’s Atlas of Ocean Wealth. The Atlas is the largest collection to date of information about the economic, social and cultural values of coastal and marine habitats from all over the world. It is a synthesis of innovative science, led by TNC, with many partners around the world. Through these efforts, they have gathered vast new datasets from both traditional and unconventional sources.

The work includes more than 35 novel and critically important maps that show how nature’s value to people varies widely from place to place. They also illustrate nature’s potential. These maps show that we can accurately quantify the value of marine resources. Further, by enumerating such values, we can encourage their protection or enhancement for the benefit of people all around the world. The Atlas clearly articulates that not only do we need nature, but how much we need it, and where we need it.

The Atlas was completed and released in June of 2016.

MAPPING OCEAN WEALTH AND TOURISM

Our oceans and coastal habitats produce a variety of benefits for coastal communities. To help illustrate these benefits, TNC has produced a series of Mapping Ocean Wealth (MOW) infographics with specific quantitative examples about how and where these benefits are produced and delivered. As members of the tourism industry we are proud to support TNC’s MOW.
Ocean habitats provide scuba diving, fishing and other recreational opportunities that attract tourists from around the world.

Coastal communities, planners and the tourism industry should protect and restore the habitats that drive local economies.

Mapping Ocean Wealth demonstrates what the ocean does for us today so that we maximize what the ocean can do for us tomorrow.
COMMUNITY ENGAGEMENT

We recognize the inextricable link between the health of our business and the vitality and sustainability of our communities, both in our home ports and in the destinations that our ships regularly visit throughout the world.

2020 GOAL & UPDATE:
Our Community
Continue to work on initiatives and partnerships that support and sponsor a broad range of organizations for the benefit of our local and global communities throughout our brands, in particular Fathom.

We continue to engage on initiatives and partnerships that support and sponsor a broad range of organizations for the benefit of our local and global communities:
- Donated $2 million to the Smithsonian National Museum of African American History & Culture over a five year period
- Continued our five year partnership with The Nature Conservancy
- Continued our five year partnership with Big Brothers Big Sisters program
- Launched our TRAVELdeep™ experience – Fathom

2020 GOAL & UPDATE:
Business Partner Code of Conduct and Ethics
Further develop and implement vendor assurance procedures ensuring compliance with Carnival Corporation & plc’s Business Partner Code of Conduct and Ethics.

We revised our Business Partner Code of Conduct & Ethics to include our efforts to combat slavery and human trafficking to further support human rights and the global communities we serve.

FY2016 COMMUNITY ENGAGEMENT PERFORMANCE

**ECONOMIC IMPACT**
As per Cruise Line International Association (CLIA) the cruise industry generated $117 billion in global economic impact in 2015. This economic activity generated over 956,547 jobs around the world, paying $38 billion in global wages in 2015. For additional details please refer to [CLIA, 2017: Industry Outlook](#).

**PORT DEVELOPMENT**
Our newest Caribbean destination, Amber Cove, located in Puerto Plata on the northern coast of the Dominican Republic is in full operation.
OUR COMMITMENT
We embrace the culture of the communities in which we operate, including our headquarters locations, home ports and ports of call. We understand that there may be an impact on the sustainability of a community when we engage with, operate in, or cease operating there. We continually strive to contribute to our communities in a positive social, environmental and economic manner, working in conjunction with local governments, trade associations, tourism organizations and other community stakeholders.

OUR STRATEGY
It is important for us to invest in the communities we visit and support their sustainable development, which is also essential for our operations. Within our supply chain, we work with our tour operators to support and ensure responsible excursions.

During times of crisis, we support our communities by providing emergency aid and relief through financial donations as well as by using our ships to deliver emergency supplies. Through our brands and corporate foundation as well as through the extraordinary efforts of our employees worldwide, we support a variety of programs providing aid, donations and services to an array of charitable organizations that touch many thousands of lives globally. Many of our brands have donation programs where reusable goods from our ships are provided to people in need throughout the communities we visit.

Local non-profit groups and government agencies work with the brands to collect toiletries, dishes, cookware, mattresses, tableware, furniture and other items from the ships and distribute them to shelters, hospitals, orphanages and homeless programs.

Our port development strategy is focused on creating leading destinations as well as securing preferred ports. This enables us to grow demand and deliver unique experiences.

GUEST SATISFACTION
We delivered memorable vacation experiences to 11.5 million guests. This represents approximately half of all cruise passengers worldwide.

FATHOM - TRAVELdeep™
Fathom’s guests joined local community members on highly impactful sustainability projects in Puerto Plata, Dominican Republic. Some of the projects impacting biodiversity included:

- Reforestation and nurseries
- Cacao and Women’s Chocolate Cooperative
- Water filter production
- Recycled paper and crafts entrepreneurship
- Concrete floors in community homes
- Educational impact

For more details on these projects, please refer to pages 70-71 and for overall Fathom projects visit www.fathom.org

COASTAL CLEANUP
Our Mahogany Bay port located in Roatan, Honduras supports various sustainability projects. The port has adopted the Brick Bay community and has organized annual coastal cleanup projects. In 2016 approximately 1,600 bags containing waste and debris were collected.

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Our port development strategy is focused on creating leading destinations as well as securing preferred ports. This enables us to grow demand and deliver unique experiences.
SUPPORTING OUR COMMUNITIES

The Carnival Foundation, brand foundations and our brands support a variety of local and national organizations through monetary and in-kind donations, innovative philanthropic programs, employee fundraisers and hands-on volunteer initiatives. We collaborate with many organizations that focus on the areas of the arts, human rights, education, health and the environment.

OUR 2016 PERFORMANCE HIGHLIGHTS:
On board luncheons: 60+
Shoreside employees who volunteered: 800+
Shoreside volunteered hours: 4,500+
Cruises donated / value: 780+ / $2.8+ MILLION
Donations for disaster relief: $700,000+
Donated to the Smithsonian National Museum of African American History and Culture: $2 MILLION

DISASTER RELIEF
During times of crisis, we support our communities by providing emergency aid and relief through financial donations, as well as by using our ships to deliver emergency supplies. We work with national and international relief organizations to support a variety of programs providing aid, donations and services to an array of charitable organizations that touch many thousands of lives globally where our ships visit, our offices are located and from the many geographical locations our employees from ship to shore are from.

FLOODS
In August 2016, catastrophic flooding in southern parts of Louisiana in the U.S. submerged thousands of houses and businesses. More than 40,000 homes were damaged and 13 deaths were reported.

The Carnival Foundation and Carnival Cruise Line donated a total of $250,000 to help support relief efforts for families affected by the devastating floods through the American Red Cross, Louisiana Association of United Way and Save the Children. Our Chairman of the Boards, Micky Arison and his wife Madeleine, matched the company’s gift through their personal foundation for a total combined donation of $500,000.

TROPICAL CYCLONE
In February 2016, severe tropical cyclone Winston was the strongest cyclone to make landfall in Fiji and the South Pacific Basin in recorded history. Winston inflicted extensive damage on many islands. A total of 40,000 homes were damaged or destroyed and 44 people were killed.

The Carnival Foundation, the Princess Cruises Community Foundation and our P&O Cruises Australia brand donated a total of $135,000 to help support disaster relief for children and families in Vanuatu through Save the Children organization.

EARTHQUAKES
Italy - Costa Cruises and the Costa Crociere Foundation built a kindergarten for 125 children in Norcia, one of the villages most severely damaged by the earthquake.

Ecuador - The Princess Cruises Community Foundation donated a $2,500 grant to International Medical Corps for urgent humanitarian aid for the earthquake response.

Japan - Princess Cruises Community Foundation provided a $24,378 grant to support Kumamoto earthquake victims.

FIRE
The Princess Cruises Community Foundation donated $9,000 to the American Red Cross of Greater Los Angeles for relief to the California Wildfires located close to our Princess Cruises headquarters in Santa Clarita. Princess launched a microsite on the American Red Cross website for employee giving while the Foundation matched the funds raised through the site.

EMERGENCY PREPAREDNESS
The Princess Cruises Community Foundation donated $47,290 to Red Cross Society of China for training of emergency first responders in the Tianjin area.
UNESCO PARTNERSHIP – WORLD HERITAGE PROTECTION AND SUSTAINABLE TOURISM

Through our Seabourn brand we partnered with The United Nations Educational, Scientific and Cultural Organization (UNESCO) to foster wider support and understanding in the travel industry and among travelers for UNESCO’s mission of identifying, safeguarding and promoting World Heritage sites. The partnership consists of a $1 million financial commitment over a five year period, which started in 2014.

OPERATION HOMEFront PARTNERSHIP

Through our Carnival Cruise Line brand we partnered with GRAMMY-award winning superstar Carrie Underwood and Operation Homefront, the national nonprofit that builds strong, stable, and secure military families. The year-long Honor. Family. Fun. program helped raise funds for Operation Homefront and culminated in a special private pier side concert for U.S. service men and women and their families starring Underwood aboard Carnival Cruise Line’s newest and most family-friendly ship, the Carnival Vista. This program provides us with the privilege and opportunity to bring much needed awareness and aid to the troops and their loved ones.

SPECIAL EVENTS & SENIOR MANAGEMENT COMMUNITY SUPPORT

AMERICAN CANCER SOCIETY

Holland America Group Chief Executive Officer Stein Kruse, Holland America Line President Orlando Ashford, and Seabourn President Rick Meadows joined a distinguished group of Seattle community leaders for American Cancer Society’s “Real Men Wear Pink” event during the month of October. All three executives were successful in raising funds and awareness for breast cancer. Kruse was the top fundraiser in Washington state and came in fifth nationally.

PROFESSIONAL WOMEN’S GROUP LEADERSHIP AND CIVIC RESPONSIBILITY

The mission of Dress for Success Worldwide is to empower women to achieve economic independence by providing a network of support, professional attire and the development tools to help them thrive in work and in life. In 2016, the Carnival Foundation awarded Dress for Success (DFS) a $35,000 grant to fund a pilot program to provide virtual mentorship to members of their Professional Women’s Group. The Los Angeles based chapter of the organization partnered with Princess Cruises and their employee volunteers to provide mentorship advice for career advancement of the members of the DFS program. 17 female employees from Princess Cruises, including Jan Swartz (Group President of Princess Cruises and Carnival Australia), participated in the nine month program which culminated in teams meeting at a graduation ceremony and sharing the impact of the program.

SUPPORTING THE INDIGENOUS COMMUNITY OF VANATU

Through our P&O Cruises Australia brand we are strengthening our relationship with the Vanuatu community by becoming the first cruise line to sell locally made products on board.

Our guests on cruises calling to Vanuatu’s capital, Vila, will now have the opportunity to buy handicrafts such as woven bags, a range of skincare products and soaps, specialty coffee, chocolate, spices and the nation’s popular vanilla at a special onboard pop-up stall dedicated to locally made products. The stall will be progressively introduced onto P&O Cruises Australia’s five ships early next year as part of a trial developed in conjunction with the International Finance Corporation, part of the World Bank group.

Many of these vendors either employ local people or source materials from local communities to make their products. Giving our guests the opportunity to purchase locally made products raises the profile of Vanuatu as a destination and highlights the skill of its people.

To learn more about our brands’ engagement programs visit our website www.CarnivalCorp.com. For more information about the Carnival Foundation’s efforts in the community, visit our website www.CarnivalFoundation.com.

1) Our brands donate various ship venues for hosting luncheons on board to support many non-profit organizations.
TRAVEL deep™

AFTER 17 FATHOM TRIPS TO PUERTO PLATA, DOMINICAN REPUBLIC IN 2016
SUSTAINABILITY FROM SHIP TO SHORE

Participation by 3,700+ guests have led to...

- 4700+ Dominicans, including students and community members, have benefited from effective foreign language interaction with English speakers
- 150+ visits to schools and communities
- Community English Conversation & Learning
- Student English Conversation & Learning
- Creative Arts, Music & Sports (CAMS)

English proficiency is one of the most important drivers of employment success in the economy of the Dominican Republic.

Approximately 31 hours per beneficiary of direct interaction and instruction. This signifies 13% of the number of hours recommended by international bodies to achieve basic proficiency in English.

RECYCLED PAPER AND CRAFTS ENTREPRENEURSHIP

Participation by 2,500+ guests have led to...

- 13,000+ sheets of paper produced
- 11 women becoming members of a cooperatively owned business
- 3 artisans having a safe workshop for their labor and a market for their products

Guests hands-on support helps all aspects of this company grow, increasing both production and sales. In addition, the RePapel ladies and the artisans are enhancing their English communication skills. This is a very important skill in order to support English speaking tourism. As a result of our partnership paper recycling has been introduced to the community.

CONCRETE FLOORS IN COMMUNITY HOMES

Participation by 1,000+ guests have led to...

- 200+ people in 50+ homes receiving a new concrete floor
- 160+ students getting a new multi-use outside court at their school
- 16,000+ square meters of concrete laid

These floors provide safer and healthier homes and areas for play. Homes and courts with concrete floors are easier to clean and less likely to cause respiratory problems. Young children are better able to develop their mobility on a smooth concrete floor. And concrete floors are a point of personal pride for the beneficiaries of this project.

EDUCATIONAL IMPACT THROUGH

Participation by 3,700+ guests have led to...

- 700+ Dominicans, including students and community members, have benefited from effective foreign language interaction with English speakers
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- Creative Arts, Music & Sports (CAMS)

English proficiency is one of the most important drivers of employment success in the economy of the Dominican Republic.

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**HUMAN CAPITAL**

Our success depends on the talent, passion and dedication of our employees, both on board our ships and ashore, who consistently deliver joyful and memorable vacation experiences for our guests. We strive to reflect the diverse and global marketplace and communities we serve.

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**2020 GOAL & UPDATE: Diversity & Ethics**

Continue to build a diverse and inclusive workforce and provide all employees with a positive work environment and opportunities to build a rewarding career to further drive employee engagement.

As part of our initiatives to build a diverse and inclusive workforce and drive employee engagement, we:

- Developed, published and implemented a slavery and human trafficking statement to further support human rights and the global communities in which our employees and their families live.
- Revised our corporate Health, Environmental, Security and Security (HESS) and Sustainability policy.
- Initiated the implementation of a diversity council.

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**FY2016 HUMAN CAPITAL PERFORMANCE**

**RECOGNITION OF OUR EFFORTS**

As we continue to build a diverse and inclusive workforce, we were recognized for the third consecutive year to be among the top companies as a best place to work for LGBTQ equality, by the Human Rights Campaign. We were also recognized by Black Enterprise Magazine as one of the 50 best companies for diversity.

**WORKFORCE**

We employed an average of 84,600 crew members on board our 102 ships at any given time, which excludes employees who are on a leave and almost 13,000 shoreside employees. This includes seasonal employees of Holland America Princess Alaska Tours, which significantly increases its workforce during the late spring and summer months in connection with the Alaskan cruise season.

**LABOR UNION RELATIONSHIPS**

We consider our employee and union relationships to be strong. The percentages of our shipboard and shoreside employees that are represented by collective bargaining agreements are 54.6% and 19.8%, respectively.

**HESS POLICY**

We revised our corporate Health, Environmental, Safety, Security (HESS) and Sustainability policy (see page 107) to further detail our commitment to risk mitigation, business partner compliance, prohibition of retaliation and require employees to report any inability to comply with requirements (company, legal or statutory).
ARISON MARITIME CENTER
We opened the Arison Maritime Center, the new home of the Center for Simulator Maritime Training Academy, also known as the CSMART Academy. CSMART’s mission is to be a leader in developing and delivering the best professional training in the maritime industry. This world-class facility, equipped with the latest technology and equipment, provides rigorous safety training for bridge and engineering officers responsible for the navigation and operation of the world’s largest fleet of cruise ships. CSMART participants receive a maritime training experience that fosters critical thinking, problem solving, ethical decision making and skill development. We expect to train over 6,500 deck and engineering officers at CSMART every year. See pages 34-35 for more details.

LEADERSHIP DEVELOPMENT AND ENGAGEMENT
We conducted a 3-day leadership summit in Orlando U.S., bringing together approximately 300 leaders from across our shore side and shipboard teams to drive engagement and alignment around our companies strategies and vision.

DIVERSITY AND INCLUSION
We continued our multicultural, diversity and inclusion campaign focused on selected communities. Specific advertisements were circulated on selected publications showcasing some of our diverse leadership.

FLEET CAPTAIN AND FLEET ENGINEER PROGRAM
We continue our Fleet Captain and Fleet Chief Engineer program, which provides regular training and mentoring for our shipboard staff, provided by our top shipboard officer performers who rotate through the program.

GUEST AND CREW CARETEAM
Our CareTeam continues to provide compassionate care in the event of an emergency while on board. CareTeam employees have received specialized training on how to sensitively and appropriately support guests, crew and their families during an emergency. They are available 24 hours a day, seven days a week and respond to a variety of guest and crew emergencies, primarily medical related situations, and are dispatched to locations throughout our cruising regions to provide personalized support and assistance as needed to all of our brands.

DISASTER RELIEF
We continue to support our communities through our brands, foundations as well as through the extraordinary efforts of our employees worldwide, by providing emergency aid and relief through financial donations, as well as by using our ships to deliver emergency supplies. During 2016, we supported communities affected by cyclones, earthquakes, fires and floods. For more details on the support provided, please refer to pages 68-69.

OUR COMMITMENT
We are a diverse organization and value and support our talented and diverse employee base. We are committed to being an equal opportunity employer, employing people from around the world and hiring people based on the quality of their experience, skills, education, and character, without regard for their identification with any group or classification of people.

We use various staffing agencies in many countries and regions to source our shipboard employees. We hire both men and women for every department on board our ships and in our shoreside offices. We have female captains and officers at various ranks; however, the majority of our shipboard employees are men, which reflect a gender imbalance in the applicant pool for officer and crew positions.
OUR STRATEGY

We recognize that maintaining a diverse workforce promotes an open, tolerant and positive work environment where everyone’s talents and strengths can be utilized. We work to recruit, motivate, develop and retain the best talent. We are committed to offering opportunities for career development, rewarding performance, and providing a safe and healthy work environment. We provide ongoing in-person and computer-based professional and leadership development programs for our employees. Our ships have on board trainers and computer training centers for our employees to use for career development purposes. We conduct 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. We have entered into agreements with unions covering certain employees on our ships and in certain of our shoreside operations. We monitor and measure employee turnover rates to assess the levels of job satisfaction among our employees. One of our strategies to raise satisfaction rates among our employees is by promoting from within.

Reorganizations are carried with low displacement rates. It is our practice to ensure timely discussion of such changes and to engage with our employees to implement these changes. This engagement helps to minimize any adverse impacts of the changes on employees and helps to maintain employee satisfaction and motivation during the change process.

Minimum notice periods regarding operational changes are set according to local rules and regulations and according to standard Collective Bargaining Agreements (CBA) for seafarers, where applicable.

To support the integrity of our work environment, we have 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 Code of Business Conduct and Ethics provides us with the tools to navigate challenging situations and respond with integrity when dealing with fellow employees, guests, global communities, government agencies, consultants, vendors, distributors and other business partners.

To help our business partners within our supply chain more fully understand and comply with our expectations for legal compliance and ethical behavior, we developed our Business Partner Code of Conduct and Ethics, which goes a step above and beyond our Business Code of Conduct and Ethics, by formally integrating ethics into our supply chain. As described in our Business Partner Code of Conduct and Ethics, our suppliers are required to know and comply with applicable employment laws and support human rights for all people. They must comply with the legal employment age in each country where they operate and abstain from using any form of forced, bonded, indentured or prison labor.

We 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.

As part of our ethics policy program, we established an infrastructure for employees to feel comfortable and safe to report any non-compliance matters to their direct supervisor or upper management without fear or concern of retaliation for making a report in good faith. We investigate these reports and take appropriate corrective actions.

We are active members of the Maritime Anti-Corruption Network (MACN). 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. We abide by the Cruise Lines International Association’s (CLIA) anti-corruption principles.
AVERAGE NUMBER OF EMPLOYEES

97,200

SHIPBOARD
AVERAGE NUMBER OF CREW
84,600
17% FEMALE • 83% MALE

SHORESIDE
AVERAGE NUMBER OF EMPLOYEES
12,600
59% FEMALE • 41% MALE
LEARNING CULTURE

Our employees are the heart of our operation. A key element to our success is that as an organization we strive to create opportunities for our employees to expand their knowledge and excel in their performance. We do this by providing avenues in which they can learn and grow in their career path.

FY2016 LEARNING CULTURE PERFORMANCE

HEALTH RECORD SYSTEM TRAINING
In support of the newly implemented global health record system, known as eSeaCare, onboard ships across the corporation, a training package was developed to support new and existing medical staff. The eSeaCare training package consists of five modules focusing on system overview and overall introduction, outpatient processing, inpatient processing, master service billing and communicable diseases.

QUALITY CONTROL
A quality control program was implemented to ensure that all of our training vendors are providing the highest quality of training to our potential and existing crew around the world. This quality control program will assist with identifying training vendors in various countries that can deliver approved and accredited training to new and existing crew to maintain our standards and industry compliance.

ARISON MARITIME CENTER
We opened the Arison Maritime Center, the new home of the Center for Simulator Maritime Training Academy, also known as the CSMART Academy. This world-class facility, equipped with the latest technology and equipment, provides rigorous safety training for bridge and engineering officers responsible for the navigation and operation of the world’s largest fleet of cruise ships. CSMART participants receive a maritime training experience that fosters critical thinking, problem solving, ethical decision making and skill development. We expect to train over 6,500 deck and engineering officers at CSMART every year. See pages 34-35 for more details.

FLEET CAPTAIN AND FLEET ENGINEER PROGRAM
We continue our Fleet Captain and Fleet Chief Engineer program, which provides regular training and mentoring for our shipboard staff, provided by our top shipboard officer performers who rotate through the program.

OUR COMMITMENT
We employ an average of 97,200 employees who come from very diverse backgrounds. We have many career options and various positions both shipboard and shoreside. These positions range from captain, engineers, hotel services, security and medical professionals to our CEO and various shoreside functions that support shipboard operations. We recognize that as part of our success, we must provide our employees with the learning tools to perform their jobs well and grow their career within our company.
OUR STRATEGY

We know that each of our employees has a unique education (formal and informal), set of skills and experiences that they apply to their job. We also recognize that it is our responsibility to provide the tools and opportunities for continuous learning and development of all employees. We are committed to providing appropriate hotel and marine-related training to ensure that our shipboard crew, including officers, have the knowledge and skills to properly perform their jobs. We provide a diverse range of shoreside and shipboard training for our hotel staff before and after they join our ships to further enhance their skills. Specifically, we provide bar, entertainment, guest service, housekeeping, leadership, management and restaurant training. Depending on the brand, we will also provide our hotel staff with in-depth English, German and Italian language training. All our hotel staff also undergo extensive safety training and, depending on their position, will pursue advanced safety certifications. We partner closely with manning agencies to help provide this training in Manila, Philippines; Jakarta, Indonesia; and Mumbai, India.

We are changing the focus on the way we deliver training to our crew and are addressing how our crew experience learning in the workplace. Putting the emphasis on the next generation of learning whereby content is accessible through various means of communication platforms and employees are involved in creating the overall learning experience is beneficial for all. The accessibility of information and flexibility of delivery empowers each crew member to drive his/her own success story through knowledge and skills development.

We have re-evaluated our training strategy and are implementing a new approach for our crew members that will focus on corporate-wide targeted training based on both individual performance and performance within team settings. This training strategy will focus on “assessment based competence” methodologies.

An element that will allow us to implement this strategy is ensuring a consistent approach to training across our ten brands. The consistency of the training programs provides a greater level of familiarity amongst learners, establishes a knowledge baseline for all crew, sets a standard level of performance and allows for more efficient production of future training programs. Moving forward, all training programs will include:

- Knowledge learning - targeted to the appropriate demographic;
- Scenarios – applied knowledge;
- Knowledge check – formative assessments;
- Assessments – summative assessments;
- Aide Memoirs – job aid to support workplace performance.

In order to implement this strategy, a mixture of training delivery methods including computer based training, instructor led training sessions, videos and job aids will assist crew members to not only prepare for their role on board, but it will also assist them with maintaining their competencies and planning for career development and advancement.

Another component of this strategy is the implementation of performance based assessments. These assessments provide the opportunity for employees to demonstrate their knowledge and skills relevant to topics within various work related activities, while allowing trainers and supervisors to validate overall performance and provide support to employees where needed. For example, this will be included in emergency drills and operational functional type drills. This provides the ability to measure the functional effectiveness of the teams and individuals. Transparency and awareness of such information will ensure that the proper support (mentoring, coaching and training) is implemented to assist the team in reaching and maintaining their required performance level if it is not met during an initial drill.

Within the re-evaluation process, our core training programs for all employees regarding ethics, environmental, safety and security remained a top priority. As part of our ethics training program, every 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. This training includes topics related to human rights, labor relations, customer privacy, and social issues such as fraud and corruption, among others.

Our environmental training programs emphasize that all employees at every level 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 environmentally conscious practices are executed fleet-wide. Training programs in this area are customized based on the level of each individual’s environmental responsibilities.

Our training centers located in a number of geographical locations worldwide are an essential component of our training strategy. These training centers offer various learning opportunities to shoreside and shipboard personnel. Our training centers are located in Brazil, China, India, Indonesia, Italy, Germany, and the Philippines. We also run the Center for Simulator Maritime Training (CSMART), a maritime training facility located in Almere, Netherlands.
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 from ship to shore.

FY2016 GUEST EXPERIENCE PERFORMANCE

OCEAN MEDALLION™
As part of our continuous efforts to enhance our cruise products and services, we unveiled an innovative interactive guest “Experience Platform” called Ocean Medallion™. This technology enables elevated service levels through enhanced guest interactions. The Ocean Medallion™ platform allows for a new level of personalization previously not available in the global vacation industry. For more on the Ocean Medallion™ visit www.ocean.com.

TV PROGRAMS
To drive cruise consideration, we launched three original TV programs that are airing on major U.S. networks – ABC, NBC and the CW – during popular family-oriented programming timing blocks. Each program showcases one of our brands providing an amazing vacation while highlighting ocean travel as a means to experience global destinations and learn about other cultures. These programs had an annual expected viewership well in excess of 150 million viewers.

FATHOM – TRAVELdeep™
We launched our impact travel brand Fathom in June 2015 and began sailing in April 2016 with an inaugural impact voyage to the Dominican Republic. Fathom offers unique and playful purpose-driven travel experiences and gives travelers meaningful opportunities to come alongside locals and participate with community-driven initiatives. Building on a legacy of pioneering achievements, we, through Fathom, became the first cruise company in more than four decades to begin operating voyages from the U.S. to Cuba, an effort that included a change to a long-standing practice that no Cuban-born individual could come or go to Cuba by sea. To learn more, go to pages 60-61 and 70-71 and visit www.fathom.org.

NEW DESTINATIONS
As part of our mission to take the world on vacation and deliver exceptional experiences, we celebrated:

• Opening of Holland America’s Denali Square complex in Alaska, a private retreat on the site of our 60-acre McKinley Chalet Resort at the gates of Denali National Park.
• Full operation of our newest Caribbean destination, Amber Cove. It serves as a gateway to the Caribbean’s newest cruise destination. The port offers a warm welcome with a lively village featuring local cuisine and artists, a complimentary swimming pool, water slides, zip lines and a Sky Bar atop a 75-foot granite rock, providing stunning views. To learn more about Amber Cove, visit www.AmberCove.com.
OUR COMMITMENT

This year, we had the privilege of taking 11.5 million guests on vacation across our 102 ships. 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 contemporary, premium and luxury cruise categories. Cruising provides something for every generation, from kid clubs to an array of on board entertainment provided to teens and adults. Cruising also offers transportation to a variety of destinations and a diverse range of ship types and sizes, as well as price points, to attract guests with varying tastes and from most income levels.

OUR STRATEGY

No matter what type of cruise our guests choose, providing excellent service and guest satisfaction is at the heart of our guest service strategy. Guest feedback also provides insight into how we approach our relationships with this key stakeholder group. We consider their feedback to be of vital importance.

Whether they are first-time cruisers or long-time cruise enthusiasts within our brands, we invite them to return and inspire them to recommend our brands, thereby sustaining our business. To encourage more first-time cruisers, we have shortened the duration of some cruises, which has broadened the appeal for cruising. Our brands also have multiple pricing levels that vary by cruise brand, category of cabin, ship, season, duration and itinerary. We continue to upgrade and enhance the vacation experiences we offer with new features as part of our effort to attract first-time cruisers and keep our product exciting for repeat guests.

We are proud to offer a wide array of gaming opportunities for the enjoyment of our guests. We also support a Responsible Gaming program designed to assist our guests in making responsible choices through knowledge and empowerment.

Our approach to Responsible Gaming forms an integral part of this commitment. Responsible Gaming occurs in an environment where management and staff have been suitably educated to assist guests so that the potential for harm associated with gambling is kept to a minimum and our guests are able to make informed decisions. To learn more about our Responsible Gaming program visit our website at www.worldsleadingcruiselines.com.

Although the vast majority of our guests are highly satisfied with their vacation experience, there are occasional complaints. 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 us with a valuable on-the-spot learning tool that supports improvement of policies, procedures and the overall cruise product. Guests also have different means available to convey their opinions and their level of satisfaction to the company. A common tool is a survey provided to guests after their cruise, through which guests may express their opinions about the various aspects of the service and assign a performance score to each aspect.

Taking care of our guests during a crisis is also part of our duty. We have a dedicated group of CareTeam members who are trained to respond to a variety of emergencies, primarily medical-related 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 members are committed to assist our guests, as well as their families, friends and loved ones and provide them with compassionate assistance and support during challenging situations.

To further care for our guests we support the U.S. Passenger Bill of Rights, which details our commitment to the safety, comfort and care of our guests. It specifically addresses delays, cancellations and other unplanned events. The Passenger Bill of Rights codifies many long-standing practices of our organization and Cruise Lines International Association (CLIA) member lines and it also goes beyond some practices to further inform cruise guests of our commitment to their comfort and care.

Protecting our guest’s privacy is also extremely important to our guests and business. We have dedicated privacy teams that oversee our data privacy programs. We have also implemented privacy standards, which require the conduct of reviews of the adequacy of the privacy program.

OPENING OF HOLLAND AMERICA LINE'S DENALI SQUARE
## Performance Summary - Environmental Data

### Total Ships

<table>
<thead>
<tr>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>100</td>
<td>99</td>
<td>102</td>
</tr>
</tbody>
</table>

### Greenhouse Gas Emissions (GHGs)

<table>
<thead>
<tr>
<th>Description</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GHG Emissions - Location Based</td>
<td>10,385,721</td>
<td>10,374,922</td>
<td>10,539,036</td>
</tr>
<tr>
<td>Total GHG Emissions - Market Based</td>
<td>N/A</td>
<td>10,377,235</td>
<td>10,538,413</td>
</tr>
<tr>
<td>Direct GHG Emissions</td>
<td>10,319,475</td>
<td>10,320,701</td>
<td>10,491,277</td>
</tr>
<tr>
<td>&gt; Ship Direct GHG Emissions</td>
<td>10,296,032</td>
<td>10,301,296</td>
<td>10,462,851</td>
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<tr>
<td>&gt;&gt; Ship Fuel GHG Emissions</td>
<td>10,062,313</td>
<td>10,059,618</td>
<td>10,226,588</td>
</tr>
<tr>
<td>&gt;&gt; Ship Refrigerant GHG Emissions</td>
<td>233,719</td>
<td>241,678</td>
<td>236,263</td>
</tr>
<tr>
<td>&gt; Shore Direct GHG Emissions</td>
<td>23,443</td>
<td>19,405</td>
<td>28,428</td>
</tr>
<tr>
<td>Indirect GHG Emissions - Location Based</td>
<td>66,246</td>
<td>54,221</td>
<td>47,759</td>
</tr>
<tr>
<td>&gt; Shore Indirect GHG Emissions - Location Based</td>
<td>45,534</td>
<td>45,201</td>
<td>41,019</td>
</tr>
<tr>
<td>&gt; Ship Indirect GHG Emissions - Location Based</td>
<td>20,712</td>
<td>9,020</td>
<td>6,740</td>
</tr>
<tr>
<td>Indirect GHG Emissions - Market Based</td>
<td>N/A</td>
<td>56,533</td>
<td>47,136</td>
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<tr>
<td>&gt; Shore Indirect GHG Emissions - Market Based</td>
<td>N/A</td>
<td>44,646</td>
<td>37,851</td>
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<tr>
<td>&gt; Ship Indirect GHG Emissions - Market Based</td>
<td>N/A</td>
<td>11,887</td>
<td>9,285</td>
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### Ship Fuel Greenhouse Gas Emission Rate

<table>
<thead>
<tr>
<th>Description</th>
<th>Grams CO₂e/ ALB-Km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>274</td>
</tr>
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</table>

### Air Emissions

<table>
<thead>
<tr>
<th>Description</th>
<th>Kilograms</th>
<th>Kg CFC-11e</th>
<th>Metric Tonnes</th>
<th>Kg SOx/NM</th>
<th>Metric Tonnes</th>
<th>Kg NOx/NM</th>
<th>Metric Tonnes</th>
<th>Kg PM/NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship Fugitive Refrigerant Releases</td>
<td>115,918</td>
<td>2,130</td>
<td>132,538</td>
<td>12.3</td>
<td>249,605</td>
<td>27.0</td>
<td>2,425</td>
<td>0.26</td>
</tr>
<tr>
<td>Ship Ozone Depleting Substances (ODS) Emissions</td>
<td>667</td>
<td>117,936</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Sulfur Oxides (SOx) Emissions</td>
<td>131,221,157</td>
<td>125,603</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur Oxides (SOx) Emissions Rate</td>
<td>14.3</td>
<td>10.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Nitrogen Oxides (NOx) Emissions</td>
<td>259,605</td>
<td>249,421</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen Oxides (NOx) Emissions Rate</td>
<td>27.0</td>
<td>27.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Particulate Matter (PM_{10}) Emissions</td>
<td>2,425</td>
<td>2,174</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM_{10}) Emission Rate</td>
<td>0.26</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Energy & Electricity

<table>
<thead>
<tr>
<th>Description</th>
<th>Gigajoules</th>
<th>Kg CFC-11e</th>
<th>Metric Tonnes</th>
<th>Kg SOx/NM</th>
<th>Metric Tonnes</th>
<th>Kg NOx/NM</th>
<th>Metric Tonnes</th>
<th>Kg PM/NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Energy Consumption</td>
<td>131,221,157</td>
<td>125,603</td>
<td>131,964,513</td>
<td>10.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Ship Energy Consumption</td>
<td>130,916,520</td>
<td>131,697,157</td>
<td>133,946,419</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>&gt; Shore Energy Consumption</td>
<td>304,637</td>
<td>267,356</td>
<td>290,606</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Total Energy Consumption Rate</td>
<td>3,572</td>
<td>3,492</td>
<td>3,427</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total Ship Fuel Consumption</td>
<td>3,194,177</td>
<td>28,459</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ship Fuel Consumption Rate</td>
<td>28,459</td>
<td>29,894</td>
<td>23,896</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Purchased Electricity</td>
<td>96,467</td>
<td>115,819</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Shore Purchased Electricity</td>
<td>68,008</td>
<td>85,925</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Ship Purchased Electricity</td>
<td>28,459</td>
<td>29,894</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Ship Fuel

<table>
<thead>
<tr>
<th>Description</th>
<th>Percent</th>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Sulfur Fuel Oil (HSFO)</td>
<td>74.9</td>
<td>78.4</td>
<td>75.8</td>
</tr>
<tr>
<td>Low Sulfur Fuel Oil (LSFO)</td>
<td>17.9</td>
<td>1.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Marine Diesel Oil/ Marine Gas Oil (MDO/MGO)</td>
<td>7.2</td>
<td>20.2</td>
<td>21.2</td>
</tr>
</tbody>
</table>

### Potable Water

<table>
<thead>
<tr>
<th>Description</th>
<th>Metric Tonnes</th>
<th>Metric Tonnes</th>
<th>Metric Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Water Consumption</td>
<td>25,632,560</td>
<td>25,591,974</td>
<td>26,566,505</td>
</tr>
<tr>
<td>&gt; Water Purchased (From Shore)</td>
<td>6,968,014</td>
<td>6,099,369</td>
<td>6,079,254</td>
</tr>
<tr>
<td>&gt; Water Produced (From Sea)</td>
<td>18,664,546</td>
<td>19,492,605</td>
<td>20,487,252</td>
</tr>
<tr>
<td>Water Consumption Rate</td>
<td>232</td>
<td>232</td>
<td>232</td>
</tr>
</tbody>
</table>

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2) Revised FY2016 emission factors in accordance with GHG protocol emissions factor library, Green-E and reliable disclosure.

3) Enhanced data control processes to improve FY2015 and FY2016 data consistency.

4) 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. FY2016 increase was due to accidental releases of a gas with a high ODS value into the environment.
SUSTAINABILITY FROM SHIP TO SHORE

PERFORMANCE SUMMARY - Environmental Data

<table>
<thead>
<tr>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Ships Number</td>
<td>100</td>
<td>99</td>
<td>102</td>
</tr>
</tbody>
</table>

WASTEWATER

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
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<tbody>
<tr>
<td>Bilge Water Discharge to Sea</td>
<td>Metric Tonnes</td>
<td>264,471</td>
<td>223,185</td>
<td>205,846</td>
</tr>
<tr>
<td>Bilge Water Sea Discharge Rate</td>
<td>Liters/NM</td>
<td>28.6</td>
<td>24.2</td>
<td>21.9</td>
</tr>
<tr>
<td>Total Gray Water Discharged</td>
<td>Metric Tonnes</td>
<td>18,096,245</td>
<td>17,494,817</td>
<td>18,003,643</td>
</tr>
<tr>
<td>&gt; Gray Water Discharged to Sea</td>
<td>Metric Tonnes</td>
<td>17,919,686</td>
<td>17,347,118</td>
<td>17,862,704</td>
</tr>
<tr>
<td>&gt; Gray Water Discharged to Shore</td>
<td>Metric Tonnes</td>
<td>176,559</td>
<td>147,698</td>
<td>140,939</td>
</tr>
<tr>
<td>Gray Water Discharge Rate</td>
<td>Liters/Person-Day</td>
<td>164</td>
<td>159</td>
<td>157</td>
</tr>
<tr>
<td>Total Black Water Discharged</td>
<td>Metric Tonnes</td>
<td>7,098,169</td>
<td>7,692,427</td>
<td>7,963,662</td>
</tr>
<tr>
<td>&gt; Treated Black Water Discharged to Sea</td>
<td>Metric Tonnes</td>
<td>7,030,809</td>
<td>7,578,235</td>
<td>7,860,077</td>
</tr>
<tr>
<td>&gt; Treated Black Water Discharged to Shore</td>
<td>Metric Tonnes</td>
<td>32,469</td>
<td>44,721</td>
<td>46,484</td>
</tr>
<tr>
<td>&gt; Untreated Black Water Discharged to Sea</td>
<td>Metric Tonnes</td>
<td>31,808</td>
<td>69,303</td>
<td>55,181</td>
</tr>
<tr>
<td>&gt; Untreated Black Water Discharged to Shore</td>
<td>Metric Tonnes</td>
<td>3,083</td>
<td>169</td>
<td>1,920</td>
</tr>
<tr>
<td>Black Water Discharge Rate</td>
<td>Liters/Person-Day</td>
<td>64.4</td>
<td>69.8</td>
<td>69.5</td>
</tr>
</tbody>
</table>

WASTE DISPOSAL

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Waste</td>
<td>Metric Tonnes</td>
<td>477,570</td>
<td>486,451</td>
<td>-</td>
</tr>
<tr>
<td>&gt; Hazardous Waste</td>
<td>Metric Tonnes</td>
<td>21,657</td>
<td>27,904</td>
<td>-</td>
</tr>
<tr>
<td>&gt; Non-Hazardous Waste</td>
<td>Metric Tonnes</td>
<td>455,913</td>
<td>458,546</td>
<td>-</td>
</tr>
<tr>
<td>Waste Rate (Excluding Recycle)</td>
<td>Kilograms/Person-Day</td>
<td>3.2</td>
<td>3.2</td>
<td>-</td>
</tr>
<tr>
<td>Total Waste Disposed to Shore</td>
<td>Metric Tonnes</td>
<td>156,402</td>
<td>160,748</td>
<td>-</td>
</tr>
<tr>
<td>&gt; Hazardous Waste Disposed to Shore</td>
<td>Metric Tonnes</td>
<td>9,178</td>
<td>11,308</td>
<td>-</td>
</tr>
<tr>
<td>&gt; Non-Hazardous Waste Disposed to Shore</td>
<td>Metric Tonnes</td>
<td>147,223</td>
<td>149,440</td>
<td>-</td>
</tr>
<tr>
<td>Total Waste Recycled to Shore</td>
<td>Metric Tonnes</td>
<td>128,956</td>
<td>129,499</td>
<td>-</td>
</tr>
<tr>
<td>&gt; Hazardous Waste Recycled to Shore</td>
<td>Metric Tonnes</td>
<td>11,392</td>
<td>15,648</td>
<td>-</td>
</tr>
<tr>
<td>&gt; Non-Hazardous Waste Recycled to Shore</td>
<td>Metric Tonnes</td>
<td>117,565</td>
<td>113,851</td>
<td>-</td>
</tr>
<tr>
<td>Food Waste Discharged to Sea</td>
<td>Metric Tonnes</td>
<td>102,688</td>
<td>105,658</td>
<td>-</td>
</tr>
<tr>
<td>Total Waste Incinerated Shipboard</td>
<td>Metric Tonnes</td>
<td>89,524</td>
<td>90,548</td>
<td>-</td>
</tr>
<tr>
<td>Non-Hazardous and Hazardous Waste Recycled</td>
<td>Percent</td>
<td>27.0</td>
<td>26.6</td>
<td>-</td>
</tr>
</tbody>
</table>

SPILLS & FINES

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Significant Spills</td>
<td>Number</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Number of Reportable Spills</td>
<td>Number</td>
<td>30</td>
<td>49</td>
<td>39</td>
</tr>
<tr>
<td>Total Volume of Reportable Spills</td>
<td>Liters</td>
<td>3,108</td>
<td>8,488</td>
<td>1,577</td>
</tr>
<tr>
<td>Total # of Non-monetary Sanctions</td>
<td>Number</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Monetary Value of Fines</td>
<td>U.S. Dollars ($)</td>
<td>62,939</td>
<td>35,900</td>
<td>277,401</td>
</tr>
</tbody>
</table>

9) 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 SOx value is 1.13 x 10 x 0.96, where S is the fuel sulfur content. This calculation has been adjusted to account for exhaust gas cleaning system (EGCS) use in FY2016. This adjustment was made based on the near-zero sulfur emissions resulting from planned HFO fuel consumption during EGCS operations. In addition, FY2015 data has been revised to correct an error. 10) The NOx weight is calculated based on default emission factors. The default emission factor used for calculating NOx value for HFO/LFO is 78 kg, MGO is 80 kg, and LNG is 7 kg of NOx per tonne of fuel consumed. These factors have been applied to FY2015 and FY2014 for comparison purposes. The NOx weight is calculated based on default emission factors. The default emission factor used for calculating PM2.5 value for HFO is 0.82 kg, LFO is 0.75 kg, MGO is 0.15 kg, and LNG negligible kilograms of PM2.5 per tonne of fuel consumed. These factors have been applied to FY2015 and FY2014 for comparison purposes. This calculation has been adjusted to account for EGCS use in FY2016. 11) In FY2016, we commenced a comprehensive evaluation of our waste management accounting practices and introduced a new approach for sustainability reporting purposes. With the goal of continuous operational improvement, we refocused our efforts to standardize waste definitions and units of measure across our global brands. This approach allows for consistent trend analysis and reporting. FY2016 waste data will be available in the next performance summary. For regulatory reporting purposes, we comply with the requirements of the particular country where waste is landed. 12) 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. 13) For FY2015 & FY2016, Carnival has defined a reportable spill for internal reporting purposes as a release of soot as well as a release of oil/grease/chemicals that is in excess of 0.5 liters (500 ml). However, in U.S. waters a spill that causes oil sheen is also reported and included in the total number of spills reported, even though the volume may be less than 0.5 liters. 14) Carnival settled and paid $277,401 during FY2016, the bulk of which was in relation to emerging sulfur emissions regulatory changes. On December 1, 2016 (FY2017), Princess Cruises paid a $40M USD fine as part of a plea agreement with the U.S. Government.
<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORKFORCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Crew</td>
<td>Number</td>
<td>81,200</td>
<td>82,200</td>
<td>84,600</td>
</tr>
<tr>
<td><strong>DIVERSITY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor Sourcing Region:</td>
<td>Percent</td>
<td>5.5</td>
<td>4.4</td>
<td>9.2</td>
</tr>
<tr>
<td>&gt; North &amp; Central America</td>
<td></td>
<td>4.6</td>
<td>3.7</td>
<td>3.1</td>
</tr>
<tr>
<td>&gt; Europe</td>
<td>Percent</td>
<td>20.4</td>
<td>17.9</td>
<td>16.6</td>
</tr>
<tr>
<td>&gt; Asia</td>
<td>Percent</td>
<td>67.7</td>
<td>70.6</td>
<td>69.4</td>
</tr>
<tr>
<td>&gt; Australia</td>
<td>Percent</td>
<td>0.5</td>
<td>2.3</td>
<td>0.7</td>
</tr>
<tr>
<td>&gt; Africa</td>
<td>Percent</td>
<td>1.4</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Gender Distribution - Female</td>
<td>Percent</td>
<td>17.3</td>
<td>16.6</td>
<td>17.0</td>
</tr>
<tr>
<td>Gender Distribution - Male</td>
<td>Percent</td>
<td>82.7</td>
<td>83.4</td>
<td>83.0</td>
</tr>
<tr>
<td><strong>INJURIES &amp; FATALITIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Injuries</td>
<td>Number</td>
<td>2,304</td>
<td>2,265</td>
<td>2,357</td>
</tr>
<tr>
<td>&gt; Minor Injuries</td>
<td>Number</td>
<td>1,155</td>
<td>1,211</td>
<td>1,304</td>
</tr>
<tr>
<td>&gt; Serious Injuries</td>
<td>Number</td>
<td>660</td>
<td>603</td>
<td>544</td>
</tr>
<tr>
<td>&gt; Major Injuries</td>
<td>Number</td>
<td>489</td>
<td>451</td>
<td>509</td>
</tr>
<tr>
<td>Accidental Deaths</td>
<td>Number</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td><strong>HEALTH &amp; SAFETY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total CDC VSP Inspections</td>
<td>Number</td>
<td>110</td>
<td>130</td>
<td>109</td>
</tr>
<tr>
<td>&gt; CDC VSP Inspections - Ships scoring 100%</td>
<td>Number</td>
<td>17</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>&gt; CDC VSP Inspections - Ships scoring 86 - 99%</td>
<td>Number</td>
<td>92</td>
<td>100</td>
<td>94</td>
</tr>
<tr>
<td>&gt; CDC VSP Inspections - Ships scoring &lt; 86%</td>
<td>Number</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td><strong>OTHER STATISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee Turnover</td>
<td>Percent</td>
<td>18.6</td>
<td>23.2</td>
<td>21.2</td>
</tr>
<tr>
<td>Employees Covered by Collective Bargaining Agreements (CBA)²</td>
<td>Percent</td>
<td>47.0</td>
<td>54.5</td>
<td>54.6</td>
</tr>
<tr>
<td>Employees Represented by H&amp;S Committees</td>
<td>Percent</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
## PERFORMANCE SUMMARY - Social Data (Shoreside)

<table>
<thead>
<tr>
<th>WORKFORCE</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Number of Full Time Employees</td>
<td>Number</td>
<td>10,100</td>
<td>10,000</td>
<td>10,500</td>
</tr>
<tr>
<td>Average Number of Part Time Employees</td>
<td>Number</td>
<td>2,800</td>
<td>2,400</td>
<td>2,100</td>
</tr>
<tr>
<td>Shoreside Employee Status - Full Time</td>
<td>Percent</td>
<td>78.3</td>
<td>80.8</td>
<td>83.2</td>
</tr>
<tr>
<td>Shoreside Employee Status - Part Time</td>
<td>Percent</td>
<td>21.7</td>
<td>19.2</td>
<td>16.8</td>
</tr>
</tbody>
</table>

### DIVERSITY

<table>
<thead>
<tr>
<th>Gender Distribution</th>
<th>Percent</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>58.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### EMPLOYEES BY BRAND HEADQUARTER REGION

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>2.3</td>
<td>2.9</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>20.7</td>
<td>30.5</td>
<td>31.3</td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td>77.0</td>
<td>66.6</td>
<td>65.6</td>
<td></td>
</tr>
</tbody>
</table>

### INJURIES & FATALITIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injuries</td>
<td>Number</td>
<td>172</td>
<td>118</td>
<td>107</td>
</tr>
<tr>
<td>Accidental Deaths</td>
<td>Number</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### TRAINING AND PERFORMANCE

<table>
<thead>
<tr>
<th>Category</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Training</td>
<td>Hours</td>
<td>129,468</td>
<td>132,613</td>
<td>125,029</td>
</tr>
</tbody>
</table>

### OTHER STATISTICS

<table>
<thead>
<tr>
<th>Category</th>
<th>Units</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Turnover</td>
<td>Percent</td>
<td>37.2</td>
<td>19.8</td>
<td>16.0</td>
</tr>
<tr>
<td>Employees Covered by Collective Bargaining Agreements (CBA)</td>
<td>Percent</td>
<td>14.5</td>
<td>23.5</td>
<td>19.8</td>
</tr>
<tr>
<td>Employees Represented by Health &amp; Safety (H&amp;S) Committees</td>
<td>Percent</td>
<td>66.3</td>
<td>74.2</td>
<td>73.5</td>
</tr>
</tbody>
</table>

---

1) Independently verified by LRQA
2) For FY2015 & FY2016 CBA’s are defined as per labor unions or labor organizations at the various countries or geographical regions where we do business.
3) In addition to our headquarter locations, other offices are located worldwide. Due to varying legal requirements worldwide, further detail on our employee base is limited.
4) For FY2015 & FY2016, enhanced data control processes to improve consistency.
5) For FY2015 & FY2016, adjusted for seasonal employees at Holland America Princess Alaska Tours. Therefore, FY2014 turnover percentages are not comparable to FY2015 and FY2016.
OUR APPROACH TO SUSTAINABILITY

We are committed to sustainability and this commitment is embedded in our business - from ship to shore. In this report we describe our approach to sustainability. We outline our positions, strategies and program around key sustainability topics of relevance to our company, the cruise industry and our stakeholders.

Our Sustainability Report provides another platform to expand our level of communication regarding additional material indicators related to our performance beyond those disclosed in our Annual Financial Reports, Proxy Statement, other regulatory disclosures and our brand specific Sustainability Reports. We produce this report for the benefit of our stakeholders.

STAKEHOLDER ENGAGEMENT

We hope that the information and perspectives in this report are useful and you see them as an invitation for further dialogue with us. We regularly and pro-actively engage and collaborate with a broad range of stakeholder groups that have interests in our sustainability policies, practices and performance through formal and informal channels. We also engage with specific stakeholders based on their involvement with and expertise on issues of importance to the company.

In general, we develop a common understanding of the issues relevant to the challenges we face, through active and ongoing stakeholder communications. We engage with our stakeholders in various ways. We have one-on-one meetings, group meetings, town halls, email communication and social media interaction, among others. These engagement processes help to ensure that all stakeholders have an equal opportunity to ask questions and voice their concerns.

GUESTS
Measuring our guest satisfaction and addressing their feedback provides a powerful indicator about our sensitivity to their needs.

TRAVEL PROFESSIONALS
We work with responsible business partners who share our values. We host travel professionals on our ships to provide them with opportunities to better experience our products and services.

SUPPLIERS
We are part of a complex network of interdependent companies. Our active dialogue with our business partners ensures sustainability is part of the relationship.

NON-GOVERNMENT ORGANIZATIONS
We collaborate with and belong to organizations that work to address issues of concern to our industry and stakeholder groups.

INVESTORS
We engage on our environment, social and governance (ESG) performance.

EMPLOYEES
We listen to and act upon our employees’ perspectives and ideas.

PORT COMMUNITIES
We meet with community leaders to discuss business and community planning, and ways to interact sustainably.

GOVERNMENT AGENCIES & POLICY MAKERS
We strive to positively impact public policy and regulation by contributing cruise industry expertise.

MEDIA
We work on a variety of subjects related to our business and impact.

BUSINESS ORGANIZATIONS/INDUSTRY ASSOCIATIONS
We work with key stakeholders to address a broad range of sustainability issues in the cruise industry, the broader maritime industry and companies representing other industries.
SCAPE OF REPORT

This Sustainability Report provides information related to our company’s FY2016 (December 1, 2015 to November 30, 2016) performance. However, due to the timing of the release of this report, certain significant events from FY2017 are also covered. This is our seventh annual Sustainability Report. This report was developed at the core “in accordance” level of the Global Reporting Initiative (GRI) G4 Guidelines, frameworks and metrics. Sustainability performance data included in this Sustainability Report are based on information supplied to Carnival Corporation & plc by our brands, the fleet of cruise ships operated by each brand and corporate departments.

These include:
• Quantitative data collected, aggregated and analyzed, utilizing our custom-made in-house sustainability data collection and reporting systems;
• Quantitative data for specific indicators assured to limited level of assurance by a third party; and
• Qualitative data collected from each of Carnival Corporation & plc’s brands and from other in-house and industry sources.

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 brands 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 consider our shoreside water consumption and waste generation immaterial to our operations. We have continued to expand our report boundary, as we have continued to include some of our indirect impacts. As we continue our sustainability journey, we expect to incorporate more indirect impacts of our operations related to our diverse supply chain.

We adjust data if data collection methods change or data errors are identified. Any significant changes in the measurement methods and/or data values applied to key metrics from previous years are documented within this report. Significant changes are defined as changes greater than 5% of the original data point. We made adjustments to the data collection process to improve consistency of data across our brands. See the performance summary for details. We normalize the majority of our indicators to take into account changes in the size of our fleet, as well as changes in itineraries and guest capacity.

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.

MATERIALITY

Every two years we perform a materiality analysis and a benchmarking review to make sure we continue to address our stakeholder needs, operational impacts, regulatory landscape and technological developments. This year we reevaluated the significant economic, environmental and social aspects of our operations to further assess the relative impacts of these aspects. Known as a “materiality assessment”, this analysis enables us to determine which aspects substantively influence the assessments and decisions of our stakeholders; recognize and act effectively in relation to sustainability-related opportunities and risks; and, determine how these aspects affect our stakeholders, society and the environment.

During this evaluation process, we simultaneously conducted a benchmarking review of major hospitality, travel and marine industries. These two assessments provided a framework for determining which aspects to focus on in our sixth and seventh annual Sustainability Reports.
As part of our materiality assessment process we:

- Reevaluated the significant issues presented in our prior sustainability materiality assessments.
- Reviewed the environmental, social, governance and economic aspects and indicators in the GRI G4 sustainability reporting guidelines, as they apply to our business.
- Analyzed the results of stakeholder sustainability engagements, including investor and customer inquiries, questionnaires and surveys from rating organizations, industry reports and analyses, policies and regulatory guidance, among others.
- Benchmarked our sustainability strategy using publicly available information.
- Held internal meetings to discuss company perspectives on sustainability aspects and impacts.
- Evaluated 2020 sustainability goals progress.
- Examined over 50 aspects and issues, including areas of significant organizational impact, as well as broader sustainability trends (GRI G4 46 Aspects).
- Mapped the full universe of stakeholder and company aspects on a materiality matrix, identifying the mid and high-scoring issues as priorities for our operations. This mapping enabled us to:
  - Prioritize information on the basis of materiality, analysis of environmental aspects and impacts (ISO 14001), sustainability context, and stakeholder inclusiveness;
  - Agree on the desired content for each metric and the approach to reporting (qualitative vs. quantitative detailed performance tracking, etc.); and
  - Expand supply chain materiality.
CHANGES FROM 2013-2014 TO 2015-2016 MATERIALITY ASSESSMENT

As a result of our materiality assessment, we revised our materiality matrix. We divided all aspects into four categories (i.e. economic, environmental, social and one combined group of all three categories). Each category is identified by a specific color. We also added, regrouped and combined aspects. The new aspects added include guest satisfaction, innovation, Fathom impact + travel, risk management and stakeholder engagement. These new categories are not included within the GRI-materiality guidelines; however, they are unique to our business. We regrouped child labor, forced or compulsory labor, non-discrimination, freedom of association and collective bargaining, labor management, and employment aspects under labor rights and human capital. The supply chain continued to grow in importance to our business and stakeholders and is reflected in the materiality matrix. Furthermore, we refined categories by, for example, renaming diversity and equal rights to diversity and inclusion.

EVALUATION PROCESS

The materiality matrix summarizes the results of our materiality assessment and shows, for each aspect, its relative concern to our stakeholders and its current or potential impact on the company. Materiality is about identifying the issues that matter most to our business and to our stakeholders. “High” and “Medium” issues help us to set the agenda for our sustainability strategy and for what we included in our current and future sustainability reports. “Low” issues, while important and managed by the company, are not currently covered in detail in our sustainability reporting as they are of lesser concern to our stakeholders.

We plan to perform this materiality analysis and a benchmarking overview every two years, to make sure we continue to address our stakeholder needs, operational impacts, regulatory landscape and technological developments.

DISCLAIMER IN RESPECT TO FORWARD-LOOKING STATEMENTS

The data included in this report has been collected and processed with the utmost care. Nevertheless, errors in transmission cannot be ruled out entirely. Some of the statements, estimates or projections contained in this report are forward-looking statements that involve risks, uncertainties and assumptions with respect to our company, including some statements concerning future results, outlooks, plans, goals and other events which have not yet occurred. All statements other than statements of historical facts are statements that could be deemed forward-looking statements. Forward-looking statements should not be relied upon as a prediction of actual results. These statements are based on current expectations, estimates, forecasts and projections about our business and the industry in which we operate and the beliefs and assumptions of our management.

We have tried, whenever possible, to identify these statements by using words like will, may, could, should, would, believe, depends, expect, goal, anticipate, forecast, project, future, intend, plan, estimate, target, indicate and similar expressions of future intent or the negative of such terms.

We go to great lengths to check and update the information we publish. However, we expressly disclaim any obligation to disseminate, after the date of this report, any updates or revisions to any such forward-looking statements to reflect any change in expectations or events, conditions or circumstances on which any such statements are based.
**COMMITTEES**

<table>
<thead>
<tr>
<th>COMMITTEE</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health, Environmental, Safety &amp; Security (HESS) Committees</td>
<td>The HESS Committees’ purpose is to assist the Boards in fulfilling their responsibility to supervise, monitor and oversee regulatory compliance related to health, environmental, safety, security and sustainability policies, programs, initiatives at sea and onshore. In addition, the HESS Committees also approve and oversee HESS leadership initiatives. For example, the HESS Committees approved the corporate-wide greenhouse gas (GHG) emissions reduction goal.</td>
</tr>
<tr>
<td>Compensation Committees</td>
<td>The purpose of the Compensation Committees is to create competitive executive 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 Corporation &amp; plc’s shareholders. Operational achievements related to sustainability performance are also reviewed as part of the compensation decisions. Moreover, each brand 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.</td>
</tr>
<tr>
<td>Audit Committees</td>
<td>The purpose of the Audit Committees is to assist the Boards’ oversight of the integrity of the financial statements, the compliance with legal and regulatory requirements (other than health, environmental, safety and security matters), the independent auditor’s qualifications and independence, the performance of internal audit functions and independent auditors, and relevant elements of the risk management programs. The Audit Committees also assist in the oversight of the reports that are required by the U.S. Securities and Exchange Commission (SEC) rules and regulations. They also approve the filing of Carnival plc, Strategic Report and IFRS Financial Statements including the Annual Accounts and Reports.</td>
</tr>
<tr>
<td>Nominating &amp; Governance Committees</td>
<td>The purpose of the Nominating &amp; Governance Committees is to develop and recommend to the Boards a set of Corporate Governance Guidelines; to assist the Boards by identifying individuals qualified to become Board members and to recommend to the Boards the director nominees for the next annual meeting of shareholders; to recommend to the Boards director nominees for each committee; and to assist the Boards with such other matters as may be set forth in its charter from time to time.</td>
</tr>
<tr>
<td>Executive Committees</td>
<td>The purpose of the Executive Committees is to exercise the authority of the full Boards between Board meetings, except to the extent that the Boards have delegated authority to another committee or to other persons, and except as limited by applicable law.</td>
</tr>
</tbody>
</table>

More information on linkages between compensation for members of the Boards of Directors, Executives and Senior Management, and the company’s financial, environmental, social and governance performance can be found in the Compensation Discussion and Analysis section of our annual Proxy Statement at [www.CarnivalCorp.com](http://www.CarnivalCorp.com).
Our brands offer distinct cruising options along with a truly unique and memorable experience for our guests. As different as our brands are, they all share a commitment to preserving the beautiful and often pristine environments in which we cruise. Because of this shared sense of responsibility, the company carefully manages environmental activities and addresses environmental stewardship at every level of our organization.

Our Maritime Policy & Analysis Department evaluates environmental risks, develops standards and procedures, and raises the bar on our environmental leadership and performance through policy and best-practice identification and implementation across the fleet.

The management teams of our brands identify and manage environmental aspects and impacts, supervise the environmental performance of the ships, and ensure implementation of environmental statutory requirements, best management practices and company environmental procedures. Most importantly, the dedicated ships’ Officers and crew carry out company policies and procedures on board every day.

Each ship in our fleet has a full-time Environmental Officer (EO), who oversees environmental compliance and correct implementation of procedures. Each EO reports directly to the ship’s Captain, and has a direct line of communication to the brand’s shoreside Environmental Compliance Manager.

Our brands also encourage our guests to be aware of their own impact on the environment. We provide, for example, environmental awareness information to passengers across a range of media. Our EOs are glad to answer any environmental questions our guests may have and to provide in-depth insight into maritime environmental management for interested guests.

**SCOPE OF EO RESPONSIBILITIES**

- Performing environmental rounds and inspections to assess the ship’s environmental performance.
- Assisting the crew in addressing environmental concerns and questions related to Carnival’s Environmental Management System and applicable laws.
- Responding to inquiries or complaints of any crew members, guests or government officials regarding environmental practices and operations.
- Managing environmental shipboard training of crew and contractors who have environmental responsibilities.
- Assessing the environmental proficiency of the ship’s crew, identifying gaps and providing additional training if necessary.
- Aiding the Captain, Engine Department and government officials, in the event of accidental releases or spills, and coordinating all related communications.
- Evaluating new methods to minimize the ship’s environmental impact (waste minimization, water and energy conservation, and other measures).
- Participating in shipboard management meetings and ensuring that environmental matters are always addressed.
- Evaluating new methods to minimize the ship’s environmental impact (waste minimization, water and energy conservation, and other measures).
- Providing relevant environmental regulatory information in support of voyage planning.
- Providing assistance to internal and external auditors during environmental audits.
- Monitoring all waste operations and monitoring crew members and shoreside contractor environmental activities.
- Testing the Carnival Compliance and Ethics Hotline and ensuring that the Hotline information is posted in highly visible crew areas.
- Ensuring proper notification of all environmental incidents.
The following is a summary of procedures adopted to protect health on board and ashore:

- Managing of food and water safety through comprehensive shore based and on board processes and systems. These include ensuring safe food sourcing and protecting food safety from delivery through storage, preparation, cooking and final service. Managing of food safety is based on the principles of the international best practice system of Hazard Analysis and Critical Control Point (HACCP). We similarly protect water safety throughout production, storage and distribution to the final consumer.

- Managing housekeeping and laundry to follow best practices for cleaning and disinfection in cabins, public areas, crew areas and within laundry operations on our ships.

- Preventing the spread of illnesses through contaminated surfaces by carefully managing all cleaning operations throughout the ship. For ship and port operations, we ensure the regular and effective cleaning and sanitizing of frequently contacted hand touch surfaces such as door handles, railings, tables and elevator buttons.

- Managing air handling systems and air conditioning to help ensure safe indoor air quality.

- Managing recreational water facilities including the quality of water and safety of swimming pools, spa pools and other leisure facilities.

- Managing onboard child activity centers and facilities to help prevent the spread of childhood illnesses.

- Managing the public health standards in onboard beauty spas, salons and gym facilities.

- Managing the prevention and control of pests using an integrated pest management (IPM) approach.

- Promoting guest, crew and port employees health by ensuring hand washing facilities and hand sanitizers are made readily available and encouraging their frequent use.

- Ensuring ready access to public health specialists and comprehensive medical and health services to deal with outbreaks and other health emergencies. This includes ensuring arrangements are in place to provide additional medical and public health personnel.

- Promoting effective isolation of anyone who may spread communicable diseases. Including requesting that ill guests and crew report relevant symptoms immediately and that they recuperate in their cabins until these subside, in an effort to reduce the spread of any illness of public health concern.

- Communicating well established good hand hygiene practices and other infection control measures to guests, crew and port employees. This includes specific public health training for crew and port staff on implementing our procedures.
ENERGY-SAVINGS INITIATIVES

We are continuously 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 multi million-dollar investments and a multi-pronged strategy. Below is a list of some of the initiatives we are working on:

DESIGNING SHIPS FOR GREATER EFFICIENCY

• Optimize hull design and coating systems to minimize drag.
• Select fuel-efficient combustion equipment.
• Install equipment to use waste heat.
• Install energy-efficient on board equipment, including lighting.

SHIP OPERATION AND MAINTENANCE INITIATIVES

• Optimize diesel generator use at sea and in port.
• Manage use of evaporators.
• Use fluorescent and LED lighting.
• Utilize automatic heating ventilation and air-conditioning (HVAC) control systems.
• Change chiller additives.
• Apply silicone-based anti-fouling marine hull coatings.
• Clean propellers and hulls periodically.
• Optimize plant energy consumption.
• Increase use of waste heat from engine exhaust for fresh water production and steam generation.
• Use vessel shore power installations (“cold ironing”).

MINIMIZING FUEL USE AND ENGINE EMISSIONS

• Examine ways to increase energy efficiency through fuel homogenizers, which improve combustion and reduce fuel consumption.
• Optimize the use of diesel generators on board to improve efficiency.
• Use waste heat generated by the ships’ engines to heat water instead of relying on the ships’ boilers.
• Reduce the power required by engine room ventilation fans, through use of variable-frequency fan-drive motors and related pressure and temperature control systems.

IMPLEMENTING OTHER ENERGY-SAVING INITIATIVES

• Design more fuel-efficient itineraries.
• Use voyage optimization tools.
• Increase energy use awareness through education and training of guests and crew.
• Develop our ability to use alternative fuels.
• Research and developing emissions-reduction technologies.
• Incorporate an innovative “Air Lubrication System,” which creates bubbles between the ship’s hull and water to reduce friction.

MINIMIZING ENGINE EMISSIONS

• Use Cold Ironing or Plug-In.
• Install Exhaust Gas Cleaning Systems.
• Take advantage of alternative fuels like (LNG).
This table summarizes some of the principal 2016 international, national, state and local laws, acts, codes, directives, legislation, treaties, protocols, statutes, rules, regulations and voluntary guidelines that govern the operation of our ships as related to environmental, maritime safety and labor requirements in the jurisdictions in which our ships operate. Carnival Corporation & plc complies with these various requirements and we update our practices and procedures, as well as our management systems, based on changes to these requirements, as appropriate.

### INTERNATIONAL CONVENTIONS:

#### INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA (“SOLAS”)

**Regulation Description & Summary of Requirements**

SOLAS contains safety requirements for design, construction, equipment, operations, safety management, and security, set forth in numerous chapters, including the following which apply to Carnival Corporation & plc’s operations:

- Chapter I – General Provisions
- Chapter II-1 – Construction – Subdivision and stability, machinery and electrical installations
- Chapter II-2 – Fire protection, fire detection and fire extinction
- Chapter III – Life-saving appliances and arrangements
- Chapter IV – Radio-communications
- Chapter V – Safety of navigation
- Chapter IX – Management for the safe operation of ships
- Chapter XI-1 – Special measures to enhance maritime safety
- Chapter XI-2 – Special measures to enhance maritime security
- Chapter XIII – Verification of Compliance
- Chapter XIV – Safety Measures for Ship Operating in Polar Waters

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.

On January 1, 2016, a new chapter to SOLAS, Chapter XIII, entered into force, establishing measures for verification of compliance with SOLAS provisions and to make the use of the IMO Instruments Implementation Code (III Code) mandatory regarding audit standards to raise the standards of the shipping industry.

On January 1, 2017, the International Code for Ships Operating in Polar Waters (“Polar Code”), adopted by the IMO in May 2015, will enter into force and is mandatory under SOLAS and MARPOL. The Polar Code establishes a new chapter of SOLAS, Chapter XIV, which provides additional operational safety measures for new vessels operating in polar waters.

**How We Meet or Exceed Regulation**

On January 1, 2015, requirements entered into force addressing musters of newly embarked passengers prior to or immediately upon departure and enclosed-space entry training and drills.

Carnival complies with SOLAS.

We have also developed and implemented standardized policies and procedures 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 suppression;
- ✔ ship stability;
- ✔ life-saving equipment and systems.

Carnival Corporation & plc exceeds regulations
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:

- 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, and 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.

In order to evaluate the effectiveness of the SMS, pursuant to amendments which entered into force on January 1, 2015, the company must also periodically verify whether personnel undertaking delegated ISM related tasks are acting in conformity with the company's responsibilities under the ISM Code.

Carnival Corporation & plc complies with ISM Code and has also obtained additional certifications that go beyond the requirements of the ISM Code, including:

- ISO 14001 Environmental Management System certification (all Brands),
- ISO 9001 Quality Management System certification (some Brands), and
- HSAS 18001 Occupational Health and Safety Management System certification (some Brands).

Carnival Corporation & plc exceeds regulations.
Annex I, Regulations for the Prevention of Pollution by Oil, establishes requirements that prevent pollution from oil. Annex I sets forth a comprehensive list of requirements that include:

- designing and constructing vessel equipment specifications to reduce the occurrence of oil discharge;
- fitting vessels with oil discharge monitoring and control systems, oily water separating equipment, oil content meters (bilge alarms) and a filtering system, slop tanks, sludge tanks, piping and pumping arrangements;
- recordkeeping requirements for such equipment; and
- having an approved shipboard oil pollution emergency plan (SOPEP).

Carnival Corporation & plc exceeds the requirements of Annex I in areas that include, but are not limited to:

- 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
- requiring that Carnival Corporation & plc’s Brands install “bilge control discharge boxes” which are redundant systems that monitor treated bilge water.

Some of Carnival Corporation & plc’s Brands 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).
### Regulation Description & Summary of Requirements

**Annex IV, Regulations for the Prevention of Pollution by Sewage from Ships:**

- establishes regulations for the discharge of sewage into the sea from ships, including regulations regarding the ships’ equipment and systems for the control of sewage discharge, the provision of facilities at ports and terminals for the reception of sewage, and requirements for survey and certification;
- requires ships to be equipped with either an approved sewage treatment plant, or an approved sewage comminuting and disinfecting system, or a sewage holding tank;
- prohibits the discharge of sewage into the sea, except when the ship has in operation an approved sewage treatment plant, or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance of more than 3 NM from the nearest land;
- limits discharges of sewage that is not comminuted or disinfected to specific rates and at a distance of more than 12 NM from the nearest land; and
- establishes stricter discharge requirements in designated Special Areas, including the Baltic Sea.

### How We Meet or Exceed Regulation

Carnival Corporation & plc exceeds the requirements of Annex IV by:

- 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 regulate gray water management or treatment.

### Regulation Description & Summary of Requirements

**Annex V, Regulations for the Prevention of Pollution by Garbage from Ships:**

- establishes rules and guidelines to eliminate and reduce the amount of garbage disposed of into the sea from ships;
- provides a general prohibition on the disposal of garbage from ships into the sea, with limited exceptions, for food wastes and operational wastes not harmful to the marine environment;
- defines garbage as all kinds of food, domestic and operational waste, including plastics and cooking oil, and excluding fresh fish, generated during the normal operation of the vessel and liable to be disposed of continuously or periodically;
- prohibits the disposal of plastics anywhere into the sea;
- restricts discharges of garbage from ships into “Special Areas;” and
- requires vessels to implement a Garbage Management Plan and record all disposal and incineration operations in a Garbage Record Book.

### How We Meet or Exceed Regulation

Carnival Corporation & plc complies with Annex V, and some Operating Lines limit discharges of comminuted food waste to beyond 12 NM, which is even more restrictive than beyond the 3 NM required by this regulation.
Annex VI, Regulations for the Prevention of Air Pollution from Ships:

- establishes reduction requirements for sulfur oxides ("SOx"), nitrogen oxides ("NOx") and particulate matter;
- sets limits on the sulfur content of fuel oil used by ships;
- requires that, in special Sulfur Emission Control Areas ("SECAs"), the sulfur content of fuel burned cannot exceed 0.10 percent as of January 2015;
- establishes stricter controls on emissions of SOx and NOx in the North American Emission Control Area (ECA), which became effective August 1, 2012, encompasses most of the United States and Canada’s coastal waters out to 200 nautical miles from the coastline, and requires that vessels use fuel with a maximum 0.10 percent sulfur content as of January 1, 2015;
- similar to the North American ECA, 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, became effective January 1, 2014 and requires that vessels use fuel with a maximum 0.10 percent sulfur content as of January 1, 2015;
- requires that, in non-SECA areas, the sulfur content of fuel burned cannot exceed 3.5 percent;
- requires ships to carry an International Air Pollution Prevention ("IAPP") Certificate;
- 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;
- requires the Energy Efficiency Design Index ("EEDI") for certain new ships, including certain passenger vessels as of September 2015, and the Ship Energy Efficiency Management Plan ("SEEMP") for all ships; and
- 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.


Pursuant to Polar Code, which will enter into force on January 1, 2017, amendments to MARPOL Annexes I, II, IV and V were adopted mandating additional provisions for the protection of the polar environment for vessels operating in the polar waters.

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annex VI, Regulations for the Prevention of Air Pollution from Ships:</td>
<td>Carnival Corporation &amp; plc 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:</td>
</tr>
<tr>
<td>• establishes reduction requirements for sulfur oxides (&quot;SOx&quot;), nitrogen oxides (&quot;NOx&quot;) and particulate matter;</td>
<td>✓ Carnival Corporation &amp; plc has installed Exhaust Gas Cleaning Systems that are capable of reducing sulfur compounds.</td>
</tr>
<tr>
<td>• sets limits on the sulfur content of fuel oil used by ships;</td>
<td>✓ Use of recovery units certified to meet refrigerant recycling and recovery requirements.</td>
</tr>
<tr>
<td>• requires that, in special Sulfur Emission Control Areas (&quot;SECAs&quot;), the sulfur content of fuel burned cannot exceed 0.10 percent as of January 2015;</td>
<td>✓ Programs to reduce ODS releases.</td>
</tr>
<tr>
<td>• establishes stricter controls on emissions of SOx and NOx in the North American Emission Control Area (ECA), which became effective August 1, 2012, encompasses most of the United States and Canada’s coastal waters out to 200 nautical miles from the coastline, and requires that vessels use fuel with a maximum 0.10 percent sulfur content as of January 1, 2015;</td>
<td>✓ Carnival Corporation &amp; plc ships are certified to SEEMP energy efficiency management for reducing GHG emissions.</td>
</tr>
<tr>
<td>• similar to the North American ECA, 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, became effective January 1, 2014 and requires that vessels use fuel with a maximum 0.10 percent sulfur content as of January 1, 2015;</td>
<td>✓ Carnival Corporation &amp; plc actively participates in the working groups at the IMO that are developing efficiencies and standards that could affect the cruise industry.</td>
</tr>
<tr>
<td>• requires that, in non-SECA areas, the sulfur content of fuel burned cannot exceed 3.5 percent;</td>
<td></td>
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<tr>
<td>• requires ships to carry an International Air Pollution Prevention (&quot;IAPP&quot;) Certificate;</td>
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<tr>
<td>• restricts the use of Ozone Depleting Substances (&quot;ODS&quot;), by requiring the recording of ODS, usage of rechargeable equipment, emissions and disposal of equipment containing ODS;</td>
<td></td>
</tr>
<tr>
<td>• requires the Energy Efficiency Design Index (&quot;EEDI&quot;) for certain new ships, including certain passenger vessels as of September 2015, and the Ship Energy Efficiency Management Plan (&quot;SEEMP&quot;) for all ships; and</td>
<td></td>
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<tr>
<td>• establishes new requirements for survey and certification for the International Energy Efficiency Certificate (&quot;IEEC&quot;), 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.</td>
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</tbody>
</table>

✓ Carnival Corporation & plc meets regulations
INTERNATIONAL CONVENTION FOR THE CONTROL AND MANAGEMENT OF SHIPS’ BALLAST WATER AND SEDIMENTS (IMO “BALLAST WATER CONVENTION”)

Regulation Description & Summary of Requirements

The Ballast Water Convention:

- aims to prevent the spread of harmful aquatic organisms from one region to another;
- establishes standards and procedures for the management and control of ships’ ballast water and sediments;
- requires all ships to implement a Ballast Water and Sediments Management Plan and carry a Ballast Water Record Book;
- require ships to implement ballast water management procedures to a given standard;
- phases-out ballast water exchange as the primary control mechanism; and
- phases-in ballast water discharge standards.

The Convention was adopted in 2004 ratified on September 8, 2016, and will enter into force on September 8, 2017.

Compliance with the Ballast Water Convention will be verified by inspections and surveys conducted by the Flag State or by its delegated representative (usually a classification society). Port States also verify compliance.

Carnival Corporation & plc voluntarily complies with the IMO’s Ballast Water Management Guidelines. In addition:

- Carnival Corporation & plc 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.
- Carnival Corporation & plc’s fuel and potable water bunkering is often managed to reduce the need for ballast water.
- Some Operating Lines have worked with ballast water technology manufacturers to advance the development of treatment technologies and testing requirements.

Carnival Corporation & plc meets regulations

INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS (“STCW”)

Regulation Description & Summary of Requirements

STCW requirements include:

- standards for the training, qualification and certification of seafarers;
- specific standards of competency of crew members; and
- methods for demonstrating competency. All eight chapters of STCW apply to Carnival Corporation & plc’s operations:
  - Chapter I: General provisions
  - Chapter II: Master and Deck Department
  - Chapter III: Engine Department
  - Chapter IV: Radio-communication and radio personnel
  - Chapter V: Special training requirements for personnel on certain types of ships
  - Chapter VI: Emergency, occupational safety, medical care and survival functions
  - Chapter VII: Alternative certification
  - Chapter VIII: Watchkeeping

Training requirements apply to all levels of crew members and are tailored to their specific on board responsibilities. 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. In November 2016, Polar Code amendments to STCW were adopted by IMO, which take effect in July 2018.

The U.S. Coast Guard published a final rule on December 24, 2013, that implements the STCW Convention and STCW Code, including the 2010 amendments and provisions for the STCW security endorsements. Additionally, the rule strengthens U.S. authority to enforce the STCW Convention and STCW Code against foreign flag vessels in U.S. waters. The rule became effective on March 24, 2014.

How We Meet or Exceed Regulation

Carnival Corporation & plc complies with the requirements of STCW.

Carnival Corporation & plc meets regulations
INTERNATIONAL CONVENTIONS:

POLAR CODE

Regulation Description & Summary of Requirements

The Polar Code, which will enter into force on January 1, 2017, applies to ships operating in Arctic and Antarctic waters and establishes mandatory construction, equipment, operational, safety, training and environmental protection standards. Pursuant to various related amendments, the Polar Code is mandatory under both SOLAS and MARPOL, and applies to new ships constructed after January 1, 2017. Ships constructed before January 1, 2017 will be required to meet relevant requirements of the Polar Code by the first intermediate or renewal survey, whichever occurs first, after January 1, 2018. Polar Code amendments to STCW were also adopted which will become effective in July 2018.

How We Meet or Exceed Regulation

Carnival Corporation & plc meets regulations

MARITIME LABOR CONVENTION (“MLC”), 2006

Regulation Description & Summary of Requirements

MLC 2006, which was ratified in August 2012, entered into force August 2013, 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 and enforce compliance with these requirements.

Amendments to the MLC, adopted in 2014, addressing the protection of seafarers from abandonment and compensation in case of death or disability by requiring members to have a financial security and compensation system and requiring ships to carry certificates or other documents demonstrating financial security, will enter into force in January 2017.

How We Meet or Exceed Regulation

Carnival Corporation & plc complies with the MLC 2006 requirements.

Carnival Corporation & plc meets regulations
### Limits on Sulfur Content in Fuel in the European Union (EU)

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
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<tbody>
<tr>
<td>In January 2010, a 0.1 percent sulfur limit on all marine fuels used by ships at berth in EU ports, with limited exceptions, entered into force, requiring the use of distillate fuels. Regulations were adopted in 2012 further reducing the sulfur limit from the current 1.5 percent to 0.5 percent in 2020 when in EU member state territorial waters, exclusive economic zone and ecological areas outside ECAs.</td>
<td>Carnival Corporation &amp; plc complies with EU requirements.</td>
</tr>
<tr>
<td><strong>Carnival Corporation &amp; plc meets regulations</strong></td>
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</tbody>
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### Canadian Ballast Regulations—Transport Canada (TP 13617 E)

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
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<tbody>
<tr>
<td>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. In 2010, Canada ratified the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, which will enter into force in September 2017, and Canada will implement the Convention.</td>
<td>Carnival Corporation &amp; plc complies with the Canadian ballast water requirements.</td>
</tr>
<tr>
<td><strong>Carnival Corporation &amp; plc meets regulations</strong></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>Carnival Corporation &amp; plc complies with this directive.</td>
</tr>
<tr>
<td><strong>Carnival Corporation &amp; plc meets regulations</strong></td>
<td></td>
</tr>
</tbody>
</table>

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(1) Port State Requirements include those rules and regulations from the countries and other geographic areas where Carnival Corporation & plc’s ships operate that may differ from those already summarized in this table. Carnival Corporation & plc complies with Port State requirements of those countries in which its ships call.
# PORT STATE CONTROL REQUIREMENTS: UNITED STATES

## NATIONAL MARINE SANCTUARIES ACT (“NMSA”)

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>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, archaeological, educational or aesthetic values. The NMSA requires permits for certain commercial operations and includes more stringent discharge restrictions.</td>
<td>Carnival Corporation &amp; plc complies with the NMSA.</td>
</tr>
</tbody>
</table>

**Port State Control Requirements: United States**

Carnival Corporation & plc complies with the NMSA.  

## THE OIL POLLUTION ACT OF 1990 (33 U.S.C. 2701–2761) (“OPA 90”)

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
</tr>
</thead>
</table>
| OPA 90 amended the Clean Water Act, and created a comprehensive prevention, response, liability and compensation regime regarding oil pollution in U.S. 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.  
The U.S. Coast Guard issued a Final Rule, which became effective October 30, 2013, requiring owners and operators of nontank vessels to update and submit Nontank Vessel Response Plans (“NTVRPs”) by January 30, 2014. The Final Rule implements a 2004 statutory mandate expanding oil spill response planning standards to self-propelled nontank vessels of 400 gross tons or greater, that carry oil of any kind as fuel for main propulsion and that operate on the navigable waterways of the United States.  
On November 19, 2015, the US Coast Guard issued a final rule increasing limits of liability under OPA 90 for non-tank vessels. Pursuant to the final rule, the limits of liability applicable to all non-tank vessels, including cruise ships, increased by about 10% for removal costs and damages. | Carnival Corporation & plc complies with OPA 90. |

Carnival Corporation & plc complies with OPA 90.
PORT STATE CONTROL REQUIREMENTS: UNITED STATES

U.S. ENVIRONMENTAL PROTECTION AGENCY’S VESSEL GENERAL PERMIT (“VGP”)

Regulation Description & Summary of Requirements

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 27 specific discharge streams and contains inspection, monitoring, recordkeeping and reporting requirements. The VGP requires vessel owners and operators to adhere to “best management practices” and, in some cases, technology, to manage the covered discharges, including but not limited to ballast water, grey water and bilge water.

The 2008 VGP expired on December 19, 2013 and a new VGP went into effect thereafter, which remains effective until December 19, 2018. The current VGP, which contains more stringent requirements than the 2008 VGP, implements numeric technology-based ballast water effluent limitations that replace the non-numeric based best management practice requirements in the 2008 VGP to reduce the number of living organisms discharged via ballast water into regulated waters. The current VGP also contains more stringent effluent limits for oil-to-sea interfaces and exhaust gas scrubber washwater, which seeks to improve environmental protection of U.S. waters.

How We Meet or Exceed Regulation

Carnival Corporation & plc complies with the 2013 VGP.

✓ Carnival Corporation & plc’s procedure exceeds the VGP’s 3 NM restriction on discharges of grey water by requiring that discharges of grey water be outside 4 NM from the nearest land.

✓ Some of Carnival Corporation & plc’s Brands 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.

✓ Carnival Corporation & plc takes all reasonably available and appropriate measures to minimize the extent and effects of ballast water discharges and comply with the 2013 VGP, which went into effect in December 2013.

U.S. RESOURCE CONSERVATION AND RECOVERY ACT (“RCRA”)

Regulation Description & Summary of Requirements

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.

How We Meet or Exceed Regulation

✓ Carnival Corporation & plc complies with RCRA and its implementing regulations once waste is landed ashore, including transportation requirements such as packaging, labeling, manifesting, and recordkeeping and reporting.

✓ Carnival Corporation & plc 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 Corporation & plc meets regulations
## Ballast Water Management

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.

The U.S. Coast Guard’s ballast water regulations apply to new ships constructed on or after December 2013 upon delivery of the ship, as well as to existing ships from January 1, 2014 or January 1, 2016 onwards, based on a phase-in schedule, determined by the dry dock schedule and ballast water capacity of the ship. These 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 U.S. Coast Guard type-approved ballast water management system. In December 2016, the U.S. Coast Guard announced the approval of the first three U.S. Coast Guard type-approved ballast water management systems. In the interim, ships calling at U.S. ports and intending to discharge ballast water must either carry out exchange, which is permitted until the implementation compliance deadlines for treatment systems. Existing vessels with a ballast water capacity between 1500 and 5000 cubic meters, which include some of Carnival Corporation & plc’s vessels, must comply by their first scheduled drydocking after January 1, 2014. Those vessels that have a ballast water capacity greater than 5000 cubic meters, must comply by their first scheduled drydocking after January 1, 2016. Some Carnival Corporation & plc Brands have obtained extensions to this compliance date from the U.S. Coast Guard.

Carnival Corporation & plc complies with international, federal and state ballast water-management requirements and aims to minimize any discharges of ballast water.

- Carnival Corporation & plc 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 Corporation & plc coordinates fuel and potable water bunkering in such a way as to reduce the need for ballast water.

## MTSA

The MTSA is U.S. legislation implementing the International Ship and Port Facility Security Code ("ISPS") described above. It:

- 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.

Carnival Corporation & plc’s ships, which all have valid International Ship Security Certificates confirming compliance with the ISPS Code, also comply with the requirements of MTSA.
### PORT STATE CONTROL REQUIREMENTS: UNITED STATES

#### INTELLIGENCE REFORM AND TERRORISM PREVENTION ACT OF 2004

**Regulation Description & Summary of Requirements**

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.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the requirements of this Act.

#### CRUISE VESSEL SECURITY AND SAFETY ACT ("CVSSA") OF 2010

**Regulation Description & Summary of Requirements**

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.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the requirements of this Act.

#### ALASKA CRUISE SHIP LEGISLATION; TITLE XIV—“CERTAIN ALASKAN CRUISE SHIP OPERATIONS”

**Regulation Description & Summary of Requirements**

Sets federal effluent standards for black water and allows continuous discharge if treatment standards are met and confirmed via sampling.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the Alaska Cruise Ship Legislation.

#### ENDANGERED SPECIES ACT ("ESA") AND MARINE MAMMAL PROTECTION ACT ("MMPA")

**Regulation Description & Summary of Requirements**

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. Department of Interior’s Fish and Wildlife Service and the U.S. Department of Commerce’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 certain 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. These SMAs were expanded in 2016.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the ESA and MMPA. In 2006, Carnival Corporation & plc partnered with the U.S. National Oceanic and Atmospheric Administration (“NOAA”), and the National Park Service 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:2

ALASKA STATE CRUISE SHIP LEGISLATION: ALASKAN STATE LAW AS 46.03.460–46.03.490

**Regulation Description & Summary of Requirements**
Establishes effluent limits for gray and black water, describes non-hazardous and hazardous waste requirements, permitting and reporting requirements for commercial passenger vessels operating in the marine waters of the state.

**How We Meet or Exceed Regulation**
Carnival Corporation & plc complies with the Alaska State Cruise Ship Legislation.

![Carnival Corporation & plc meets regulations](Carnival Corporation & plc meets regulations)

ALASKA STATE REGULATION 18 AAC 50.070. — MARINE VESSEL VISIBLE EMISSION STANDARDS

**Regulation Description & Summary of Requirements**
Establishes state visible emissions requirements for marine vessels operating within three miles of the Alaska coastline.

**How We Meet or Exceed Regulation**
Carnival Corporation & plc complies with AAC 50.070. Some Operating Lines have installed opacity meters as an additional tool for monitoring air quality.

![Carnival Corporation & plc meets regulations](Carnival Corporation & plc meets regulations)

ALASKA OCEAN RANGER PROGRAM

**Regulation Description & Summary of Requirements**
Alaskan Department of Environmental Conservation program, which became law in 2006, requires U.S. Coast Guard licensed marine engineers, or equivalent, 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.

**How We Meet or Exceed Regulation**
Carnival Corporation & plc complies with the Alaska Ocean Ranger Program.

![Carnival Corporation & plc meets regulations](Carnival Corporation & plc meets regulations)

HAWAII STATE CRUISE SHIP LEGISLATION—ACT 217, COMMERCIAL PASSENGER VESSELS DISCHARGES

**Regulation Description & Summary of Requirements**
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.

**How We Meet or Exceed Regulation**
Carnival Corporation & plc complies with the Hawaii Cruise Ship Legislation and some of our Corporate Standards exceed these requirements.

![Carnival Corporation & plc meets regulations](Carnival Corporation & plc meets regulations)

(2) There are numerous state requirements that apply to Carnival Corporation & plc’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.
### KEY U.S. STATE REQUIREMENTS: 2

#### STATE BALLAST REQUIREMENTS: CALIFORNIA CODE OF REGULATIONS, TITLE 2, DIVISION 3, CHAPTER 1, ARTICLES 4.5–4.8

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
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</thead>
<tbody>
<tr>
<td>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.</td>
<td>Carnival Corporation &amp; plc complies with State Ballast Requirements.</td>
</tr>
</tbody>
</table>

**Carnival Corporation & plc meets regulations**

#### CALIFORNIA STATE LIMITS ON SULFUR CONTENT IN FUEL

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
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</thead>
<tbody>
<tr>
<td>Since August 1, 2012, California required the use of marine gas oil with 1.0 percent sulfur or less or marine diesel oil with 0.5 percent sulfur or less within 24 NM of California's coast. Effective January 1, 2014, the limit for both was reduced to 0.1 percent.</td>
<td>Carnival Corporation &amp; plc complies with the California requirements. Several of Carnival Corporation &amp; plc's Brands have installed shore power connections, which operate in the ports of Juneau, Seattle, Long Beach, San Diego, San Francisco, Brrooklyn, Halifax and Vancouver. Carnival Corporation &amp; plc ships operating 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.</td>
</tr>
</tbody>
</table>

**Carnival Corporation & plc meets regulations**

#### CALIFORNIA SEWAGE DISCHARGE REQUIREMENTS

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
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</thead>
<tbody>
<tr>
<td>Effective March 28, 2012, California established a no-discharge zone (“NDZ”) for passenger vessels in state marine waters along the California coast from Oregon to Mexico, which applies to Carnival Corporation &amp; plc ships.</td>
<td>Carnival Corporation &amp; plc exceeds the California requirement by requiring that discharges of treated black water be made beyond 12 NM from the nearest land (California only restricts treated black water discharges to outside 3 NM).</td>
</tr>
</tbody>
</table>

**Carnival Corporation & plc exceeds regulations**

#### CALIFORNIA AT-BERTH REQUIREMENTS

<table>
<thead>
<tr>
<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>On January 1, 2014, California's shore-power requirements became effective, which apply to Carnival Corporation &amp; plc ships, and require the use of shore power or equivalent emissions reductions for vessels at all California ports with target goals of 50% reduction by 2014, 70% by 2017, and 90% by 2020. Fleets can comply through the Reduced Onboard Power Generation Option or the Alternative Equivalent Emissions Reduction Option. Beginning January 1, 2017, at least 70% of a fleet's visits to a port must limit auxiliary engine operation to no more than three hours during the entire time the vessel is at-berth and the fleet's total onboard auxiliary engine power generation must be reduced by at least 70% from the fleet's baseline power generation, or vessels must reduce NOx and PM by 70% or more through use of an approved technology, such as shore power.</td>
<td>Carnival Corporation &amp; plc complies with the California requirements. Several of Carnival Corporation &amp; plc's Brands have installed shore power connections, which operate in the ports of Juneau, Seattle, Long Beach, San Diego, San Francisco and Vancouver.</td>
</tr>
</tbody>
</table>

**Carnival Corporation & plc meets regulations**

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(2) There are numerous state requirements that apply to Carnival Corporation & plc'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.
### FLAG STATE REQUIREMENTS:

#### Regulation Description & Summary of Requirements

Rules and regulations that generally implement international conventions from which Carnival Corporation & plc’s ships are registered: Bahamas, Bermuda, Italy, Malta, the Netherlands, Panama and the United Kingdom.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with all Flag State requirements.

- **Carnival Corporation & plc meets regulations**

### STATE, TRADE ASSOCIATION AND OTHER VOLUNTARY GUIDELINES:

#### A) MEMORANDUM OF UNDERSTANDING—CRUISE OPERATIONS IN WASHINGTON STATE

#### B) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION MEMORANDUM OF UNDERSTANDING

#### C) CRUISE LINES INTERNATIONAL ASSOCIATION WASTE MANAGEMENT PRACTICES AND PROCEDURES

**Guideline Description & Summary of Requirements**

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.

**How We Meet or Exceed Guideline**

Carnival Corporation & plc’s procedures meet or exceed the levels recommended by the Guidelines, for example, by requiring discharge of treated black water outside 12 NM.

- **Carnival Corporation & plc meets and exceeds some guidelines**

#### D) THE VENICE BLUE FLAG AGREEMENT

**Guideline Description & Summary of Requirements**

Adopted in 2007 and renewed annually, this encourages 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.

**How We Meet or Exceed Guideline**

Carnival Corporation & plc complies with the voluntary Blue Flag agreement.

- **Carnival Corporation & plc meets guidelines**
Corporate Policy:
Health, Environmental, Safety, Security and Sustainability

<table>
<thead>
<tr>
<th>Original Issue: 15 October 2007</th>
<th>Revised: 18 January 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved by:</td>
<td></td>
</tr>
<tr>
<td>William R. Burke, Chief Maritime Officer</td>
<td></td>
</tr>
<tr>
<td>Arnold W. Donald, President and CEO</td>
<td></td>
</tr>
<tr>
<td>Micky Arison, Chairman of the Board</td>
<td></td>
</tr>
</tbody>
</table>

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 our behalf, thereby promoting an organization that always strives to be free of injuries, illness and loss.
- Protecting the environment, including the marine environment in which our vessels sail and the communities in which we operate, striving to prevent adverse environmental consequences and using resources efficiently and sustainably.
- Complying with or exceeding all legal and statutory requirements related to health, environment, safety, security and sustainability throughout our business activities.
- Assigning health, environment, safety, security (HESS) and sustainability matters the same priority as other critical business matters.

To implement this Policy, the management of Carnival Corporation & plc and its Operating Lines will:

- Ensure compliance with this Policy within each of Carnival’s Corporate and Operating Line organizations.
- Identify managers who are responsible for HESS and sustainability performance and ensure that there are clear lines of accountability.
- Develop, implement and monitor effective and verifiable management systems to realize our HESS and sustainability commitments.
- Support a proactive framework of risk mitigation in the areas of HESS aimed at preventing, monitoring and responding to threats.
- Identify the aspects of our business that could negatively affect the environment and take appropriate action to minimize any adverse effects.
- Identify, document, assess and conduct periodic reviews of the principal HESS and sustainability risks affecting our business and implement practical measures to manage the identified risks effectively.
- Provide HESS and sustainability support, training, advice, and information, as appropriate, to passengers, guests, employees, and others working on behalf of the Company.
- Perform annual HESS audits and take prompt action on identified audit findings.
- Promptly report and properly investigate all HESS incidents and take appropriate action to prevent recurrence.
- Establish and act upon goals and objectives to improve our HESS and sustainability performance.
- Promote industry best practices and publicly report to and maintain open dialogue and cooperation with key stakeholders on HESS and sustainability matters.
- Require business partners to know and comply with applicable legal and statutory requirements related to HESS, labor and human rights.
- Prohibit retaliation against anyone who reports a violation of Company, legal or statutory requirements and establish that an employee’s failure to notify regarding any such violation is grounds for discipline or dismissal.
- Require that employees who become aware of any vessel or crew’s inability to comply with Company, legal or statutory requirements report same to management.
- Conduct a Corporate senior management review of this Policy at least annually.
Assurance Statement related to Greenhouse Gas Emissions Inventory and Sustainability Data for Fiscal Year 2016 prepared for Carnival Corporation & plc.

Terms of Engagement
This Assurance Statement has been prepared for Carnival Corporation & plc. (Carnival).

Lloyd’s Register Quality Assurance Inc. (LRQA), an affiliate of Lloyd’s Register North America, Inc., was commissioned by Carnival to assure its Greenhouse Gas (GHG) Emissions Inventory and Sustainability Data Assertion for the fiscal year (FY) 2016 (December 1, 2015 to November 30, 2016).

The GHG Emissions Inventory includes direct GHG emissions and energy indirect GHG emissions.

The following were excluded from the GHG Emissions Inventory on the basis of their de minimis contribution to the total direct and energy indirect GHG emissions and sense-checked during the engagement:

- Fuel combustion GHG emissions from emergency generators used in shore facilities;
- Combustion GHG emissions from burning waste in the shipboard incinerators;
- Fugitive release of Sulphur Hexafluoride (SF₆) gas from shipboard circuit breakers;
- Fugitive release of Methane (CH₄) gas or Carbon Dioxide (CO₂) from shipboard Marine Sanitation Devices or Advanced Waste Water Treatment plants;
- Fugitive release of refrigerant gas from shore hotels and offices;
- Electricity consumption from shore offices smaller than 8,000 square feet;
- Small water craft at Carnival owned islands; and
- Releases of Halon and CO₂ based fire suppression systems on board the ships.

The Sustainability Data Assertion includes the following parameters:

- Total Ship Fugitive Refrigerant Releases (Kg);
- Total Ship Ozone Depleting Substances (ODS) Emissions (Kg CFC-11e);
- Total Ship Energy Consumption (Gigajoules);
- Total Ship Fuel Consumption (Metric Tonnes);
- Ship Fuel Consumption Rate (Grams Fuel/Available Lower Berths-Km);
- High Sulfur Fuel Oil (Percent of total Ship fuel consumption);
- Low Sulfur Fuel Oil (Percent of total Ship fuel consumption);
- Marine Diesel Oil/Marine Gas Oil (Percent of total Ship fuel consumption);
- Total Potable Water Purchased (Tonnes);
- Total Potable Water Produced (Tonnes);
- Total Number of Significant Spills;
- Total Number of Reportable Spills;
- Total Volume of Reportable Spills (Liters);
- Total Number of Non-monetary Sanctions; and
- Total Monetary Value of Fines (US Dollars).

- Total Number of Centers for Disease Control and Prevention (CDC) VSP Inspections
- Total Number of CDC VSP Inspections - Ships scoring 100%
- Total Number of CDC VSP Inspections - Ships scoring 86-99%
- Total Number of CDC VSP Inspections - Ships scoring <86%
Management Responsibility
The management of Carnival was responsible for preparing the GHG Emissions Inventory and Sustainability Data 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 Emissions Inventory and Sustainability Data Assertion in accordance with our contract with Carnival.

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

LRQA’s Approach
Our verification has been conducted in accordance with ISO-14064-3:2006 Specification with guidance for validation and verification of greenhouse gas assertion for the GHG data and LRQA’s verification procedure for the Sustainability Data Assertion to provide limited assurance that the data as presented in the GHG Emissions Inventory and Sustainability Data Assertion for Carnival have been prepared in conformance with ISO 14064-1:2006 Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals and Carnival sustainability data management processes.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:
- Conducted a site visit to Carnival Corporate Headquarters and phone interviews with representatives from two of the Carnival brands;
- Reviewed the processes for the management of data and information related to the direct and energy indirect GHG emissions used at the Carnival corporate level and by the two sampled brands;
- Interviewed relevant staff responsible for managing and maintaining data and information and for preparing and reporting the GHG Emissions Inventory and the Sustainability Data Assertion for Carnival;
- Verified the direct and energy indirect GHG emissions for FY 2016; and
- Verified the Sustainability Data Assertion which is a subset of Carnival’s complete set of sustainability data parameters.

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

LRQA’s Opinion
Based on LRQA’s approach, nothing has come to our attention that would cause us to believe that the total direct GHG emissions, energy indirect GHG emissions and Sustainability Data disclosed by Carnival in its GHG Emissions Inventory and Sustainability Data Assertion for FY 2016, as summarized in Table1 below, are not materially correct and that the GHG Emissions Inventory and Sustainability Data Assertion have not been prepared in conformance with ISO 14064-1:2006 and Carnival sustainability data management processes.

Signed          Dated: June 27, 2017

Derek Markolf
LRQA Lead Verifier
On behalf of Lloyd’s Register North America, Inc., represented by Lloyd’s Register Quality Assurance, Inc., 1330 Enclave Parkway, Suite 200, Houston, TX 77077
Table 1. Summary of Carnival, GHG Emissions Inventory and Sustainability Data FY 2016

<table>
<thead>
<tr>
<th>Data Parameter</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct (Scope 1) GHG Emissions (Tonnes CO₂e)</td>
<td>10,491,277</td>
</tr>
<tr>
<td>Energy Indirect (Scope 2) GHG Emissions – Location-Based (Tonnes CO₂e)¹</td>
<td>47,759</td>
</tr>
<tr>
<td>Energy Indirect (Scope 2) GHG Emissions – Market-Based (Tonnes CO₂e)¹</td>
<td>47,136</td>
</tr>
<tr>
<td>Total Ship Fugitive Refrigerant Releases (Kg)</td>
<td>117,936</td>
</tr>
<tr>
<td>Total Ship ODS Emissions (Kg CFC-11e)</td>
<td>10,292</td>
</tr>
<tr>
<td>Total Ship Energy Consumption (Gigajoules)</td>
<td>133,946,419</td>
</tr>
<tr>
<td>Total Ship Fuel Consumption (Tonnes)</td>
<td>3,233,138</td>
</tr>
<tr>
<td>Ship Fuel Consumption Rate (Grams Fuel/ALB-Km)</td>
<td>82.5</td>
</tr>
<tr>
<td>High Sulfur Fuel Oil (Percent of total Ship fuel consumption)</td>
<td>75.8%</td>
</tr>
<tr>
<td>Low Sulfur Fuel Oil (Percent of total Ship fuel consumption)</td>
<td>3.0%</td>
</tr>
<tr>
<td>Marine Diesel Oil/Marine Gas Oil (Percent of total Ship fuel consumption)</td>
<td>21.2%</td>
</tr>
<tr>
<td>Total Potable Water Purchased (Tonnes)</td>
<td>6,079,254</td>
</tr>
<tr>
<td>Total Potable Water Produced (Tonnes)</td>
<td>20,487,252</td>
</tr>
<tr>
<td>Total Number of Significant Spills²</td>
<td>0</td>
</tr>
<tr>
<td>Total Number of Reportable Spills³</td>
<td>39</td>
</tr>
<tr>
<td>Total Volume of Reportable Spills (Liters)</td>
<td>1,577</td>
</tr>
<tr>
<td>Total Number of Non-monetary Sanctions</td>
<td>0</td>
</tr>
<tr>
<td>Total Monetary Value of Fines (US Dollars)</td>
<td>$277,401</td>
</tr>
<tr>
<td>Total Number of CDC VSP Inspections</td>
<td>109</td>
</tr>
<tr>
<td>Total Number of CDC VSP Inspections - Ships scoring 100%</td>
<td>13</td>
</tr>
<tr>
<td>Total Number of CDC VSP Inspections - Ships scoring 86-99%</td>
<td>94</td>
</tr>
<tr>
<td>Total Number of CDC VSP Inspections - Ships scoring &lt;86%</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Scope 2, Location-based and Scope 2, Market-based are defined in the GHG Protocol Scope 2 Guidance, 2015.
2. A significant spill is defined as a spill for which the monetary sanctions are greater than $100,000.
3. A reportable spill is a spill greater than 500ml. However, in US waters, any spill that causes oil sheen is to be reported.

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Due to inherent limitations in any internal control, it is possible that fraud, error, or non-compliance with laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above as the verification has not been performed continuously throughout the period and the verification carried out on the relevant internal controls were on a test basis. Any projection of the evaluation of control to future periods is subject to the risk that the processes may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

The English version of this Assurance Statement is the only valid version. Lloyd’s Register assumes no responsibility for versions translated into other languages.
Carnival Corporation & plc works, collaborates and partners with a variety of organizations worldwide. The goals of these partnerships vary depending on the type of organization. Our work with these organizations contributes to and broadens our thinking around our sustainability issues and opportunities. Below is a list of some of these collaborations.

**Catalyst**
Catalyst is the leading nonprofit organization with a mission to expand opportunities for women and business. Catalyst is dedicated to creating more inclusive workplaces where employees representing every dimension of diversity can thrive. It acts as a catalyst through its research, tools and services, events and awards. Together, its offerings raise awareness of how diversity benefits today’s global businesses, and provide guidance on how to enact real change.

**Create Common Good**
Create Common Good is a nonprofit social enterprise that uses innovative food-related job training programs to help at-risk people find, perform and retain work to attain self-sufficiency for them and their families. The two organizations explore opportunities to introduce custom-crafted Create Common Good food products into shipboard menus.

**Cruise Lines International Association (CLIA)**
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 non-governmental organizations (NGOs), universities, regulators and scientists around the globe.

**Florida Caribbean Cruise Association (FCCA)**
The FCCA is 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 productive bilateral partnerships with every sector.

**International Chamber of Shipping (ICS)/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.

**Edge4Vets**
Edge4Vets helps veterans translate their strengths from the military into tools for civilian success. Veterans get support from business mentors who help them identify strengths they developed in the military and apply their strengths for success in school, work and life.

**European Community Shipowners’ Associations (ECSA)**
ECSA 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.
Executive Leadership Council (ELC)
ELC is a national organization comprised of current and former African-American CEOs and senior executives at Fortune 500 and equivalent companies. For more than 25 years, the ELC has worked to build an inclusive business leadership pipeline and to empower African-American corporate leaders to make significant and impactful contributions in the global marketplace and their communities.

FIU Chaplin School of Hospitality and Tourism Management
Carnival Foundation established the Carnival Gold Scholars Program at Florida International University’s Chaplin School with a $400,000 donation that awards renewable scholarships up to $20,000 to hospitality and tourism students. The Carnival Foundation also funded renovation of the school’s 2,600-square-foot multipurpose Carnival Student Center.

Global Environmental Management Initiative (GEMI)
GEMI is 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 ethic for EHS management and sustainable development through example and leadership.

HEAT Academy
The Carnival Foundation and the Miami HEAT NBA team partner to offer this after-school enrichment program to improve math and reading skills for students in third through fifth grade.

Hispanic Association On Corporate Responsibility (HACR)
HACR's mission is to advance the inclusion of Hispanics in Corporate America at a level commensurate with our economic contributions. To that end, HACR focuses on four areas of corporate responsibility and market reciprocity: employment, procurement, philanthropy, and governance. The HACR Research Institute (Institute) is the research arm of HACR. The Institute is devoted to objective research, analysis, and publication of Hispanic-related issues in Corporate America. The Institute primarily focuses its research on HACR's four pillars.

Human Rights Campaign (HRC)
Founded in 1980, the Human Rights Campaign (HRC) advocates on behalf of the lesbian, gay, bisexual and transgender (LGBT) Americans, mobilizes grassroots actions in diverse communities, invests strategically to elect fair-minded individuals to office and educates the public about LGBT issues. The HRC is America's largest civil rights organization working to achieve LGBT equality. By inspiring and engaging all Americans, HRC strives to end discrimination against LGBT citizens and realize a nation that achieves fundamental fairness and equality for all.

International SOS
Supports employees by keeping them safe and healthy when traveling to unfamiliar and remote locations.

Jackson Memorial Foundation/Holtz Children’s Hospital
Renovation of the Pediatric Intensive Care Unit at Holtz Children's Hospital created the Carnival Cares for Kids Center, which includes 30 special oversized rooms that enable family members to remain with their critically ill children, as well as a lounge for family members.
LEADERSHIP EDUCATION FOR ASIAN PACIFICS (LEAP)
Envisioned as a vehicle to develop future leaders, LEAP is a national nonprofit organization whose mission is to achieve full participation and equality for Asian and Pacific Islanders (APIs) through leadership, empowerment, and policy.

Maritime Anti-Corruption Network (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.

Miami Children’s Museum
The Carnival Foundation, in partnership with Carnival Cruise Line, supported the creation of the Miami Children’s Museum’s Carnival Cruise Line Ship Exhibit, where visitors learn about how a cruise ship functions and the cruise industry’s relationship to local and international communities.

The Nature Conservancy (TNC)
The Nature Conservancy (TNC) is the leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. It addresses the most pressing conservation threats at the largest scale. Since its founding in 1951, TNC has protected more than 119 million acres of land and thousands of miles of rivers worldwide and operates more than 100 marine conservation projects globally. It works in more than 35 countries protecting habitats from grasslands to coral reefs. It also addresses threats to conservation involving climate change, fresh water, oceans and conservation lands.

Society for Gas as a Marine Fuel (SGMF)
SGMF is a new NGO established to promote safety and industry best practice in the use of gas as a marine fuel.

SEA\LNG
SEA\LNG is a multi-sector industry coalition, created to accelerate the widespread adoption of liquefied natural gas (LNG) as a marine fuel.

The initiative brings together key players in the value chain, including shipping companies, classification societies, ports, major LNG suppliers, LNG downstream companies, infrastructure providers and OEMs (original equipment manufacturers), helping to break down the commercial obstacles to transform the localized use of LNG as a marine fuel into a global reality.

UK Chamber of Shipping
The UK Chamber of Shipping is the trade association for the UK shipping industry, which works to promote and protect the interests of its members both nationally and internationally. With 144 members and associate members, the UK Chamber of Shipping represents more than 860 ships of about 23 million gross tonnes and is recognized as the voice of the UK shipping industry.

United States Wildlife Trafficking Alliance
The United States Wildlife Trafficking Alliance is a voluntary coalition of non-profit organizations, companies, foundations and media interests that work closely with the U.S. government in a collaboration to reduce the purchase and sale of illegal wildlife products in the United States.
BOARDS OF DIRECTORS (BOD HESS policy)

HEALTH, ENVIRONMENT, SAFETY & SECURITY (HESS) COMMITTEE

CEO/PRESIDENT
Brands

CHIEF EXECUTIVE OFFICER

CHIEF FINANCIAL OFFICER

SHORESIDE MANAGEMENT RESPONSIBLE FOR HESS
Brands

CHIEF MARITIME OFFICER

Ships’ Masters and Department Heads RESPONSIBLE FOR HESS
SUSTAINABILITY MANAGEMENT

Health, Environment, Safety, Security and Sustainability Working Groups

- MEDICAL
- PUBLIC HEALTH
- SECURITY
- ENVIRONMENTAL
- SUSTAINABILITY
- SAFETY/DESIGNATED PERSON ASHORE
- TRAINING
- TECHNICAL
- OCCUPATIONAL HEALTH & SAFETY
## WASTE STREAM DETAILS

### TYPES OF WASTE

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilge Water</td>
<td>Wastewater normally generated in the machinery spaces of the engine room during vessel operation.</td>
</tr>
<tr>
<td>Gray Water</td>
<td>Wastewater from sinks, showers, galleys, laundry and some cleaning activities.</td>
</tr>
<tr>
<td>Black Water</td>
<td>Wastewater from toilets, urinals and liquid waste from medical facilities.</td>
</tr>
</tbody>
</table>

### TREATMENT & REQUIREMENT

- **Bilge Water:**
  - Wastewater normally generated in the machinery spaces of the engine room during vessel operation.
  - 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) as per international regulations.
  - On all of our ships, we have installed redundant systems that monitor treated bilge water a second time prior to discharge to ensure the treated bilge water contains less than 15ppm of oil before being discharged overboard. This voluntary and proprietary system provides additional control to prevent overboard discharges of processed bilge water that exceeds 15ppm of oil. If the system reading indicates 15ppm or greater of oil, it will sound an alarm and automatically stop the discharge, redirecting the flow to on board storage tanks.
  - Bilge water discharges are in strict compliance with applicable international and national laws and regulations, and often contain less than five ppm of oil.
  - Bilge water not meeting discharge criteria and oil residues/sludge are offloaded for shoreside disposal or recycling depending on available shoreside infrastructure.
  - Bilge water from Carnival Corporation & plc ships is discharged only when the ships are underway at sea and proceeding at a speed of no less than six knots.

- **Gray Water:**
  - Wastewater on most ships is not typically treated unless an Advanced Wastewater Purification System (AWWPS) is used. We have installed AWWPS’s on more than one-third of our ships and continue to review application of AWWPS’s worldwide. We control the products and supplies used on board our ships to help improve the level of the gray water quality.
  - Gray water from Carnival Corporation & plc ships is discharged only while the ships are 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. Gray water that has been treated by an AWWPS can be discharged inside 4 nautical miles or in port based on local requirements.

- **Black Water:**
  - Wastewater from toilets, urinals and liquid waste from medical facilities.
  - Black water from our ships is treated by a sewage treatment plant called a Marine Sanitation Device (MSD) or by an Advanced Wastewater Purification System (AWWPS).
  - On more than one-third of our ships, black water is treated by an AWWPS that uses technologies designed to produce a higher effluent quality that meets or surpasses sewage standards for secondary and tertiary effluents, and reclaimed water.
  - Black water discharges from Carnival Corporation & plc ships treated by an MSD 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 traveling at a speed of not less than six knots. Discharges of treated black water by AWWPS can be discharged inside 12 nautical miles from the nearest land.
### TYPES OF WASTE

#### REGULATED WASTE:
Includes cleaning solutions generated from operations of the ship, biomedical type waste and chemical products or paints that are non-hazardous.

#### FOOD WASTE:
Any uneaten spoiled or unspoiled food substances, including fruits, vegetables, dairy products, poultry, meat products and food scraps generated aboard the ship.

#### SOLID WASTE:
Any refuse, and other discarded materials not considered hazardous.

#### HAZARDOUS WASTE:
Waste that poses a risk to human health or to the environment and typically exhibit at least one of four characteristics (ignitibility, corrosivity, reactivity, or toxicity).

#### RECYCLED WASTE:
Materials that can be diverted from landfill or incineration and are managed through recycling processes where the material can be used again.

### TREATMENT & REQUIREMENT

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carnival Corporation &amp; plc shipboard regulated waste</strong> is generally transferred to licensed shoreside waste contractors for appropriate disposal. Some types of regulated waste can be incinerated on board.</td>
<td></td>
</tr>
<tr>
<td><strong>Food waste</strong> may be processed by being comminuted/ground so that it is able to pass through a screen with openings no greater than 25mm or left as is.</td>
<td></td>
</tr>
<tr>
<td>Comminuted food waste from Carnival Corporation &amp; plc ships is discharged greater than 3 nautical miles from the nearest land and inside special areas greater than 12 nautical miles from the nearest land. Unground food wastes can be discharged at greater than 12 nautical miles from the nearest land.</td>
<td></td>
</tr>
<tr>
<td>Solid waste generated on board can be incinerated on board or landed ashore to be landfilled or incinerated. Carnival Corporation &amp; plc ships are equipped with incinerators, and compactors to manage solid waste.</td>
<td></td>
</tr>
<tr>
<td>Carnival Corporation &amp; plc shipboard hazardous waste disposal is transferred to licensed shoreside waste contractors for disposal according to applicable regulations.</td>
<td></td>
</tr>
<tr>
<td>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 and other do not. In jurisdictions that classify oily sludge as hazardous waste, oily sludge makes up the majority of hazardous waste of offloaded for disposal.</td>
<td></td>
</tr>
<tr>
<td>Recycling containers are placed throughout the ships for guest and crew to segregate items for recycling at the source. In addition, designated crew sorts trash to ensure recyclable items are not commingled with other waste streams.</td>
<td></td>
</tr>
<tr>
<td>After sorting, recyclable materials are crushed, baled and stored for shoreside recycling at designated ports of call where the infrastructure is in place for recycling. However, if the infrastructure is not in place recyclable items may be landed for landfill. Our standard recycled materials include plastic, glass, paper, cardboard, oily waste, used cooking oil, refrigerants, aluminum, electronic equipment, toner cartridges, batteries, fluorescent lamps, silver (recovered from photo and X-ray processing fluids) and scrap metal.</td>
<td></td>
</tr>
<tr>
<td>Where port reception facilities and infrastructure allows, the following additional items may be recycled: mattresses, carpets, and corks.</td>
<td></td>
</tr>
<tr>
<td><strong>Glossary</strong></td>
<td></td>
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<tr>
<td>----------------</td>
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<tr>
<td><strong>A</strong></td>
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<tr>
<td><strong>Audit</strong> Systematic, documented, periodic and objective assessment of an organization’s performance, management systems and processes.</td>
<td></td>
</tr>
<tr>
<td><strong>Available Lower Berth (ALB)</strong> Guest beds available on a cruise ship, assuming two people occupy each cabin.</td>
<td></td>
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<tr>
<td><strong>B</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ballast Water</strong> Seawater that is taken on board a ship and stored in tanks to control draft, list, trim and stability.</td>
<td></td>
</tr>
<tr>
<td><strong>Bilge Water</strong> Water from equipment maintenance and minor leaks that collects in the lowest part of the ship.</td>
<td></td>
</tr>
<tr>
<td><strong>Black Water</strong> Wastewater from toilets, urinals and medical sinks.</td>
<td></td>
</tr>
<tr>
<td><strong>Bunkered Water</strong> Potable water that is purchased from a municipal or private system at a port and stored on board in tanks.</td>
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<tr>
<td><strong>C</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CFC-11 Equivalent</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Chlorofluorocarbons (CFCs)</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>CO₂ (Carbon Dioxide)</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Cold Ironing</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>CO₂e (Equivalent Carbon Dioxide)</strong> A measure used to compare the emissions from various greenhouse gases based on their global warming potential (GWP). The CO₂ equivalent for a gas is derived by multiplying the tonnes of the gas by the associated GWP.</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Direct Emissions (Scope 1 Emissions)</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Energy Saved</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Environmental Aspect</strong> How an environmental aspect may affect the environment.</td>
<td></td>
</tr>
<tr>
<td><strong>Environmental Impact</strong> How an environmental aspect may affect the environment.</td>
<td></td>
</tr>
<tr>
<td><strong>Environmental Management System (EMS)</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Exhaust Gas Cleaning System (EGCS)</strong> Abatement technology used to reduce the concentration of air pollutants in engine exhaust gauges.</td>
<td></td>
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<tr>
<td><strong>F</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Footprint</strong> The amount of environmental impact related to a specific resource.</td>
<td></td>
</tr>
<tr>
<td><strong>G</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Global Reporting Initiative (GRI)</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Global Warming Potential (GWP)</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Governance</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Gray Water</strong> Wastewater that is generated from activities such as laundry, bathing, cooking and dish washing.</td>
<td></td>
</tr>
<tr>
<td><strong>Greenhouse Gas (GHG)</strong> 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 (CO₂); methane and biomethane emissions (CH₄); nitrogen oxide (N₂O) and chlorofluorocarbons (CFC).</td>
<td></td>
</tr>
</tbody>
</table>
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.

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.

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.”

Liquefied Natural Gas (LNG)
Liquefied natural gas or LNG is natural gas (predominantly methane, CH4) that has been converted to liquid form for ease of storage or transport.

Marine Sanitation Devices (MSD)
A system that employs filtration, maceration and chlorination technologies to treat black water.

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.

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

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.
**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.

**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.

**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.

**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**
Turnover includes voluntary separation, retirement, terminations and layoffs in the reporting year and excludes seasonal employees at Holland America Princess Alaska Tours.
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Additional details relating to the Company’s information, services, operating structure, and financials are disclosed in the Carnival 2016 Annual Report to Shareholders, and Annual Report on Form 10-k at www.CarnivalCorp.com

Additional details regarding the company’s water management can be found on our water CDP at www.CDP.net
### LABOR PRACTICES AND DECENT WORK

**Occupational Health and Safety**
- G4-LA5 Employees represented in health and safety committees
- G4-LA6 Occupational injury rates

**Training and Education**
- G4-LA9 Employee training
- G4-LA10 Employee career development
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**Diversity and Equal Opportunity**
- G4-LA12 Composition governance bodies and breakdown of employee category

**Supplier Assessment for Labor Practices**
- G4-LA14 New suppliers that were screened using labor practices criteria

**Labor Practices Grievance Mechanisms**
- G4-LA16 Number of grievances about labor practices

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**Disclosure on Management Approach Human Rights**
- DMA-HR

**Investment**
- G4-HR2 Employee training on human rights policies and procedures

**Non-Discrimination**
- G4-HR3 Incidents of discrimination

**Freedom of Association and Collective Bargaining**
- G4-HR4 Freedom of association and collective bargaining

**Child Labor**
- G4-HR5 Operations and suppliers identified as having significant risk for incidents of child labor

**Forced or Compulsory Labor**
- G4-HR6 Operations and suppliers identified as having significant risk for incidents of forced labor

**Security Practices**
- G4-HR7 Security personnel trained on human rights policies and procedures

**Supplier Human Rights Assessment**
- G4-HR10 New suppliers screened using human rights criteria

**Human Rights Grievance Mechanisms**
- G4-HR12 Number of grievances about human rights impacts

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**Disclosure on Management Approach Society**
- DMA-SO

**Local Communities**
- G4-SO1 Community engagement, impact assessment, and development programs

**Anti-Corruption**
- G4-SO3 Operations assessed for risks related to corruption
- G4-SO4 Training on anti-corruption policies and procedures
- G4-SO5 Confirmed incidents of corruption policies and procedures

**Compliance**
- G4-SO8 Sanctions for non-compliance with laws and regulations

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**Disclosure on Management Approach Product Responsibility**
- DMA-PR

**Customer Health and Safety**
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- G4-PR2 Compliance with health and safety standards

**Product and Service Labeling**
- G4-PR3 Product and services information and labeling
- G4-PR4 Non-compliance with regulations and voluntary codes concerning product and service information and labeling
- G4-PR5 Customer satisfaction

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- G4-PR8 Customer privacy

**Material Aspect: Compliance**
- G4-PR9 Sanctions for non-compliance with laws and regulations concerning the provision and use of products and services

Additional details regarding Carnival’s greenhouse gas (GHG) emissions can be found on our Climate Change CDP at [www.CDP.net](http://www.CDP.net)
OUR JOURNEY CONTINUES...

Follow Carnival Corporation & plc’s continued sustainability efforts from Ship to Shore as we work to protect the oceans we sail, preserve economic growth in the lands we visit and promote quality of life for our crewmembers.

www.CarnivalCorp.com

✉️ Sustainability@Carnival.com

✓ /carnivalplc
CONTACT US
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