

STEERING THE COURSE Sustainability Report 2021



2021 SUSTAINABILITY REPORT



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As the CLIA Global Chair, I have spent the past year thinking

deeply about the issues affecting our industry and working

with our peers and partners to find solutions. The increased

global attention on climate change has highlighted the vital

importance of our environment and a healthy and viable

planet. We may be a small part of the system, but we are

committed to working with governments and the public

sector to achieve our long-term goal of zero-impact cruise

operations. As we steer the course towards this lower

carbon future, our values will remain at the heart of every

WELCOME FROM OUR **EXECUTIVE CHAIRMAN**



MSC Cruises is a values-driven company. Our five values are the cornerstone of our business, supporting our vision, shaping our culture and guiding our future direction. As we navigated our way through the extraordinary turbulence of the past two years, these values kept us focused on sustainable business practices and on protecting our guests, employees, and the communities in which we operate.

We are a family company. Our business was founded by the Aponte family and their entrepreneurial spirit has helped to foster a culture of courage and resilience. That has served us well through another challenging year, as we have pulled together to weather the ongoing storm of the COVID-19 pandemic.

Being a family company also means supporting each other. Our people are at the heart of our business, and we value them and look after them.

We have passion. I commend our people for the enthusiasm they have shown throughout the year. Their positive attitude and hard work have meant that we have seen a steady return to business as usual.

At the beginning of 2021, we had a single ship in operation. By the close of the year, 13 of our 19 ships were back in operation, and we expect the entire fleet to be in service by the summer of 2022. The passion of our people has helped enable this.

We are in continuous evolution. Throughout this crisis, we have never stopped believing in our industry's bright future. Indeed, we took delivery of two new ships, MSC Virtuosa and MSC Seashore, and began construction of a further two. One of these, MSC World Europa, will be our first LNG-powered cruise vessel and will start service in 2022.

We made an important pledge in 2021: to achieve net zero greenhouse gas emissions by 2050. If bio or synthetic LNG was available at scale today, MSC World Europa could operate with net zero emissions from its very first day, so it is vital that producers and regulators accelerate the development of alternative zero emissions fuels. In the meantime, we continue to invest in and explore technologies that are helping us to decarbonise.

We care for people. Every member of our team brings unique value to our business, and we worked hard to keep their loyalty and nurture the team spirit that makes MSC Cruises a great place to work. They, in turn, took excellent care of the more than 700,000 guests we carried last year, ensuring they had a safe and happy holiday with us.

Crew welfare is a priority - particularly supporting their mental health - and I am proud of how our teams have looked out for each other

We believe in equal opportunities. We know that having a diverse and inclusive workforce makes MSC Cruises a stronger business. Our thousands of crew represent more than 120 different nationalities and we are making excellent progress on ensuring our workforce is gender balanced.

We are committed to ensuring the continued professional growth of our people. During 2021, all our crew received job specific training and we were able to restart comprehensive training programmes for our shoreside employees too, which had been halted when COVID-19 first broke out.

PIERFRANCESCO VAGO EXECUTIVE CHAIRMAN, MSC CRUISES





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2021 AT A GLANCE

OPERATING	AVAILABLE LOWER	TOTAL PASSENGERS
DAYS	BERTH DAYS	CARRIED
4,203	14,338,116	2,007,106
PLANNED	PLANNED	PLANNED
2,086 ACTUAL	8,285,424 ACTUAL	723,201
- 50,4%	- 42,2%	- 64,0%

Our fleet

MSC Grandiosa returned to service in January 2021, after a six week break from its itinerary in the West Mediterranean. By December 2021, 13 vessels had resumed operations in the West and East Mediterranean,

Northern Europe, Caribbean, and the Middle East. This gradual return to service – and with six vessels remaining in layup – resulted in a second year of lower commercially operational days than projected.

New deliveries

In 2021, we welcomed two new vessels into our fleet - **MSC Virtuosa** and **MSC Seashore**.

Both are fitted with hybrid exhaust gas cleaning systems on all their engines which reduce sulphur oxide (SOx) emissions by 98%. In addition, selective catalytic reduction (SCR) systems reduce nitrogen oxide (NOx) emissions by 90%. The ships are equipped with shore-to-ship power connectivity meaning that, whilst available, they can connect to local power grids whilst at ports.

The vessels also incorporate advanced wastewater treatment systems designed in line with the IMO's MEPC 227(64) Resolution (the Baltic Standard), with purification standards that are higher than most wastewater treatment facilities ashore. Ballast water treatment systems prevent ballast water discharges from introducing invasive species into the marine environment.

A certified underwater radiated noise system on MSC Virtuosa features hull and engine room designs that minimise acoustic sound impact. This reduces their potential effects on marine fauna, most particularly on marine mammals, in the surrounding waters.

Both these vessels incorporate a wide range of energy efficient equipment that help to reduce and optimise engine use.



MSC Virtuosa received 11 **Golden Pearls** from Bureau Veritas for innovations onboard, including environmental protection and health and safety features. It is the first cruise ship in the world to receive a **BIORISK** notation from Bureau Veritas in recognition of her ability to mitigate and manage infectious disease risk for passengers.

Future growth

MSC Seascape, the fourth in the Seaside class of vessels, will join our fleet in 2022.

Another important milestone this year will be the delivery of **MSC World Europa** as the first LNG-powered vessel to join the MSC Cruises fleet.

This ship, together with the two additional LNG vessels that are planned for delivery in 2023 and 2025, will help advance our journey to net zero greenhouse gas emissions by 2050.



OUR PRIORITIES

Our Sustainability Action Plan addresses issues of high importance for our business and our stakeholders. It was created following robust engagement with our internal and external stakeholders.

Materiality

We conducted our first materiality assessment in 2019, identifying those issues which were understood to be of greatest importance to our external and internal stakeholders. This in turn has helped to shape our prioritisation of sustainability topics.

Between 2019 and 2021 our business, like many others, has been severely challenged by the COVID-19 pandemic. Our experience over this period has emphasised the central importance of thinking systematically about global issues and developing an ever more resilient business.



External engagement

In early 2022 we refreshed our materiality assessment, supported by an expert third-party. We engaged with numerous external stakeholders including NGOs, port authorities, fuel suppliers, ship builders and banks. We also reviewed the priorities of sector peers, suppliers, and leading hospitality companies to identify common issues and trends.

Internal engagement

Our internal engagement reached hundreds of colleagues both on ship and on shore. Drawing together the internal and external data and insights, we convened a materiality assessment working group comprised of both the senior business leaders and sustainability subject matter experts. This group determined that some topics – such as food safety and quality, wastewater treatment and disposal, data security, and talent development and retention – were of greater importance to MSC Cruises than the underlying data suggested, and so were given greater weight in the materiality matrix.

Issues of top importance

The following issues have emerged as those with the combined greatest level of importance to external and internal stakeholders:

- Guest health, safety, and wellbeing
- Climate change
- Employee wellbeing and working conditions
- Local air quality
- Sustainable ship and product design

Key changes since 2019

There is a high level of continuity between those issues which were seen as being of greatest importance in 2019, for example guest health, safety, and wellbeing and employee wellbeing and working conditions.

We have noted two clear significant changes between the materiality assessments: an even greater importance placed on employee wellbeing due to COVID-19, and the emergence of data and cyber security as a relevant business responsibility.

Some issues developed and grew to be more important like

biodiversity. We have aggregated a previously wide set of biodiversity topics in the 2022 matrix to illustrate this higher level of importance.

Plastics and humans rights remain just as important to MSC Cruises, although the feedback from external stakeholders was that they were a lower priority relative to other issues than when this assessment was conducted in 2019. This input has not affected the rigour of our approach to addressing single-use plastics or protecting human rights.

MATERIALITY MATRIX

This matrix shows the sustainability issues plotted against importance to external stakeholders and importance to MSC Cruises as identified through the methodology outlined on the previous slide.



Issues key: • Environment • Social • Economics, ethics and governance

Our areas of focus

We have established six key workstreams across the business that align with the strategic priorities identified at either an internal task group, committee or directly to in the materiality assessments. These six areas make up the Sustainability Advisory Board. our Sustainability Action Plan.

Many actions within the plan are accompanied by goals with corresponding targets. Where appropriate, these align with relevant industry-approved metrics.



Our Sustainability Action Plan

WORKSTREAM	FOCUS AREAS	KEY GOALS
Transitioning to net zero emissions	Fleet decarbonisation Reduction in local air emissions	40% reduction in emissions intensity by 2030 against 2008 baseline Net zero emissions 2050 All new ships with shore power capability and retrofit for existing ships
Scrutinising resource use and waste	Onboard freshwater consumption Onboard waste management Onboard wastewater discharge	3% reduction in freshwater consumption per year Wastewater from all new ships will meet the IMO MEPC 227 (64) standard (the Baltic Standard) of treatment
Building greener terminals	Terminals development	All new MSC Cruises' port terminals certified to LEED silver or higher
Supporting our people	Building a healthy and diverse work culture Attract, retain and develop talent Build future capabilities and skills	Increase the percentage of females working onboard by 30% by 2025 Strengthen leadership succession planning with launch of 'high-potential' management system
Procuring sustainably	Sustainable Sourcing Responsible supply chain	Remove or replace non-essential single-use plastics items onboard by 2024 Increase products with sustainability credentials
Investing in sustainable tourism	Destination management Socio-economic support	Provide sustainable tourism training to our tour operators in 2022 Increase sustainability credentials of shore excursions

Supporting the UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) provide a common vision for the role that individuals, businesses and governments must play in transitioning to a sustainable world. Our strategy, commitments and priority issues are aligned to seven of the goals. These are issues where our impact on the world means we have a responsibility to act.





Safety is our number one priority, and we are committed to providing a safe and healthy working environment.





Our employees are the driving force of our business, and we are committed to their continued professional development.



5 GENDER

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We have robust programmes in place to reduce single-use plastic and food waste, and are investing in technology to reduce waste from ships.

We are committed to reaching gender equality

across our fleet and consciously shaping an

inclusive culture is a key priority.



Transitioning to a low carbon business is not easy but it is essential, and we're investing significant sums to make this a reality.



Alongside the sustainable tours we offer, we have set up a sustainable procurement committee to help use our purchasing power for good.



We rely on the ocean for our business, and we all rely on the oceans for our planetary health. Many actions we're taking are designed to support life underwater.



GOVERNANCE AND RISK MANAGEMENT

Good governance is essential to the successful delivery of our Sustainability Action Plan. This is supported by an effective risk management process which helps us to identify and prioritise the key issues.

Sustainability governance

MSC Cruises' activities are fully overseen by our Board of Directors, with the interests of our MSC Group shareholders and principal stakeholders represented.

The primary body with oversight of our sustainability activities is the Sustainability Advisory Board (SAB). This is responsible for ensuring the continued relevance of our sustainability strategy and for reviewing progress. It is guided and supported by our Sustainability Team. Beyond this, we have three programme area working groups: the Executive Committee on Decarbonisation, the Sustainable Procurement Committee, and the Sustainable Destination group. The Executive Committee on Decarbonisation meets quarterly, is made up of Senior Business leaders, and is chaired by the Executive Chairman. It is supported in its work by a Decarbonisation Task Force which meets monthly.



Risk management

Managing risk is an essential component of running a cruise company. In 2021 we undertook an environmental, social and governance (ESG) risk assessment and this was further developed with the completion of our latest materiality assessment. This allowed us to better understand and prioritise ESG risks and opportunities across the business.

Climate change stands out as a particular risk of importance to our business, presenting physical, reputational and regulatory risks. The climate change related transitional risks are becoming increasingly apparent, with stricter regulatory regimes to control emissions coming into play to reflect and ensure the success of national and regional carbon and greenhouse gas reduction targets. Our Executive Committee and Task Force on Decarbonisation are key instruments in the management of this risk.

As acknowledged in the materiality assessment, beyond climate change are a range of further social and environmental risks. We are managing these through our comprehensive Sustainability Action Plan by establishing action, setting goals and assigning responsibilities to manage risk and make positive progress.

Reporting and disclosure

We recognise the importance of robust, comprehensive and transparent reporting and disclosure to further the sustainability agenda and to drive the necessary behaviour changes. Not only do we seek to be in full compliance with existing required reporting at national and international levels, we are already looking to the future and developing the pre-requisite strategies, risk assessments, KPIs, targets and other metrics that will ensure we remain aligned with further developments in this area, such as the recommendations of the Taskforce on Climate Related Financial Disclosures (TCFD), the International Sustainability Standards Board and the EU Corporate Sustainability Reporting Directive (CSRD).



You can find more information on our approach to climate change in the PLANET section of this report.

BUSINESS CONDUCT AND ETHICS

Our Code of Business Conduct requires a high standard of business and personal ethics for all our employees and partners. Our conduct and ethics programmes are under constant review to reflect both changing regulatory environments and the expectations of those with whom we engage and work.

We continue to abide by regulations in all relevant operational areas, maintaining necessary permits and certifications. We also continually seek opportunities to go beyond these, through compliance with numerous industry guidelines and other voluntary measures, to ensure high labour standards and safe and responsible operations. management system, further developing the reporting aspects of our Conflict of Interest Policy. We also updated both this and our Gift and Hospitality Policy. In addition, we introduced a new Global Sanctions Policy.

All elements of our compliance management system, whether new or updated, are supplemented by internal communications and training programmes.

In 2021, we continued to strengthen our compliance

Our Code of Business Conduct

Our employees, suppliers and partners must abide by the code and its supporting policies. The Code covers ten core areas:



Business Partners' Code of Business Conduct

We are developing a code of conduct specifically for third parties, which is being rolled out in 2022. Based on our existing Code of Business Conduct, it requires our suppliers, partners, and others with whom we engage to provide information on aspects like global sanctions, modern slavery and anti-money laundering as part of our initial engagement and due diligence processes.

Regulatory compliance

We respect and comply with all applicable local, national and international regulations, including but not limited to:

- International Maritime Organization (IMO) regulations
- EU regulations
- Flag state regulations and requirements
- International Labour Organization regulations
- Fiscal obligations with respect to national tax authorities
- Numerous applicable national legislations related to activities including data privacy, anti-bribery and corruption, anti-money laundering and anti-tax evasion; and
- International sanctions regulations.

Our activities also often go beyond regulatory requirements. For example, our latest ships are certified to several additional environmental and health and safety standards.

In addition, we voluntarily adopt five ISO standards:

- ISO 14001 Environmental Management
- ISO 50001 Energy Management
- ISO 45001 Safety Management
- ISO 22000 Food Safety Management; and
- ISO 9001 Quality Management.

Global sanctions policy

Our new Global Sanctions Policy was adopted in late 2020. This is designed to help our employees and third parties acting on behalf of MSC Cruises to understand where breaches of sanctions laws might arise. It also offers support in making the right decisions. In 2021, we carried out mandatory internal training and communications to support its implementation.

As part of our global sanctions programme, supplier prequalification declarations have also been updated to ensure vendor compliance.



Whistleblowing

Our Speak-Up line, which is aligned with our whistle blowing policy and was introduced in 2020, has been used on several occasions, with all reports being investigated. Managed by a third-party, all reports initiate an alert with the internal compliance department, and are reviewed at the Operative Compliance Committee. Cases deemed serious are elevated to the senior level Compliance Committee, which is overseen by the Executive Chairman.

Cyber security

To ensure ongoing vigilance when it comes to information protection and security, we ensure regular communication and awareness raising to protect company assets and the data of guests from information leaks and cyberattacks.

In 2021, we rolled out a training programme, which is compulsory for all employees. This covers all our cyber security-related policies and ensures a minimum level of awareness to lower risk across the business.

COLLABORATIONS AND PARTNERSHIP

The shipping and cruise industries are well supported by various industry associations, and we work closely with them to drive forward our shared sustainability ambitions. We also look for opportunities to collaborate with academics, experts and peers through coalitions and specific projects.

Trade associations



Cruise Lines International Association (CLIA) is the world's largest cruise industry trade association, representing 95% of the ocean cruise industry by capacity. MSC Cruises' Executive Chairman, Pierfrancesco Vago, currently holds the position of CLIA's Global Chair.

This is a testament to the importance MSC Cruises places on its engagement with CLIA on all matters of policy affecting global cruise operations.

Through our membership of the Swiss Shipowners' Association (SSA), MSC

Cruises has been able to support and engage with the activities of the

International Chamber of Shipping (ICS), a leading global trade association

International Chamber of Shipping haping the Future of Shipping

for shipowners and operators. This has involved, throughout the pandemic, participating in various working groups and taskforces convened by ICS to address crew change challenges, seafarer access to COVID-19 vaccines and other issues.

Our engagement with ICS and others has enabled us to play a part in developing and promoting a proposal for a USD \$5 billion R&D fund, to support the decarbonisation journey for the shipping industry.



MSC Cruises is a member of the UK Chamber of Shipping, the trade association for the UK shipping industry. We are represented on its Supervisory Board and are fully engaged in chamber activities.

Experts from MSC Cruises engage actively with its various policy committees and working groups. We are a proud signatory to the Single-Use Plastic Charter, committing us and other members to removing or replacing non-essential single-use plastics as soon as possible.

Membership organisations



Committee, the Sustainability Committee and the Sustainability Task Group.

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Collaborating for action

UK Research

and Innovation

	Led by the University of Vaasa, Project CHEK is project funded from the European Union's Horizon 2020 research and innovation programme.
E CHEK	It uses an MSC Cruises vessel and a Cargill bulk carrier to combine and test progressive energy efficiency technologies and investigate hydrogen engines and wind power. Other consortium members include World Maritime University, Wärtsilä, Lloyds Register, Silverstream Technologies, Hasytec, Deltamarin, Climeon, and BAR Technologies.
CHANTIERS DE L'ATLANTIQUE	In partnership with ship builder, Chantiers de l'Atlantique , MSC Cruises' first LNG vessel, MSC World Europa, will be fitted with a solid oxide fuel cell to test its capability as an onboard energy provider.
De Caicannque	Additionally, we are collaborating with Chantiers to design an innovative prototype ship class concept, potentially incorporating new technologies such as wind power.
	Our partnership with Shell is focused on the decarbonisation of the shipping sector. We are investigating zero-emissions fuels of the future and the technologies to support a zero-carbon, flexi-fuel concept vessel.
	Our partnership will also enable collaboration on energy efficiency technologies, including digital services and platforms.
snam	MSC Cruises is collaborating with technology provider SNAM and ship builder Fincantieri to investigate the design and construction considerations of a hydrogen powered cruise ship.
FINCANTIERI	This collaboration began in mid-2021 and includes looking into ship space to accommodate hydrogen technologies and fuel cells, technical parameters of onboard systems, assessing the potential greenhouse gas emissions savings, and a technical and economic analysis of hydrogen supply and infrastructure.
Department	The UK's Department for Transport provides funding for the Clean Maritime Demonstration Competition with Innovate UK as the delivery partner.
for Transport	This is allowing MSC Cruise Management (UK) to partner with GE, CERES and

Lloyds Register. Together, we are studying the feasibility of implementing solid

oxide fuel cells into existing ships as a retrofit measure.





The Global Maritime Forum is committed to influencing the sustainable development of shipping. In 2021, the Forum's **Getting to Zero Coalition** launched a global Call to Action to support decarbonisation of the maritime industry.

As part of this, MSC Cruises reaffirmed its commitment to supporting low carbon fuels. We also reaffirmed our commitment to a net zero emissions target by 2050.

The **Waterborne Technology Platform** (WTP) has over 100 members from the maritime industry, including private sector businesses, industry associations and academics.

An important aspect of the Platform is a partnership with the European Commission to ensure that public funds assigned to maritime decarbonisation meet industry needs and expectations. As well as being a member of the Platform, MSC Cruises also has a place on the WTP Board.

The **Cruise Ship Safety Forum** is a tripartite consortium of cruise ship operators, shipyards and classification societies.

The Forum works on technical recommendations to advance safety, and more recently, on industry decarbonisation. MSC Cruises is represented on both the Decarbonisation Working Group and the Carbon Intensity Index Technical Group.

Additionally, our place on the Steering Committee allows us to influence the strategic direction of the Forum.



HEALTH AND SAFETY

Our pioneering Health & Safety Protocol, developed in response to COVID-19, meant that we led the cruise industry in its restart back in mid-2020. As the pandemic has evolved, we have updated our requirements, enhancing the protocol to develop and strengthen its medical capabilities as necessary.

During 2021, we gradually returned into service the majority of the MSC Cruises' fleet, with 13 operational by the end of the year. Our plan is for the full fleet to resume operations by the summer of 2022.



Continued response to COVID-19

We developed our industry-leading Health & Safety Protocol in 2020 in close collaboration with our Blue Ribbon COVID Expert Group. With their support, we continued to monitor and adapt it throughout 2021 in response to the everevolving public health situation.

In 2021, we initially implemented the Protocol on two operational ships in Italy and Malta, and then extended it to more ships and many other regions, including northern Europe, USA, Caribbean Region, Brazil, South Africa and the Middle East.

The Protocol has proven to be adaptable and flexible, reflecting the specific requirements of local and national

authorities to prevent or manage the spread of the coronavirus. The Protocol ensured that COVID-19 was able to be successfully identified and contained, with no serious cases onboard our ships. We anticipate maintaining some aspects of the Protocol, even at times when COVID-19 cases are low.

We continued to monitor and adapt our Health & Safety Protocol throughout 2021



6 CASE STUDY

BLUE RIBBON COVID EXPERT GROUP

As we sought to rapidly address the risks presented by COVID-19, we have benefited from the support of a team of international experts. As well as helping to draft our Health & Safety Protocol, they have supported us to implement it, and kept us up-to-date on developments in the areas of vaccines and testing. Since the Group's inception, the panel has been further reinforced with the addition of Dr. Robert R. Redfield, an American virologist and infectious disease clinician.

The Blue Ribbon COVID Expert Group met 13 times during 2021, with all meetings attended by MSC Cruises' VP for Medical Services, the Director of Fleet Sanitation and the MSC Group Executive VP of Maritime Policy and Government Affairs. Each meeting was also attended by either the CEO or Executive Chairman of MSC Cruises as observers.

In 2021, the Expert Group reviewed the ever-evolving public health situations in the destinations in which we were operating. This involved monitoring government and local authority requirements to determine adjustments to vaccination policies, COVID-19 testing frequencies, appropriate isolation periods, as well as reviewing shore excursion procedures to ensure the ongoing safety of crew and guests whilst onshore.

The changing situation, and varied regulatory requirements in different countries, required continual updates to the Protocol. Most notably, by the end of the year, in response to the availability of vaccinations for younger travellers, MSC Cruises put a requirement in place for all guests over 12 years old to be fully vaccinated.



DR. IAN NORTON

Specialist Emergency Physician, managing director of Respond Global, formerly the head of the World Health Organization (WHO) Emergency Medical Team Initiative programme

PROF. CHRISTAKIS HADJICHRISTODOULOU

Professor of Hygiene and Epidemiology at the Faculty of Medicine as well as its Vice President, School of Health Sciences, University of Thessaly, Greece

PROF. STEPHAN J. HARBARTH

Hospital Epidemiologist, Infectious Diseases Specialist and Head of the Antimicrobial Stewardship Programme at the Geneva University Hospitals (HUG) and Faculty of Medicine

PROF. CAMILLO RICORDI Professor of Biomedical Engineering,

University of Miami School of Medicine

DR. ROBERT R. REDFIELD

An American virologist and infectious disease clinician who served as Director of the US Centers for Disease Control and Prevention (CDC) from 2018 to 2021.

Crew vaccination drive

Determined efforts by our crew office, government affairs and local teams helped to ensure a rapid and successful vaccination programme for our crew.

The preference was to get crew vaccinated prior to leaving their home country and our local recruitment agencies supported efforts to achieve this.

For those onboard, we collaborated with local health authorities, allowing crew to be transported in a safe and controlled way to local health facilities for vaccination. In some locations, health officials even came onboard our ships to vaccinate our crew, and temporary vaccination centres were set up within the cruise terminal. Having worked to ensure that our crew received their first and second dose of vaccine, by the end of 2021, we had commenced our crew vaccine booster campaign.

Vaccinating our crew was a priority, whether before they left their home country or when they were already onboard





Medical services

Our medical services team continued to play a key role in implementing the Health & Safety Protocol onboard, together with our onboard Health Protocol Compliance Officers.

The medical teams worked closely with national and local authorities as part of the restart processes, modifying equipment and medical set up on the ships to ensure they met all requirements. Intensive care facilities were enhanced to ensure full readiness for respiratory emergencies. Each vessel now has a branch of a certified laboratory, allowing valid COVID-19 certificates for antigen and PCR tests to be issued onboard, and making travel to different countries easier for guests.

We employ a higher number of medical personnel than in pre-COVID-19 times, with up to three doctors and seven nurses on each vessel. A Medical Administrator position has been created on each ship, to gather information and maintain a database on medical incidents, including those relating to COVID-19 and other communicable diseases. This information is then readily available if required by port authorities, other local and national regulators and authorities, or by third-party auditors. To comply with our Protocol, as well as national or local regulations, our medical teams worked closely with local authorities to ensure pre-embarkation testing services were made available for guests. Medical staff onboard were responsible for additional testing in the event of crew or guests displaying symptoms during a cruise. Where local rules required additional testing prior to disembarkation, our medical staff were also responsible for managing this.

In 2021, MSC Cruises managed a total of 446,394 preembarkation COVID-19 tests that were carried out on guests (PCR and antigen). A further 685,105 tests were carried out onboard as required for disembarkation or onward journeys.

At some ports pre-embarkation testing was carried out by third parties and are additional to these.

MSC Cruises managed more than 1.1 million COVID-19 tests for guests in 2021, either preembarkation or during the cruises

Managing COVID-19 cases onboard

Over 720,000 guests travelled with us in 2021 and, despite the robustness of our Health & Safety Protocol, 786 guests tested positive for COVID-19 whilst onboard and received our full assistance. Out of more than sixteen thousand crew members, 1,097 contracted COVID-19 and were fully assisted also by us.

The success of our Health & Safety Protocol was demonstrated by the effective way positive COVID-19 cases were managed: those infected received immediate and ongoing medical attention; we maintained good communication with local health officials; and action plans were implemented to align with the varying requirements of local ports and authorities.

Guests or crew who tested positive onboard were immediately assigned to dedicated isolation areas onboard. Full support was provided with logistical and other arrangements for people disembarking to travel to a local medical facility or their home, to ensure zero impact on local destinations.

Our Health & Safety Protocol gives us the flexibility to adapt to local requirements at every destination



Onboard public health

Dedicated Public Health Compliance Officers continued to support the implementation of strict fleet public health policies. These team members promote a high standard of public health onboard, training the crew in general public health practices and specific topics related to their jobs, perform water testing, perform onboard inspections, participate in external inspections/audit, and assist ship management with any related concerns.

Our shore-based Fleet Sanitation team were responsible for managing the standard public health procedures in addition to writing and providing guidance for COVID policies. They reviewed ship internal public health inspection reports, Public Health Officer reports, had frequent calls with ships in layup, arranged water testing of layup ships in advance of restarting, provided guidance to New Building Department and the shipyards for both ships under construction and future designs, and responded to numerous public health related inquiries from vessels and MSC Cruises' offices.

Additional COVID-19 responsibilities included writing isolation and quarantine plans as ships became operational, actively participating in CLIA working groups related to restarting cruising and providing feedback that was incorporated into the EU Healthy Gateways guidelines for restarting passenger vessels in Europe. Specific to the US, the Fleet Sanitation team prepared key documents and procedures to meet the Conditional Sailing Order requirements of the US Centers for Disease Control and Prevention (CDC).

The Fleet Sanitation Director continues to be the primary point of contact with the US CDC, including replying to inquiries from CDC, submitting documents, participating in CDC industry meetings and updating guidance.

CASE STUDY

THE 'SAFE AIR' SANITATION SYSTEM

We are committed to making cruising as safe for our crew and guests as possible. MSC Cruises was the first cruise line in the world to install a new and advanced innovative technology sanitation system called **Safe Air** to improve further the quality and cleanliness of the onboard air for our guests and crew. **Safe Air** was fitted on MSC Seashore, which set sail in July 2021.

The system is based on UV-C lamp technology, using ultraviolet rays to destroy air pollutants such as viruses, bacteria and mold. It was developed by the ship builder, Fincantieri, and the virology laboratory of the International Center for Genetic Engineering and Biotechnology.

MSC Grandiosa and MSC Virtuosa both received the BIOSAFE risk notation from classification society RINA.



Onboard security

Guests and crew are protected by a comprehensive system of security, including the MSC Cruises Access Control protocol which requires proof of identity to access our vessels with security screening using x-ray, metal detectors and trace detector technology.

All luggage must pass through strict check-points and cabins are protected by locks and individually equipped with safe boxes. Public areas are monitored by an advanced CCTV system certified to a recognised technology qualification. Trained ship security guards continuously patrol the ship and are on emergency call 24/7.

We also implemented a new Cyber Security Protocol. A risk assessment of cyber-related equipment and the managing of emergency situations relating to cyber equipment was carried out for each individual ship, and specific training and familiarisation was provided via a dedicated online platform to all crew.



Safety onboard

To ensure ongoing compliance with extensive rules and regulations, we work closely with external stakeholders, such as the Classification Societies, to ensure compliance with international and/or national statutory regulations on behalf of Flag States and local authorities.

In 2021, our priority was to continuously review and adapt onboard safety practices and procedures to align them with the provisions of the Health & Safety Protocol, ensuring that onboard safety for crew and guests was never compromised.

To enable safety and emergency training in compliance with social distancing, safety inductions for crew were held primarily online, using fully immersive virtual experiences that carefully explain the emergency procedures and safe working practices onboard.

Similarly, rather than all guests converging on their assigned muster station for emergency drills, they are now required to watch the safety instructions on the television in their cabin and acknowledge this using the cabin phone. All guests must then visit their assigned muster station within a specified time to have their presence registered.

With continued pandemic-related travel restrictions, Flag States allowed remote audits and surveys to be carried out to check for compliance with IMO regulations, as far as these did not compromise the integrity of the ship and compliance with our Safety Management System.

To address enhanced IMO and EU regulations and standards, all onboard items listed as "hazardous" were incorporated into an Inventory of Hazardous Materials and certified by third parties.

To comply with social distancing, we provide online induction training for our crew using fully immersive virtual experiences



Safety risk assessment

As required by the International Safety Management Code and ISO 45001, a work permit, requiring a full risk assessment, is created for every task that is classified as risky. Tasks include working at height, in an enclosed space, or using potentially dangerous tools and equipment. We have now extended the scope of the risks assessment to incorporate ship manoeuvres.

Personal Protective Equipment (PPE) is provided and used by all crew as required. All PPE is regularly verified by our ships' Officers and are checked by each operator before any work activities. We have also made available a user-friendly PPE Familiarisation Booklet for all crew onboard.

Safety performance monitoring

An essential component of safety culture is monitoring, allowing us to assess the effectiveness of existing controls, and to identify any risks.

A detailed programme of inspections and audits, both internal and by Classification Societies, ensures regular monitoring of safety performance. The certified systems we adhere to also require us to regularly review procedures and to instigate immediate actions following any accidents or incidents to prevent their reoccurrence.

We assess performance against key performance indicators, including tracking near miss data to ensure analysis of each situation and that adequate preventive measures are fully implemented. We also investigate all non-conformances issued by auditors.

We keep a record of events that have occurred onboard such as safety incidents, near misses and security incidents. This record is then reviewed by our internal Health, Safety, Security and Environment Committee, which provides strategic guidance to our operations.

In addition to the periodic audits carried out by the Classification Societies on behalf of Flag States, which are focused on the implementation of IMO safety regulations, we are also subject to unscheduled inspections in the ports by national authorities.

Depending on the itinerary of individual vessels, these are carried out at least once per year, or more frequently if the vessel is relocated to different regions. Port States act under various Memoranda of Understanding between countries to ensure a harmonised system of inspections.

In 2021, all our vessels successfully passed Port State Control inspections with zero detentions.

2021 Safety Data



1,758 (1,116 GUESTS, 642 CREW)



10 (7 GUESTS, 3 CREW)

THERE WERE NO FATALITIES RELATING TO ONBOARD INCIDENT OR INJURY

Planned safety activities

Despite the heavily regulated safety environment in the shipping industry and the strong safety culture at MSC Cruises, we strive to make continual improvements to further strengthen safety onboard.

To ensure that our safety standards are as high as possible, in 2022 we are introducing numerous additional certifications that exceed current regulations. We have engaged third parties to certify our vessels for compliance with both crew and passenger drills. We are also inviting assessors to review our approach to fire prevention and our culture of fire risk prevention.



Food safety

We place food safety as one of our highest strategic objectives, from the purchase of food and beverage products to the service provided to our guests and crew onboard. During 2021, we conducted 2,000 microbiological analyses (on the ready-to-eat food prepared onboard) and provided more than 10,000 hours of food safety training for our crew onboard.

We aim to continuously improve the processes we have developed to comply with the highest and most effective standards. In 2021, a comprehensive review was undertaken of our onboard food safety systems, which we updated to align with the newly revised ISO 22000 Food Safety Management Systems standard. This revised standard places a greater focus on business management concepts including increased emphasis on leadership and management commitment, addressing expectations of interested parties, risk identification and management, continual improvement and communication, and ensuring that the standard is fully integrated into a company's overall business processes.

As part of our transition to the new ISO 22000 version, we carried out internal audits, examining over 7,000 documented pieces of information, including procedures, logbooks, photos, and videos of the food and beverage processes onboard.

All MSC Cruises sites (including offices in London and Genoa and the warehouse in Genoa) and our entire fleet are now certified by Bureau Veritas as compliant with the new version of ISO 22000 standard.

All MSC Cruises ships are certified to the ISO 22000 Food Safety Management Systems standard

PEOPLE

In 2021, we continued to invest in the wellbeing of our employees, both onboard and ashore, keeping them safe and supporting them physically and mentally.

Despite the ongoing pandemic, we also maintained our extensive training programmes, ensuring our teams were compliant with mandatory systems and prepared for the introduction of new technologies and future changes.



CREW WELFARE

PEOPLE

The pandemic continued to affect the restart of operations throughout 2021 and created challenges for crew and crew operations. We provided support to the 16,729 crew members onboard in 2021 and those stuck at home, unable to work.

Supporting mental health

Looking after the mental wellbeing of our crew is important to us. Our crew care team, as well as external support, were on hand to support our onboard teams throughout the year.

Two highly qualified psychotherapists carried out group counseling sessions with our crew, conducted training and assisted our Crew Support teams. This training meant our support teams ashore were better equipped to support crew members who needed it. For those who required an additional level of support, we offered one-to-one sessions with a psychotherapist. In 2021, we supported over 500 crew with their mental health, including 34 people who needed support from a psychotherapist.



We are proud of how we have looked after our crew's mental wellbeing throughout this difficult period

6 CASE STUDY

SEAFARERS IDENTIFIED AS KEY WORKERS

In December 2020, the United Nations adopted a resolution that called on its members to designate seafarers and other marine personnel as key workers, and implement relevant measures to allow stranded seafarers to be repatriated and others to join ships.

The UN resolution was incorporated into an IMO resolution, which was approved at the IMO Assembly in 2021. We are fully supportive of these efforts, having experienced first-hand the challenges of repatriating and changing crew during the pandemic, with minimum manning required for ships in layup.

PEOPLE

Crew safeguarding programme

The unique nature of life on a cruise ship – long stretches away from family, close confinement with colleagues – means that we must take extra care to ensure that vulnerable crew members are able to raise concerns easily and have any issues resolved quickly.

A new and important programme was rolled out in 2021 to support vulnerable crew members. Through clear assignment of onboard and ashore responsibilities, a comprehensive set of practices ensures enhanced levels of duty of care for those who have experienced incidents onboard, or who are identified as being at risk.

Our new safeguarding policy has led to a complete re-design of our vulnerable crew detection and management system. We have created a new role – the Single Point of Contact (SPOC) – to coordinate activities and stakeholder engagement regarding every identified case. The SPOC ensures the necessary support of onboard teams, and in cases where repatriation is required, will continue the support of individuals once on shore.

We provide extensive training for the ships' Command, managers, and those with key responsibilities, as well as those with assigned responsibilities on shore.

Money management

Historically, many crew did not have bank accounts and were paid in cash. To improve security and streamline a complex payment mechanism, we have replaced cash payments with a pre-paid debit card. As well as alleviating concerns about keeping large amounts of cash onboard, this system allows crew to withdraw cash from an onboard terminal and, using an app on their phone, to make transfers home without having to leave the ship. This system is proving more safe and secure for both the company and crew, and is helping to build the financial literacy of our workforce.



TRAINING AND DEVELOPMENT

Despite the global pandemic, we continued with our extensive training programmes in 2021.

Our training focus was on managing the 'new normal' through continued implementation of the Health & Safety Protocol. We also introduced additional tailored training, for example to prepare for the new LNG powered ships and to ensure effective roll-out of energy efficiency practices.

All our training is aligned with extensive regulatory requirements, and all trainers are third-party assessed.

Onboard training

All crew embarking our ships in 2021 were required to complete specific training on topics related to COVID-19 – not just on infection control and sanitisation but also on social distancing, vaccines and keeping safe when travelling to and from our ships. Given the uncertainty around the development of the pandemic, and the regular revisions we made to our Health & Safety Protocol, this training evolved as the global situation changed.

The specific COVID-19 training was in addition to over 100 distinct training modules created to upskill crew on the updated procedures for each department. During 2021, we trained 14,000 crew members on 12 ships on the many new processes introduced as part of the Protocol.

Face-to-face training remained a challenge, so we made further use of our well-established e-learning platforms. This allowed us to reach crew both onboard and at home and for us to take advantage of the time each crew spent in quarantine in their cabin (typically seven to 14 days after boarding the ship and prior to starting work). The time spent in quarantine onboard, after embarkation, was optimised using video on demand for theory modules and via tablets/laptops for technical sessions. Our virtual training was particularly helpful for onboarding newly hired crew as we were unable to conduct our usual in-person pre-embarkation training. Instead, our trainers used online conference platforms to teach 3,500 new crew members about working and living onboard our ships.

The pandemic has created unique challenges for our onboard management teams, and we wanted to support our leaders to take full ownership of their role, whilst encouraging a positive, productive workspace. We created a Change Management Programme, which helped them to take ownership of their impact on others and build strong teams by gaining the trust of their direct reports. We also helped them to identify stress – in themselves and others – and to build resilience by developing a positive perception of change. In total, 960 managers and officers received this training.

During 2021, we trained 14,000 crew members on our Health & Safety Protocol

Cultural awareness training

We are always looking to upgrade our itineraries with new destinations in new countries, and are well aware of the importance of training our teams on the particular expectations and manners of the different nationalities we serve.

In 2021, we delivered UK cultural training for the team on MSC Virtuosa, Saudi Arabian cultural training for the crew of MSC Bellissima, and training for the crew members who were restarting operations in USA.



6 CASE STUDY

PROVIDING WORK EXPERIENCE IN SAUDI ARABIA

We recognise the importance of encouraging the next generation to consider a career in cruising. In Saudi Arabia, we have worked in collaboration with our partner, Cruise Saudi, to make connections with various universities that offer hotel management qualifications. In 2021, we created a programme for young Saudi ambassadors to come aboard our ship and shadow our onboard team, providing them with work experience in areas such as guest services, excursions and retail.

In the second half of 2021, a total of 50 young Saudi ambassadors came aboard MSC Bellissima for internships lasting between 45 and 90 days. We will repeat the programme in 2022.

Cyber security

In our increasingly digital world, it is important that our people understand and mitigate against cyber threats and crimes.

In 2021, we provided cyber security training for 16,679 crew members. The e-learning module was intended to raise awareness of the risks of information disclosure, theft and damage as well as providing general training on how to protect computer systems and networks. Crew members with an email address received additional training

on 'phishing', malware, and password security. Our ship leadership and our IT systems managers also received training on security risks and crisis management.

We are aware of the growing number of fake job sites and adverts for crew which seek to illegally extort money by requiring payment to progress a job application. To protect job seekers, we have put in place mechanisms to identifythese sites as well as email and social media accounts, and, where possible, disable them.

Training for deck and engine teams

Our deck and engine personnel make up 13% of our ships' crew. Providing ongoing competency and development training for them is an important aspect of our day-today operations. On-the-job training is a key part of this. Additional training needs are met by 'travelling' trainers who move from ship to ship, providing trainings on various topics such as bridge and engine resource management and emergency response. In 2021, these trainers provided 612 days of onboard training across 13 ships – 372 of these days were safety focused.

The existing Bridge Resource Management (BRM) System has been operating successfully since 2019. In 2021, to supplement this, we started implementing the Engine Resource Management (ERM) System.

BRM and ERM are comprehensive systems designed for bridge crew (BRM) and engine crew (ERM). They help to ensure competent and safe onboard deck and engine practices though training and management in the use of equipment, situational awareness, and actions in the event of emergency.

The ERM manual was approved by RINA Classification Society, and we then provided class training at our MSC Training Centre in Sorrento. This included a four-day ERM 'operative level' training programme for engine officers. The training used engine simulation equipment provided by our engine provider, Wartsila.

In total, we provided more than 500 hours of ERM training and follow-up observation time by travelling trainers onboard our operational fleet.

In 2021, our team of travelling trainers delivered 612 days of onboard training across 13 ships.



Another innovation for 2021 was bringing together our captains, chief engineers, staff captains and hotel directors for three days of focused energy efficiency management training. This was led by our MSC Cruises Energy Efficiency Management Officer and four more of these courses are planned for 2022.

Environmental training was also provided by RINA to raise awareness of the extensive and changing global and national environmental regulations. This was attended by senior officers and our shipboard Environmental Compliance Officers. We have scheduled an additional five environmental training courses in 2022.

Specific leadership training for onboard employees was temporarily put on hold during the pandemic. However, this will restart in 2022, with five 5-day leadership training programmes for onboard senior officers being planned for the year.

Hotel maintenance training

In 2021, we instigated a specific training programme on the new Infoship Hotel Defect Platform, a digitalised solution to report defects and assign responsibilities. This significantly reduces the time taken to address maintenance requirements in cabins and guest areas.

Operational software training

In 2021, we introduced new shipboard management software, Otalio, on two of our ships, MSC Virtuosa and MSC Seashore to optimise internal efficiencies, tailor guest services and digitalise information for crew.

The Otalio system requires an entirely new suite of training modules. These were created by our IT teams in Geneva and Sorrento and delivered onboard partly virtually (through cabin videos and laptops) and through face-to-face training sessions. In total, more than 500 crew members received training on the new Otalio system, and we will continue this training activity in 2022 for the rest of our fleet as we roll out the new system more widely.

Our training teams worked incredibly hard throughout 2021. Together, we delivered hundreds of job-specific modules.

NINO FONTANA, DIRECTOR, SORRENTO TRAINING CENTRE

Preparing for LNG fuel

With the arrival of the first of three LNG powered ships in 2022, we introduced LNG training for crew members and support teams last year implemented through a seven-year training cooperation agreement with the Italian Maritime Academy of Genoa. This programme will include a minimum of 1,800 person days of training over three years.



The training consists of four different levels; a general awareness information session; basic and advanced LNG system training aligned with International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) requirements; and bespoke advanced 'in-service' training. The bespoke training will be repeated regularly for top-level crew members.

The first LNG STCW sessions have already been delivered to 30 crew members, including the Master and Officers of MSC World Europa, the first LNG-powered ship, which that will be operational in late 2022.

We have begun training our teams to prepare them for the delivery of our first LNG-powered ship

Development and training of onshore employees

Access to online information to help personal development, support home working and improve productivity was a key aspect of employee learning development in 2021. And as new compliance processes and procedures were rolled out, we developed online training programmes to support and enable their full implementation.

In 2021, use of our extensive library of eLearning materials rose 23% with 2020, with 749 people actively making use of the Learning platform. Resources include e-books, audio learning and recorded classroom sessions. More than 3,600 books were downloaded from the platform in 2021. These help to encourage productivity and support personal development and project management. They also provide specific skills training in areas such as marketing, sales and finance.

We continued training on various aspects of our compliance management system. This included training on our Code of Business Conduct, anti-bribery requirements, Conflict of Interest Policy and the General Data Protection Regulation (GDPR).

For people in certain roles, new training was required, including courses on economic sanctions, ransomware, and cybersecurity awareness and policies.

In 2021, usage of our extensive library of eLearning materials rose 23%

Developing talent

In 2022, we will re-start our leadership development programmes for both shore-based and onboard employees, which were put on hold in early 2020. This includes group leadership training and virtual coaching based on individual needs. We will also introduce specific skills programmes, including those on Project Management and Business Finance.

Mapping talents will allow us to better understand the capabilities of our people – our 'human capital' – and ensure that we have an appropriate management strategy in place to develop people for specific roles in the future. During 2022, we will roll-out a comprehensive programme to identify the skills and potential across our shore-based employees. This programme will help to improve our leadership succession coverage.

We are rolling-out a comprehensive programme to identify the skills and potential of our shore-based employees



PLANET

We are working towards decarbonising our business, and aim to be Net Zero by 2050.

Improving the efficiency of our operations is a key part of this journey, but we are also investing in new technologies and fuel sources. As well as reducing our carbon footprint, these will help us to minimise local pollutants too.

We are also supporting the planet by positively impacting ocean biodiversity and by using resources responsibly.



PATHWAY TO DECARBONISATION

Decarbonising maritime operations is without doubt the greatest challenge our industry has faced. We pride ourselves on being a committed and innovative business and this is a challenge we are embracing.

As a technically complex and energy intensive sector, our industry doesn't yet have all the solutions that will enable us to meet our Net Zero 2050 target.

PLANET

However, our new build plan will be subject to regular review as technologies develop, commercial viability is assured, and new opportunities arise. We do know that the following activities will be essential to our success:

- Ensuring energy efficient operations across our fleet, updating both technology and related operations onboard, and continuously reviewing our itineraries to lower emissions intensity;
- Collaborating with technology providers to support and test new engine design and modifications, novel energy conversion systems, and new lower or zero emissions fuels;
- Direct engagement with energy providers to ensure the delivery and storage systems to bring these new fuels to market;
- Working closely with governments and encouraging effective policy measures to support an industry-wide transition.



IMPROVING OPERATIONAL EFFICIENCY

In addition to decarbonising our energy supply, we can reduce our carbon footprint by taking steps to optimise our use of energy.

Industry goals and regulations

By the end of 2019, we had successfully lowered our carbon intensity by 28% compared to 2008. Whilst the pandemic has meant we have been unable to track accurately the carbon intensity improvements across our fleet, we

currently estimate that we will meet the IMO intensity ambition of a 40% reduction by 2027 – three years earlier than the industry target date of 2030 set by the IMO and adopted as a goal by CLIA.



CARBON INTENSITY ACROSS THE FLEET (GRAMMES PER ALB KM)

The IMO is now setting new, more specific requirements for existing fleets through the EEXI and Carbon Intensity Index (CII) standards.. The Energy Efficiency eXisting ship Index (EEXI) is a one-off measure of design performance for existing vessels, and CII is an annual operational efficiency measurement, which becomes increasingly stringent over the years. MSC Cruises is tracking existing performance against the future CII and its required levels of conformity, enabling the necessary planning before the requirements come into force in 2023.

PLANET

In terms of EEXI, the operating performances of our newest ships such as MSC Seashore and MSC Virtuosa are expected to be approximately 15-25% lower than the targets set by the IMO.

Efficiency obligations for existing fleet will profoundly influence the way ships operate in the future.

EMILIO LA SCALA, PRESIDENT AND CEO, MSC CRUISE MANAGEMENT

All new ships are required to meet the IMO Energy Efficiency Design Index (EEDI), requiring a design that meets a minimum energy efficiency level which increases in stringency every five years, encouraging continued innovation and technical development.

Launched in 2021, MSC Virtuosa – sister ship of MSC Grandiosa and part of the second generation of the Meraviglia class – falls under the Phase I level of stringency aligned with the start of its construction. Its design performance enabled an EEDI score of 7.35, approximately 40% more efficient that the IMO EEDI requirements under this Phase and 15% more efficient than the most stringent Phase III requirement. MSC Virtuosa had a design performance 40% better than the required energy efficiency under the EEDI Phase I





CALLING FOR GOVERNMENT SUPPORT

"Governments and institutions are setting ambitious climate relate targets but, to enable this ambition to be realised, they need to appreciate the practical hurdles that need to be overcome and continue providing political support.

At COP26, the shipping industry made its position clear – there is a willingness to decarbonise, with an increasing and overwhelming majority of industry stakeholders aligning on a net zero emissions 2050 goal.

But that was not all. Ship owners, operators, technology providers and others used this global forum to unite and call for support from governments. Together, we are asking for a price on carbon and a global market based measure. We also need to facilitate capital flows to help accelerate progress, through the industry-proposed R&D fund. This could amount to USD \$5 billion or more being provided directly by ship owners, to help identify and scale up the technical solutions we need. Following this unequivocal industry commitment, it was quite disappointing to see the lack of progress made two weeks later. At the IMO's Marine Environmental Protection Committee MEPC 77, little meaningful progress was made by its 175-member states. There was no agreement to support to support the industry's higher ambitions beyond a 50% reduction in GHG emissions by 2050, nor any progress in agreeing to the industry proposal for an R&D fund.

Nevertheless, we remain optimistic. In 2022 and beyond, we will continue to make progress as an industry in supporting and trialling new technologies and engaging with fuel suppliers to ensure our future demands are understood, and supply chains are developed accordingly. I hope governments will meet our ambitions and reciprocate, providing the political and financial support frameworks we need. This, in turn, will enable their own targets to be achieved. "

Energy efficiency

Digitalisation is allowing us to simulate real-time scenarios – using digital 'twin ship' technology – to fully understand the potential for improvements and provide the crew with specific guidance for performance improvements.

Our newest ships can gather and send ashore thousands of data sets arising from their complex onboard operations. We use this data to better understand how we operate, and to improve efficiency through measures such as improving ship handling and scheduling preventive maintenance to optimise performance.

Throughout 2021, we conducted advanced trials of energy efficiency measures on MSC Grandiosa. As a result of teamwork between our onboard ship Command and our shore-based experts, we were able to achieve an 8% reduction in emissions intensity compared to its design performance. We achieved this by monitoring the ship operations, as well as the efficiency of numerous systems throughout the ship, allowing the specific analysis of the energy profile.

Our technical teams are also working on hydrodynamic and electrical improvements. Hydrodynamic performance could be optimised through propeller re-blading and drag reduction measures. Electrical improvements include extending the application of LED lighting and making use of variable frequency drives to manage electrical motors – such as fans for ventilation and pumps – to reduce energy demand. During 2022, we will continue retrofitting these and other technologies throughout the fleet.

Knowledge building and training are also essential to the success of energy efficiency measures. In 2021, we further developed advanced energy efficiency training courses for our onboard personnel, with specific operational guidance provided by our energy efficiency teams.



We must work together to succeed on this journey; and we absolutely must succeed.

BUD DARR, MSC GROUP EVP, MARITIME POLICY AND GOVERNMENT AFFAIRS



Focused energy efficiency trials reduced emissions on MSC Grandiosa by 8% compared to its pre-trial performance.

The leaner we can make our operations now, through efficiency improvements, the better position we will be in, to bridge the cost gap that we will see with new fuels, and to minimise the additional bunkering capacity needed."

ANDREA CROSETTI, ENERGY EFFICIENCY MANAGEMENT OFFICER

Itinerary optimisation

The way in which we design and implement our itineraries can significantly influence our emissions profile as it can impact the speed at which our ships travel. In 2021, we worked to reduce and optimise itinerary speeds whenever possible. Compared to 2019, average speed was reduced by more than two knots in 2021. As part of our extensive efficiency efforts we will take into consideration the most efficient and sustainable itinerary when visiting popular destinations.



New technologies and fuels

We continue to investigate new fuel types as well as the technologies needed to ensure their most efficient use. Partnerships are essential and we are engaging with technology providers, fuel suppliers, academia, and governments to unlock future potential solutions. In addition to specific projects, we also engage as members on various platforms and associations to understand the technology and fuels landscape.

In 2020, we announced a collaboration with energy solutions provider SNAM and ship builder Fincantieri. Together, we are investigating the design, construction, and related hydrogen supply and bunkering requirements for a hydrogen-powered cruise ship. The year-long study, which started in mid-2021, includes investigating ship space to accommodate hydrogen technologies and fuel cells, technical parameters of onboard systems, assessing the potential greenhouse gas emissions savings, and a technical and economic analysis of hydrogen supply and infrastructure. Despite the huge technical challenges for safely accommodating and using hydrogen onboard, as well as the lack of a proper supply chain for maritime use, we are committed to continuing this work in 2022, with the objective of operating a hydrogen fuelled cruise ship before 2030.

Our Decarbonisation Strategic Partnership with Shell will continue to open up both shipboard technology and fuel supply pathways to meet the shared ultimate goal of net zero emissions. Areas of focus include collaboration on energy efficiency measures, adoption of digital solutions, future fuels, and fuel cell technologies.

Partnerships are essential to unlock future potential solutions



6 CASE STUDY

FUNDED R&D PROJECTS

The European Union's Horizon 2020 research and innovation programme funded Project CHEK brings MSC Cruises together with Cargill, Wartsila, Lloyds Register, academia and technology partners. The €10 million project running from 2021 to 2024, investigating a range of synergistic measures including hydrogen engines, drag reduction measure, and waste to energy solutions, with results shared throughout the maritime community.

Funding provided by the UK's Department of Transport for the Clean Maritime Demonstration Competition is allowing MSC Cruise Management (UK) to partner with GE, CERES and Lloyds Register to study the feasibility of implementing solid oxide fuel cells taking into consideration automation integration and risk management.

We expect to engage on two further EU-funded projects commencing in 2022.

These projects will explore the development and integration of technologies such as fuel cells onboard cruise vessels, as well as retrofit solutions to achieve methane abatement flexibility. We will cooperate with leading European partners including ship builders, technology providers and various Universities and Technical Institutes on these projects. PLANET

PLANET

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ENERGY EFFICIENCY

On new ships' lighting is provided by

energy-efficient LED and our heating,

ventilation and air conditioning system

ADVANCED ANALYTICS

Digitalisation is allowing us to

anticipate and address inefficiencies in

systems and equipment, and provide

ENVIRONMENTAL INNOVATIONS





pathogens.

MINIMISING LOCAL POLLUTANTS

Minimising local pollutants from our operations remains a key element of our environmental strategy. Continuous efforts are therefore being made to limit SOx, NOx and particulates, particularly when the ships are in port.

Cleaner air

By the end of 2021, seven of our 19 ships – including all our new ships – had been fitted with shore power capability. Two existing ships, MSC Poesia and MSC Preziosa, are expected to be retrofitted in 2022 as their itineraries will take them to ports where we anticipate shore power being available.

14 of our vessels have been fitted with hybrid exhaust gas cleaning systems, ensuring a SOx reduction of 98%. Our three newest ships have selective catalytic converters, which convert NOx into harmless nitrogen and water.

MSC World Europa is due to be delivered in November 2022 and will be the first of three confirmed orders for LNG fuelled vessels. As the cleanest marine fuel commercially available at the scale required for cruise operations, the use of LNG for power and energy needs onboard will enable a 99% reduction in sulphur oxides compared to heavy fuels, an 85% reduction in nitrogen oxides, and a 98% reduction in particulates.

The use of fossil-based LNG on these ships will allow approximatively 25% reduction on CO_2 emissions and at least 10% reduction in overall greenhouse gases. The continuous improvement of engine technologies and the experiences achieved through the R&D projects we are working on will more likely allow methane slip to be reduced. Further substantial reductions in carbon and our greenhouse gas profile would also be possible with the availability of bio or synthetic LNG.

In 2021, we continued cooperation with ports around the Mediterranean Sea to reduce air emissions. In particular, an agreement was made to monitor air quality in the Port of Marseille and we renewed the existing Blue Flag Agreement with the Port of Genoa.



PLANET



LNG fuel will reduce SOx by 99%, NOx by 85% and particulates by 98%

6 CASE STUDY

SUPPORTING SHORE POWER

With anticipated regulatory demands and local community concerns about air quality, many ports around the world are developing infrastructure to support shore power for large cruise ships, potentially enabling the onboard engines to be switched off whilst in berth.

To ensure compatibility with the visiting ships' systems, we are collaborating closely with port authorities and engineering companies in charge of the infrastructure design. Aspects, such as onboard energy demands and ship technical systems, need to be considered as part of shore side planning. For example, ports need to be flexible in the positioning of cables to account for differing locations of the plug-in systems, and energy supply should be sufficient to cope with the loads of large cruise vessels.

We have signed agreements to support shore side power by committing to make use of this when it becomes available. The increasing number of requests in 2021 from ports in Europe, China and the USA provide us with confidence that shore power will be much more widely available in the coming years. Wherever MSC Cruises is involved in building and financing new terminals, we are ensuring the designs take account of shore power requirements, providing the infrastructure, such as trenches for the power cables – current examples being the new terminals in Miami and Barcelona

We are committed to supporting authorities in developing shoreside power for our ships whilst in port. We have a clear and unequivocal position, that wherever shore power is available we will prioritise ships that have that capability.

MICHELE FRANCIONI SVP COST OPTIMISATION AND PROCESS IMPROVEMENT



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Cleaner water

We use water onboard for drinking, cooking, cleaning, and in bathrooms. Most of this water is created onboard the ship, with highly efficient reverse osmosis systems producing clean freshwater from seawater.

As part of our Sustainability Action Plan, we aim to reduce onboard water demand by 3% per year for each operating ship. This will be achieved by a combination of monitoring usage, new technologies, and training and educating crew to reduce usage. In 2021, we consumed an average of 246 litres per guest per day, higher than previous years due to the lower occupancy of the ships.

All vessels within our fleet contain have wastewater treatment systems. These enable full compliance with wastewater discharge rules in any part of the world's oceans. 11 of our ships, covering 71% of capacity, are fitted with advanced wastewater treatment systems, enabling the treatment of all wastewater onboard to near tap water standard.

Treated effluent water is also periodically analysed by SGS, an accredited testing laboratory, to ensure the expected standards are maintained all the time.

In our effort to continuously improve, our newest ship, MSC Seashore is provided with an advanced wastewater treatment system complying with the "Baltic Standard".

11 MSC Cruises ships contain advanced wastewater treatment systems, meaning the treated water is near tap water standard





Ballast water

MSC Cruises is fully compliant with the International Convention for the Control and Management of Ships' Ballast Water and Sediments. All vessels in our fleet are fitted with approved and certified ballast water treatment systems. These help prevent the transfer of harmful aquatic organisms and pathogens - causing injury or damage to the environment, human health, property and resources through ballast water operations. In 2021, 100% of ballast water was filtered and UV treated before being discharged at sea to ensure that it does not contain harmful aquatic organisms and pathogens.

All vessels in our fleet are fitted with approved and certified ballast water treatment systems

RESPONSIBLE WASTE MANAGEMENT

We continue to seek ways to minimise the amount of waste generated on our ships. To properly and responsibly address new waste flows associated with our preventive measures against the COVID-19 pandemic, such as material from testing, we established new robust Waste Management Protocols. We collaborate with local stakeholders and authorities around the world to enhance or develop new effective, efficient, safe and sustainable waste management operations.

Managing non-food waste

The requirements of EU Directive (2019/883), which is associated with the safe and responsible delivery of waste from ships to port, have been fully integrated into our Waste Management Protocols. We also continue to support initiatives to optimise waste treatment and increase process efficiency.

Our onboard Environmental Compliance Officers manage a dedicated waste management team, which is responsible for collecting, segregating and safely storing wastes and recyclable materials, including plastics, paper and cardboard, aluminium, glass and scrap metals.

By engaging with our suppliers, we have considerably reduced packing waste, through more innovative packaging design and take-back measures.

Furthermore, we have worked hard to minimise the amount of single-use plastics that we have onboard. Unfortunately, in 2021 the extensive COVID-19 preventive measures have required significantly higher volumes of plastic and other single-use materials, relating to extensive onboard COVID-19 testing of crew and guests. As soon as these new measures are relieved, we expect to be able to reduce single-use plastic down to 2019 levels.



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In 2021, 0.015m³ of waste was created per passenger, with 19% of this segregated onboard for recycling

Managing food waste

PLANET

In 2021, we installed three ORCA food digesters on Ocean Cay MSC Marine Reserve, our island destination in The Bahamas. These allow organic food waste to be converted into liquid effluent through an aerobic digestion process, which can then be directed to the islands' wastewater treatment plant. The treated water is used for island irrigation.

Each unit can process 23 kilogrammes of organic waste per hour, with substantial benefits, including reducing the time spent on waste handling and storage, eliminating odour, and reducing the risk of pests. ORCA substantially reduces the carbon profile of our Ocean Cay operations, providing additional benefits, beyond the sanitation improvements of using a food digester.

CAPTAIN MINAS MYRTIDIS, VICE PRESIDENT ENVIRONMENTAL OPERATIONS AND COMPLIANCE

6 CASE STUDY

TRAINING NEW ENVIRONMENTAL COMPLIANCE OFFICERS

In anticipation of the growth of our business and the introduction of new ships, in 2021 we trained nine new Environmental Compliance Officers. The nine ECOs all had extensive experience onboard as ships officers, and were specifically trained on environmental management, including a three-day intensive course at our dedicated training facility in Sorrento, Italy.

The training covered our complex onboard environmental procedures, as well as the extensive

environmental regulations for the areas in which our ships operate. From learning about procedures associated with ballast and bilgewater systems, liquid waste streams and solid waste, to recycling, internal and external monitoring and reporting requirements, the class-based training was then following by a period shadowing existing ECOs onboard our ships. PLANET

PROMOTING BIODIVERSITY

Biodiversity is declining at an alarming rate, and we are committed to playing our full part in protecting natural ecosystems. Not only is it the right thing to do but, as our materiality assessment revealed, our stakeholders expect it of us.

Our efforts to reduce our impact on the climate and avoid pollution contribute to this effort. This includes our work to decarbonise our energy sources, reduce local emissions, and use resources and water responsibly. Our robust approach to waste management is also important. habitat regeneration – particularly for ocean species, given the nature of our business. Throughout the year, the MSC Foundation continued its work to support the regeneration of ocean habitats around our island destination, Ocean Cay.

We support various initiatives that promote responsible and sustainable tourism and recognise we can play a role more directly too, by protecting wildlife and supporting

In 2021, we also worked with several non-governmental organisations to identify new routes to avoid potential whale strike.



Ocean Cay

MSC Cruises' flagship marine conservation programme focuses on the waters around Ocean Cay in The Bahamas, 65 miles east of Miami. Once an industrial sand excavation site, Ocean Cay has been transformed by MSC Cruises into a private island destination, surrounded by crystal blue waters that are home to important marine species and coral habitats.

Marine Conservation Centre and 'Super Coral' programme

In 2021, we started design and development of the MSC Foundation's new Marine Conservation Center on Ocean Cay.

A focus of the new centre will involve working in collaboration with a team of academics and environmental experts to identify hardy species and genotypes of coral capable of surviving rising ocean temperatures. Colloquially named 'Super Coral', our plan is to propagate and plant these in the waters around Ocean Cay. In time, these regenerated sites will support strong and resilient ecological functionality and provide a lifeline for coral reefs in the region, helping to ensure their future survival. Our key partners in this include the University of Miami, the Nova Southeastern University and the Perry Institute for Marine Science.

Partnering to restore red sea coral

The MSC Foundation and Ba'a Foundation have joined forces to support coral reef restoration programmes in the Caribbean and the Red Sea. This will allow both parties to combine the findings of their innovative coral restoration programmes and increase the global impact of their pioneering work.

Turtles hatching on Ocean Cay

Young sea turtles and hatchlings frequent coastal habitats such as tidal mangrove creeks, seagrass beds and coral reefs.

In August 2021, we saw the first loggerhead turtle hatchlings on Ocean Cay. Having found evidence of nesting, we marked and monitored the sites. This was done in accordance with the turtle management procedure that forms part of our wider Environmental and Social Management Plan for the island.

The turtle management procedure includes:

- Measures to mitigate the impact of artificial lights in areas where there may be nesting females and subsequent hatchlings;
- Nesting season monitoring and patrol activities, with protection measures, such as barriers put in place to control visitors in nesting areas;
- Monitoring any effects of the eco-shark barriers on the turtles; and
- Measures to mitigate potential impacts on turtles and other marine life, if future dredging or other earth works are required.





ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT ON OCEAN CAY

Since September 2020, as the cruise operations finally resumed on the island, our Ocean Cay MSC Marine Reserve has had its own dedicated Environmental, Health and Safety Officer. Ms. Sujaya Lobo is responsible for implementing our comprehensive environmental, health and safety system on the island.

Sujaya, what does a typical day look like for you?

"Every day, I make the 25 daily inspections we have implemented to manage and verify our Environmental, Health and Safety (EHS) requirements. On those days we have our cruise ships visiting Ocean Cay, I am out and about, both checking on our compliance with our procedures, and helping to ensure our cruise vessel guests enjoy their stay at our wonderful island. In addition, I help train our employees in our EHS procedures and regularly check that our procedures continue to comply with regulatory requirements."

What aspects of the role are most fulfilling for you?

"Writing and managing the implementation of our EHS procedures on the Cay was a tough job that taught me a lot about my strengths and capabilities."

What sort of training/awareness do you provide to Ocean Cay teams?

"My job is to help our employees here on the Ocean Cay to be aware of current environmental regulations and considerations, and to help guide and train them in developing and implementing our environmental and safety responsibilities, both as individuals and as employees."

What were the standout highlights for you in 2021?

"Two things stand out: the acceptance and support of my work that I have received whilst writing, implementing, and managing the Standard Operating Procedures for the EHS management system. And the successful restart of our opening to cruise visits after the lifting of COVID-19 restrictions. Most of all, I owe my gratitude my gratitude to the leadership and support given by my mentor and line manager, Captain Minas Myrtidis."

What do you like to do in your spare time on the island?

"I enjoy the Ocean Cay and its pristine air, jogging around the island and working on my personal fitness. I also enjoy phone calls with my daughter, a Health Science student in Florida, and staying in touch with my family and circle of friends."





Rerouting to avoid sperm whales

Following discussions with the International Fund for Animal Welfare (IFAW), Pelagos Cetacean Research Institute, OceanCare and WWF Greece, MSC Cruises agreed to support efforts to preserve the endangered sperm whale population in the eastern Mediterranean Sea.

This is being done by re-routing ships in the area to the west and south of the Peloponnese, and southwest of Crete. Modifications of routes between April and October, when cruises operate in this region, will help contribute to the survival of these at-risk whales.

MSC Cruises is committed to supporting the health of our oceans. Working closely with experts in the field to identify and implement meaningful action, is how we can best do this. We are pleased to support this initiative, recognising that with small changes in our routings, we can support the conservation of this important sperm whale population.

LINDEN COPPELL, DIRECTOR OF SUSTAINABILITY

PLACE

Before COVID-19, the travel and tourism industry contributed approximately 10% to global GDP. It is important that we meet our sustainability goals and society's expectations, without compromising on the economic benefits that the industry brings.

In 2021, MSC Cruises continued to work closely with tour operators and industry partners to support and promote sustainable tourism practices, including the development of new, sustainable cruise terminals.



LOCAL INVESTMENT

We have continued to invest in new terminal facilities, and work has progressed on several of these in 2021.

The Durban Cruise Terminal in South Africa became operational in December 2021 following an investment of 16 million Euro. It was the first South African port to resume MSC Cruises itineraries since the start of the pandemic.

The multi-use terminal will make Durban an even more desirable destination for cruise ships from all over the world, substantially boosting tourism numbers, creating hundreds of jobs, and supporting extensive goods and services supply chains.

ROSS VOLK,

MANAGING DIRECTOR, MSC CRUISES SOUTH AFRICA

Construction of the new MSC Cruises terminal in Miami began in the summer of 2021, initially catering for two berths, but with the potential to extend to a third berth in the future. With three berths, this terminal is designed to cater for 18,000 passengers per day. At a minimum, it will meet the LEED Silver rating, and a comprehensive environmental and social management system will be in place for the construction and subsequent operation of the terminal. This third-party audited system will ensure extensive data collection, reporting and incident notification practices.

A third MSC Cruises terminal is under construction in Barcelona and is due to be operational in 2023. We are investing over 35 million Euro in the new terminal, which is on track to meet the LEED Gold rating. We will seek LEED Zero Energy and LEED Zero Water certification within 12 months of operation. LEED Zero Energy requires a low energy consumption design, the incorporation of solar panels, and confirmation that any energy required from the grid will be from a renewable source. LEED Zero water is achieved through evidence of low water demand, such as the use of rainwater for irrigation and having the infrastructure to ensure stormwater flows directly to the sea. The terminal will have shore power connectivity and will also be ready for LNG bunkering.

The MSC Cruises terminal in Barcelona is due to be operational in 2023, and is on track to meet the LEED Gold rating

6 CASE STUDY

GREEN BUILDING COMMITMENT

LEED (Leadership in Energy and Environmental Design) is a widely used global green building rating system. Its rigorous score-based systems ensure high levels of efficiency in building design and operation.

We are committed to meeting at least LEED Silver certification for all new terminals in which we invest.

RESPONSIBLE TOURISM

Our guests delight in exploring the various ports and towns that our ships visit, and it is important to us that they can do so safely and sustainably.

Safe excursions

Ensuring the safety of our guests when they leave the ships for shore remains a priority, and we follow strict protocols. For instance, guests must undergo temperature checks before and after shore excursions, sit in assigned seating whilst travelling onboard buses and coaches, and wear face masks and sanitise their hands regularly whilst visiting attractions. In addition, tour vehicles are thoroughly cleaned and sanitised after every use.

Over the past year, some destinations continued to require that cruise guests were accompanied on shore excursions, to ensure the safety of visitors and the communities visited. We organised 600 different "bubble" shore excursions in 80 destinations in 2021. For those allowing independent visits, cruise guests were asked to follow protocols whilst off the ship, such as regular hand sanitising, mask wearing and social distancing.

The pandemic has also driven changes in guest expectations, with a greater interest in less crowded destinations, as well as outdoor locations.

Going forwards, there will be greater demand for less busy destinations, allowing us to de-centralise our itineraries away from what were traditionally the most sought-after locations. This will facilitate our efforts towards sustainable tourism.

MARIALUISA IACCARINO, HEAD OF SHORE EXCURSIONS

In 2021, we organised 600 different bubble shore excursions in 80 destinations



Sustainable tourism

We continue to work with industry partners on initiatives to support destination stewardship. We also work directly with our tour operators on the ground to encourage sustainable practices. We comply with all our internal guidance documents, including our Sustainable Tourism Policy.

In 2021, we sent a survey to our tour operators to understand their use and availability of low or zero emissions transport solutions. Recognising the need to provide transport from ports to tourism destinations, we are seeking ways to improve the carbon footprint of these services. From the responses received, we see progress being made in some European countries, and the use of either hybrid or electric shuttle buses will begin in several destinations in 2022, including Barcelona, Valencia and Palma.

We continue to work with industry partners on initiatives to support destination stewardship

Partnering with Travelife

In 2021, we partnered with Travelife, a leading training, management and certification initiative for tourism companies committed to achieving sustainability. Its specialised indicators, based on the Global Sustainable Tourism Council's (GSTC) Industry Standard criteria, have a strong focus on supply chain impact and the responsibilities of tour operators.





Our partnership with Travelife will ensure the provision of training and capacity building for all the tour operators with whom we work. This will help to encourage the implementation of sustainability actions, providing comprehensive online training, and making available extensive supporting materials. The training will also encourage tour operators to become certified by a recognised sustainable tourism scheme.

Our partnership with Travelife will ensure the provision of training and capacity building for our tour operators.

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Responsible Protectours

We are currently developing a set of shore excursion sustainability practices. In the future, tour operators who adhere to these practices will become our preferred partners.

Our shore excursions team has worked with tour operators around the world to identify excursions founded on strong sustainability principles. Known as 'Protectours', these excursions are specifically designed to educate our guests.

Around 70% of our Protectours now include low impact transportation - including walking, cycling or kayaking and many make a direct contribution to the environment through supporting species or habitat protection.

We continue to build up tours that offer a low carbon footprint, including MSC Bike Adventours. Currently, these are provided in 21 countries, with a total of 150 bicycle tours planned for 2022 as part of regular cruise itineraries in the Mediterranean, Northern Europe and the Middle East.



6 CASE STUDY

PROTECTOURS: ICELANDIC HORSEBACK NATURE TREK WITH TREE PLANTING

Iceland is known for its powerful and unique landscapes. Perhaps less well known is its age-old law forbidding the import of horses and barring any horse that leaves Iceland from ever returning, preserving them over generations.

Guests saddle up on a Viking-age Icelandic horse, and trek into the scenic wilderness of lava fields and green hillsides, rich with birdlife. These strong, medium sized horses have a docile and friendly temperament and are kept warm with a thick coat.

Following the trek, the guests journey to Guðmundarlundur forest, where they are met by a forester from the Kópavogur Forestry Association, who guides them in planting a tree. This supports the forestry service's efforts to help conserve this unique area, and simultaneously contributes to lowering carbon emissions.

70% of our Protectours include low impact transportation such as walking, cycling or kayaking





Accessible tours

The development of accessible tours also remains a priority, with the aim of ensuring that we offer guests with limited mobility a range of options at each destination.

All our 'Easy & Accessible' tours aim to eliminate obstacles and ensure smooth access to all the highlights visited. These tours allow slow walkers, wheelchair or scooter users, and any guests that simply like to explore leisurely, to visit the best sites that each destination has to offer. Through specifically selected itineraries and specially designed tours, guests can enjoy step-free routes at their own pace, with special needs vehicles made available to accommodate small groups. These excursions are designed and vetted by worldrenowned accessibility experts at Accessible Travel Solutions and by travellers with disabilities. Routes are verified and tested consistently to meet our high standards. So far, our Easy & Accessible excursions are available in 20 destinations, and we aim to extend this to other ports of call going forwards.

Our Easy & Accessible tours for people with limited mobility are available in 20 destinations

Working with CLIA

We continue to work collaboratively with CLIA and other cruise lines to manage visitor numbers and support the sustainable tourism aspirations of the destinations we visit.

The Memorandum of Understanding between CLIA and the city leadership in Dubrovnik, for example, focuses on collaboration and innovative solutions to help manage tourism flows. In 2021, CLIA and our fellow members continued our longstanding cooperation with the Balearic Islands Government to help Palma address tourism management issues. And CLIA has also teamed up with the Global Sustainable Tourism Council (GSTC) and the Greek cities and ports of Corfu and Heraklion to develop Destination Assessments. These will help to map out the future of sustainable tourism in these popular destinations.

Contributing to the success and sustainable development of cruise destinations is of vital importance to the cruise industry, and trust built through dialogue with ports and destinations is at the heart of responsible tourism.

KELLY CRAIGHEAD PRESIDENT AND CEO, CLIA

We continue to work collaboratively with CLIA to support the sustainable tourism aspirations of the destinations we visit



Supporting the World Travel & Tourism Council

MSC Cruises is a member of both the CEO-led Sustainability Committee and the Sustainability Task Force of the World Travel & Tourism Council (WTTC). In 2021, we supported the preparation of their report 'A Net Zero Roadmap for Travel & Tourism', which was launched was launched during COP26 in Glasgow.

Going forwards, we will continue to work closely with the WTTC and travel industry partners to develop and implement sustainable solutions for our industry.

SUPPORTING LOCAL COMMUNITIES

Through the MSC Foundation, we provide support to communities in need, either directly or through a number of global organisations with a strong track record of effective action.

Providing emergency relief

In 2021, the MSC Foundation (mscfoundation.org) led 17 emergency relief initiatives in 14 countries. These included emergency responses to two volcanic eruptions, one earthquake and one wildfire.

We continued our efforts to assist with the delivery of protective personal equipment to hospitals and health ministries in 11 African countries during the pandemic. Providing free transportation and logistical support as part of our partnership with Mercy Ships, in 2021 we reached Guinea, the Democratic Republic of Congo, Cameroon and Senegal.

The MSC Foundation also supported other national efforts and partners to mitigate the COVID-19 pandemic in Brazil, Italy, Lebanon, Montenegro and Vietnam.

MSCFOUNDATION



In 2021, the MSC Foundation led 17 emergency relief initiatives in 14 countries

Improving healthcare

In 2021, we celebrated ten years of supporting Mercy Ships.Over the years, this has enabled the NGO to perform:19,740 surgeries

- 218,100 dental procedures; and
- Medical training for 15,150 people.

In the past year, the MSC Foundation facilitated the delivery of a 40-foot container of medical supplies for ELWA Hospital to the Mercy Ships team in Liberia. It assisted in the outfitting of Global Mercy™ to support Mercy Ship's life-changing medical work and worked with the cargo division of MSC in providing free logistics and shipping, with 95 containers transporting the materials required to outfit what will be the world's biggest purpose-built NGO hospital ship.

Through container shipping and logistics, to fundraising and maritime expertise, we have supported the life changing work of Mercy Ships for a decade

Marine conservation education

In the field of marine conservation education, we continued our support for Marevivo. It introduced several innovations in 2021, successfully adapting its environmental education programme 'Nauticinblu' to the constraints of the pandemic. These ranged from online lectures to livestreamed field trips, enabling the programme to reach approximately 800 school students, 80 teachers and a total of 3,300 family members.

Together with Marevivo, the MSC Foundation supported the 'Guardian Dolphins of the Islands' programme in Italy, so that it could continue despite pandemic lockdowns. Every participating school was supplied with a 'Blue Corner' environmental education study unit, equipped with audiovisual aids. This initiative reached around 1,000 students in 21 primary schools on 11 Italian islands.

Marevivo has been protecting the sea and its resources for over 35 years; it promotes education in schools on biodiversity, sustainable development, and the protection of marine life

Plastic waste pollution, education, and empowering women

Through the MSC Foundation, we continued our longterm support, since 2009, of UNICEF's efforts to improve children's access to quality education. In 2021, UNICEF built 10 more classrooms in the Ivory Coast, taking the total to 71 classrooms and catering to 3,228 children.

Our support also helped to train 32 women waste collectors, enabling the up-cycling of plastic waste into innovative bricks. This resulted in 400 tonnes of plastic being removed from the environment to be recycled, with the bricks being used to construct 44 further classrooms.



PLACE

PLACE

PROCUREMENT AND LOGISTICS

As our ships came out of layup, we re-engaged with our suppliers to ensure the timely delivery of products and services to support the re-start of operations.

The ongoing pandemic meant that we experienced many changes to our itineraries throughout the year as the rules and regulations were amended. This required close engagement with our suppliers. To facilitate this, we formed a dedicated Sustainable Procurement Committee, consisting of key representatives from our purchasing and logistics teams.



MANGAGING THE IMPACTS OF COVID-19

The pandemic has continued to significantly impact our global business, with cost increases and timely deliveries being challenged in 2021.

The limited availability of certain products such as food items, as well as local COVID-19 transport restrictions, caused significant delays. We quickly identified the need for a flexible approach in terms of sourcing supplies and delivery expectations.

Transporting products from Asia to Europe proved challenging, with extended lead times for furniture and equipping new ships. Many factories within our supplier network were severely impacted due to COVID-19 cases among their workforces, forcing some manufacturing facilities to significantly scale down their output.

We have worked closely with the cargo division of MSC to assist us in facilitating sea transport. We also explored other transport modes, including over land rather than sea, to get products where they need to be. Our procurement teams were also heavily focused on sourcing millions of items of PPE – such as face masks, shields and suits – as well as COVID-19 testing equipment. All the face masks and COVID-19 tests we purchase for our crew and guests need to be CE and FDA certified, meaning that many available types do not meet our requirements. In addition, all medical equipment, including face masks, are reviewed and approved by our medical department and our independent Blue Ribbon COVID Expert Group before we agree to purchase them.

All relevant medical equipment is reviewed and approved by our medical department and the Blue Ribbon COVID Expert Group



PROCUREMENT

PROCUREMENT

SOURCING AND LOGISITICS

Our procurement team continues to look for opportunities to make our systems and processes more efficient and sustainable.

Sustainable Procurement Committee

In 2021, we created a new committee dedicated to making sure that our approach to procurement has a positive impact on society and minimises damage to the environment.

The committee is comprised of heads of procurement, logistics and sustainability and meets every two months to review operational standards across our supply chain and to identify specific opportunities where we can focus our efforts.

Part of the committee's remit is to standardise our approach so we can use similar KPIs across our business. For instance, we are introducing best practice approaches that mean that the teams that procure food and beverages will operate in a similar way to our technical procurement teams.



We continue to look for ways to simplify the extensive logistics required to ensure the timely delivery of products to our ships

Efficient logistics

We have responded to increased sourcing costs and logistics challenges by evolving our global sourcing strategy to better manage risks and build in flexibility in the future.

We track commodity markets closely as we continue to experience inflated costs within our supply chains. To maintain long-term strategic partnerships with our suppliers, we are incorporating raw material clauses, to allow potential cost adjustments during the course of a contract. We are also continually benchmarking prices to ensure that we incorporate realistic pricing structures.

We continue to look for ways to simplify the extensive logistics required to ensure the timely delivery of products to our ships, which are positioned at many global ports. As we bring ships out of layup and into operation, we will investigate ways to consolidate consignments and reduce our road, rail and transport needs.

One initiative that we will roll out in 2022 is internalising our logistics. The MSC Group owns and manages extensive shipping and ground transportation services, and we will make more use of these to help ensure a greater level of control in the management of our goods and reduce the number of shipments.

To further support more streamlined services and optimise the operational process, we have rationalised the use of existing warehouses to reduce the number of journeys needed between them and our ships.

Supplier management

Whilst 2021 saw ongoing supplier audits, we will increase this going forwards, to ensure continued compliance with our policies. We have rolled out a more comprehensive online vendor registration and management system across many more products, providing one platform to assess compliance with our requirements and check supplier credentials.

Over the past year, in addition to setting up a Sustainable Procurement Committee to review our current supplier management systems and identify areas for improvement, we are now developing a policy to reinforce our expectations of suppliers. We have identified several projects that we will pursue, including on sustainable seafood, chocolate, coffee and paper products.

We have already started work on a plan to support sustainable seafood, working on policies to support the efforts of various global initiatives in this matter. We are also reviewing current sustainable seafood certification schemes and global initiatives to drive better seafood practices.

In 2022, we will roll out the Business Partner Code of Business Conduct to all third parties with whom we engage. Aligned with our internal Code of Business Conduct, this will help ensure that the strict governance and ethics practices that guide our business are also adhered to by our partners outside of the business.

We set up a Sustainable Procurement Committee to review our current supplier management systems and identify areas for improvement



Single-use plastics

In recent years, we have made good progress in reducing our use of single-use plastics. We eliminated all hotel plastic items such as plastic cutlery, glasses, and plates and, in food and beverage, replaced single-use packed items – such as mayonnaise, ketchup and jam – with shared servings and dispensers. We also liaised with our suppliers to enlist their support.

The use of sustainable single-use items is stipulated in all new tenders

During the pandemic, we had to temporarily reintroduce some items to enable enhanced hygiene – such as using plastic wrap for food for those in quarantine. To minimise the use of any new pandemic-related plastic items, we are strictly controlling their management.

Pandemic restrictions also meant we had to temporarily suspend some of our plans, such as reducing transparent plastic packaging at our Chocolate Bar. However, the use of sustainable single-use items is stipulated in all new tenders across the world. DATA TABLE

DATA TABLE 2021

OPERATIONS	2019	2020	2021
Number of ships	17	17	19
Operating days	5,704	1,543	2,086
Available lower berth days	17,379,840	5,011,719	8,285,424
Total passengers carried	2,747,943	685,247	723,201
Total passenger days	19,501,176	4,772,286	4,472,355

FUEL/EMISSIONS ⁽¹⁾	2019	2020	2021
Total fuel consumption (ships) tonnes	650,306	290,596	350,724
Total CO ₂ tonnes	2,031,639	908,393	1,103,320
Fuel consumption – cruise operations only ⁽²⁾	Not applicable	160,217	239,483
CO ₂ gr per ALB Km	238	251	194
SOx gr per ALB Km	1.47	1.21	1.12
NOx gr per ALB Km	4.10	4.43	4.27
Number of ships with hybrid exhaust gas cleaning system (EGCS)	9	9	14
Number of ships with selective catalytic reduction system (SCR)	1	1	3

WATER	2019	2020	2021
Potable water use (liters/person/day)	167	230	246
Potable water produced onboard (m ³)	3,476,049	1,207,031	1,748,136
Potable water bunkered (m ³)	839,660	319,775	241,813

WASTEWATER DISCHARGED TO SEA	2019	2020	2021
Treated blackwater (m ³)	276,273	85,481	3,204
Untreated blackwater (m ³)	73,243	765	8,602
Greywater (m ³)	1,326,098	386,172	44,219
Wastewater treated using AWTS (m ³)	2,885,040	731,768	186,817
Percentage of wastewater treated using AWTS	63%	61%	77%
Number of ships with AWTS	9	9	11

SOLID WASTE/RECYCLED MATERIAL	2019	2020	2021
Total waste removed - excluding recyclables (m ³)	Not available	41,234	54,134
Total waste per passenger day – including recyclables (m ³)		0.01	0.015
Total recycled waste (m ³)	26,352	6,794	12,907
- glass	6,897	1,712	2,284
- aluminium	1,418	318	290
- plastics	6,263	1,654	2,84
- paper	9,393	2,083	5,52
- cooking oil	147	56	5
- other	2,234	971	1,90
PEOPLE	2019	2020	2021
Total employees shoreside (3)	2,608	2.142	2,46
Shoreside female employees	55%	53.7%	54%
Shoreside retention rates	89.7%	76.9%	85.9%
Average training hours per shoreside employee	49.7	8.2	6.

Total employees shipboard (4) 19,860 16,729 19,789 Shipboard % female employees 18% 19.4% 18% 92.5% Shipboard retention rates 89% Not available Average training hours per shipboard employee 36.3 Not available 22

⁽¹⁾ Greenhouse gas emissions are calculated based on the IMO Guidelines, supplier records and internal standards, then summarised and presented for this report. Emission factors used in this report are in accordance with The United Nation's Climate Registry Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5).

The annual total amount of CO2 is calculated by multiplying annual fuel oil consumption and conversion factor for the type of fuel, as required by IMO (MEPC.1/Circ.684 – and MEPC.245 (66))

The SOx calculations take into account the sulphur content of the fuel consumed and the emission factors, considering the usage of the exhaust gas cleaning system (EGCS) to process emissions using deSOX chemical reactions. With reference to IMO guidelines including MARPOL 73/78 Annex VI, MEPC 74 and the Study of GHG Emissions from Ships and ISO 8178, NOX emissions are calculated based on the engine type per single ship. NOX abatement using onboard SCR is taken in account.

⁽²⁾ For the purposes of calculating emissions per ALB Km, only the fuel for commercial cruises during 2020 and 2021 was used, thus discounting fuel use during warm lay up.

⁽³⁾ Based on number employees on December 31st

 $^{\rm (4)}$ Based on number of crew onboard December 31 $^{\rm (3)},$ except 2020 when based on number of crew February 29th

Contact us sustainability@msccruises.com

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Our values are the cornerstone of our business, supporting out vision, shaping our culture and guiding our future direction.

PIERFRANCESCO VAGO, EXECUTIVE CHAIRMAN

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