



2022
**SUSTAINABILITY
REPORT**

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REPORT



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A WORD FROM OUR GROUP PRESIDENT

Diego Aponte

MSC Group President

2022 was another year of unexpected developments that few could have predicted. As the world strove to put the pandemic behind us, geopolitical tensions and challenging economic conditions brought new and additional complexity to deal with on top of the disruptions we have become used to in recent years. We have become accustomed to coping with adversity, leveraging our resilience and determination to find solutions at times of crisis.

The conflict in Ukraine interrupted post-pandemic recovery efforts, with knock-on effects beyond the humanitarian tragedy unfolding. Mainly the energy and food crisis as well as the subsequent recession faced by countries around the world, with implications for communities and our climate. While recognising the challenges, times of crisis also bring opportunities for new ways of thinking and responding as well as the chance to define alternative pathways and find innovative solutions. In today's fragmented world, the only way to move forward is together, drawing on our collective strength towards the future we want.

The recent disruptions have exposed cracks in the world's systems, reminding us of the global sustainable development agenda in which we all have a role to play. Business is a powerful change agent and key to advancing sustainable development and accelerating the transition. We have a fundamental role to play in responsibly delivering the solutions to accompany us throughout the transformation currently underway.

We are living in an era of instability. Geopolitics are directly impacting business and society, and as a leading global transport and logistics company our role has become more important than ever in the net-zero transition. Connecting the world comes with a responsibility that goes beyond simply transporting cargo; what we do is intrinsically linked to MSC's contribution and the imprint we leave on the earth. Our purpose represents the essence of MSC's commitment.

As we navigate the ongoing transitional period, our company continues to evolve to ensure our global network, assets and infrastructure are fit for the future. 2022 was a particularly

exciting chapter of our journey as we further strengthened our company through investments and diversification in different areas of our business, including expansion of our network of terminals as well as our recently launched air freight operations, MSC Air Cargo. We also consolidated MSC's global presence across different geographies including through the acquisitions of Log-in Logistica in Brazil and Bolloré Africa Logistics. The integration of the latter that we recently named Africa Global Logistics – comprising land, port and rail infrastructure spanning the African continent – is of particular significance, as Africa is an important part of MSC's history since our first service in 1971 between the Mediterranean and East Africa. We see Africa as a continent of the future, whose immense potential we intend to help unlock over the coming decades.

The growth plan for MSC's Cargo Division and related investments are not separated from our commitment to be an active player in the decarbonisation pathway of our industry, reflected by the modernisation of our fleet –

including our significant newbuilding orderbook – and the upgrading of our infrastructure to adapt and respond to the impacts of climate change. At the same time, this also represents a unique opportunity for fostering technological innovation and finding the scalable solutions needed to transform the entire logistics value chain.

Recognising the rise and potential impact of artificial intelligence and new technologies on our industry, at MSC we embrace the opportunity to be supported by innovation that will enable us all to thrive. The expertise and passion of MSC people are the source of our strength, and they will always be at the heart of our success. Our unique MSC family is united by a deep sense of belonging and solidarity – especially at difficult times including for our Ukrainian colleagues – both at sea and ashore – as the conflict continues more than one year on, as well as those in Türkiye and Syria affected by the recent earthquake. Looking ahead, I am confident of our ability to overcome the challenges and seize the opportunities along our journey.



CEO STATEMENT

Soren Toft

MSC Chief Executive Officer



One thing the world has learned over the past three years is that uncertainty has become our new normal. As 2022 drew to a close, I was pleased and impressed by our ability to not only live with this uncertainty but to find a way to unite, innovate and become stronger, drawing on our heritage as we step up to the challenges ahead. More than ever, the global community must stand together and deliver towards the achievement of the Sustainable Development Goals. At MSC, we reaffirm our support of the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labour, Environment and Anti Corruption, and we are fully committed to integrate these into our business strategy, culture and operations.

Shipping and logistics keep the wheels of our global economy turning and in turbulent times, resilience is key. Trade brings new opportunities to developing markets, helping local producers tap international markets and empowering local communities as they thrive. We recognise the central role of our sector in connecting underserved consumers and markets – particularly those located in remote and vulnerable areas – as well as supporting small- and medium-sized enterprises around the world. We drive our business strategy based on our long-term

purpose, success and growth. This is reflected in the way we address sustainable development, connect the world and play our part in building resilience across the global value chain. We invest for the future, expanding our ocean and land transportation networks as we serve customers and communities around the world, enhanced by the integration of AGL and other recent acquisitions. 2022 was another year where supply chains were put to the test, and we worked closely with our customers to ensure the best possible connectivity by sea, land and more recently by air following the introduction of MSC Air Cargo.

As we learned during the pandemic and the ongoing conflict, our industry has a key role to play. With our leading position comes also commitment to create the connections to access our global trade system. Being responsive and responsible for us means ensuring essential products are in the hands of the people who need them, particularly at times of crisis.

Removing trade barriers and enabling the consistent flow of goods across borders is the essence of what we do, and by being on the ground in more than 150 countries MSC is bringing to the table critical expertise and capabilities. To catalyse cross-sectoral action, we are joining global



leaders from business, intergovernmental organisations, civil society and academia through the Business Commission to Tackle Inequality to find sustainable solutions, together. We are currently facing a climate crisis and we must take firm action to reduce our carbon emissions, protect our oceans as well as reducing biodiversity loss. At MSC we are focused on achieving carbon neutrality across the entire Cargo Division by 2050 – without relying on external offsetting – and we are committed to accelerating the energy transition in collaboration with our partners. Along our decarbonisation journey we are taking immediate steps to reduce our emissions towards our goal of net zero.

Following this path, our entire fleet of more than 700 container ships will comply with new global and regional regulations, including the 2023 introduction of the International Maritime Organization's Carbon Intensity Indicator (CII) as well as the European Union Emissions Trading System (EU ETS). In the face of uncertainty, waiting is not an option. We must explore all opportunities to reduce our emissions today, rather than waiting for zero-carbon fuels to be available at scale. For this reason we continue our significant investments in improving the energy efficiency of our fleet, engaging with shipbuilders, technology providers and

energy suppliers to build and retrofit flexi-fuel ships with the future fuels in mind to ensure our readiness as they become progressively available. Our efforts are equally focused on contributing to a just transition for seafarers as we prepare our workforce for vessels operating on a range of low- and zero-carbon fuels and technologies.

We seek to pioneer sustainable and scalable solutions to reduce the carbon footprint of global supply chains, working closely with customers with similar climate ambitions along our collective decarbonisation journey. Our carbon insetting programme MSC Biofuel Solution is an example of how we are partnering with others across the supply chain to advance the transition towards zero-emission shipping.

Our people are the driving force of our success, and protecting their health and ensuring their safety is a top priority. I am extremely saddened by the tragic loss of four of our colleagues in 2022. Despite the highest level of health protection measures and safety protocols in force across our global operations, this shows we must and will do more. I have been moved by the dedication, energy and strength of our global colleagues throughout this extended period of uncertainty, and am honoured to lead our growing global family into the future.

MSC CARGO DIVISION

Headquartered in Geneva, Switzerland, and part of the privately owned MSC Group, MSC's Cargo Division is a leading shipping and logistics conglomerate.

Guided by an innovative, flexible and unique approach reflecting the values of our family company, MSC's visionary leadership transformed a single vessel operation in 1970 into a successful global end-to-end logistics business through exponential and organic growth. Fifty-one years after the start of our great human story we became the industry leader in shipping and have played an essential role in shaping the world as we know it.

2022 marked another milestone in the MSC story, preparing us for the way forward. Our steady growth was complemented by a series of strategic acquisitions and the creation of new entities, further enhancing our global transport and logistics network.

We overcame geographic boundaries and disruptions, connecting the world by sea, road and rail as well as air. Adopting an inclusive approach, we have contributed to the industry as it is today, enabling global economic growth by driving international trade and unlocking the potential of communities.

It is our responsibility and purpose – our north star – to lead the way to the future that we want. Today, more than ever, we commit to navigating the path to sustainable development and tackling the global challenges connecting us all.



OUR PURPOSE

WE CONNECT THE WORLD, FOSTERING INCLUSIVE SOCIAL PROSPERITY AND ECONOMIC GROWTH, WHILST RESPECTING AND NURTURING THE HOME WE ALL SHARE, OUR BLUE PLANET.



CONNECTING THE WORLD

We connect **80%** of the world with a direct presence in over **150+** countries

We navigate **223** routes with **725*** vessels

We move **23** million TEUs at sea

We reach **500+** ports of call with **64** terminals moving **36.5** million containers per year

We transport **8.5** million TEU on land by road and rail with our network of **170+** operating yards

We commenced air operations with our **first** 777 freighter

We are **95,500+*** people from **150+** nationalities and **6** continents,
of which **4.8%** are indirect employees

* Updated as at 31 March 2023.

Please see page 124 for data for the reporting period 1 January - 31 December 2022



MEDLOG

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OUR PRIORITIES



AIMING FOR **CARBON NEUTRALITY**

SUPPORTING **LOGISTICS TRANSITION SOLUTIONS**

MAINTAINING A **FOCUS ON ENERGY EFFICIENCY**



CONTRIBUTING TO **ECONOMIC GROWTH**

BUILDING **RESILIENCE ACROSS THE GLOBAL VALUE CHAIN**

DEVELOPING **LOCAL CAPACITY AND KNOW-HOW**



ADVANCING **HUMAN RIGHTS**

PROMOTING **DIVERSITY, EQUITY AND INCLUSION**

ENGAGING OUR **SUPPLY CHAIN**

OUR FUNDAMENTALS



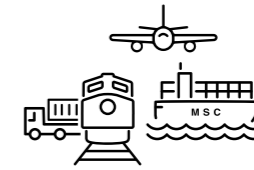
BUSINESS ETHICS AND COMPLIANCE

PROTECTING **OUR BLUE PLANET**

ENSURING A **SAFE PLACE TO WORK**

HOW WE CREATE VALUE

At MSC we are committed to enabling sustainable and inclusive growth, and by achieving **our Purpose** we create value for all.



OUR IMPACT

PEOPLE

A culture of continuous learning, improvement and innovation nurtures our growing workforce, promoting a safe, healthy and inclusive workplace while our people thrive as they develop new skills and build a unique set of competencies.

CUSTOMERS

By creating connections and ensuring continuity and resilient supply chains, we enhance our customers' business performance and growth.

COMMUNITIES

With a direct impact on sustainable development challenges and contributing to social prosperity, our business provides trade access, tackling growing inequalities and fostering economic growth. At local level we play a key role in the transformation of logistics ecosystems, including local industry – ports, road and rail infrastructure; shipbuilding and recycling yards; dry-docking and retrofitting; and related supply chains – as well as employment and capacity development across the whole value chain.

PLANET

Our industry contributes to global greenhouse gas emissions and our operations have a direct impact on our climate and our ocean home. We are committed to reach net zero by 2050 through our ongoing investments and implementation of scalable solutions, as well as engaging in strategic partnerships to improve our efficiency and accelerate the energy transition. We have a key role to play in the blue economy, ensuring the sustainable use of natural resources while protecting marine and land-based ecosystems.

VALUE CREATION STARTS WITH SOLID FOUNDATIONS

Global logistics **assets, infrastructure** and **worldwide network**

Commitment and expertise of **our people** across the global MSC family

Digital infrastructure, data and technology assets

Authentic relationships and close **cooperation with our stakeholders**

Our **blue planet**, rich in the resources on which we depend, and we must respect

A close-up, profile view of a man with short, graying hair, wearing a dark blue pilot's uniform with gold epaulettes. He is looking out of an airplane window. In the background, another person in a similar uniform is visible but out of focus. The lighting is soft and natural, coming from the window.

SUSTAINABILITY

**AT THE HEART
OF OUR BUSINESS**

OUR COLLECTIVE RESPONSIBILITY IN THE NEW NORMAL

After an extended period of challenges emerging as a result of the global COVID-19 pandemic, a new normal emerged in 2022 with change and uncertainty becoming part of daily life. The world moved between health, environmental and political crises, evolving and changing at an ever-increasing pace and with widespread socio-economic consequences, including rising levels of inequality.

Among members of the business community, there is a growing sense of collective responsibility to build resilience to withstand these interconnected crises and address global challenges. Working with others across

and beyond our industry is key, with close cooperation enabling convergence to design joint pathways leading to the sustainable solutions the world needs.

With MSC's global shipping and logistics network and our significant expanding inland presence we are in a unique position to accelerate the net-zero transition and contribute to an inclusive global trade system. As a leading company with a clear purpose that connects the world, MSC has a responsibility to help build a future where supply chains are both resilient and sustainable.

ACCELERATING THE TRANSITION TO A SUSTAINABLE WORLD

MSC's **Sustainability Roadmap** reflects our long-term view and structured approach to sustainable development that considers the dynamic global landscape and the implications of what is happening in the world for MSC's business. In 2022 as part of our strategy we widened our circle of key stakeholders, creating new and deepening existing relationships to identify areas of convergence and opportunities for collaboration on our material topics.

Through a process of participative dialogue and exchange of perspectives we can address common challenges we face, together. As our company continues to grow, we are continually refining and adjusting our approach to ensure the ongoing relevance of our roadmap, while maintaining a focus on addressing our **Fundamentals** and **Sustainability Priorities**.

OUR APPROACH

UNDERSTANDING THE LANDSCAPE

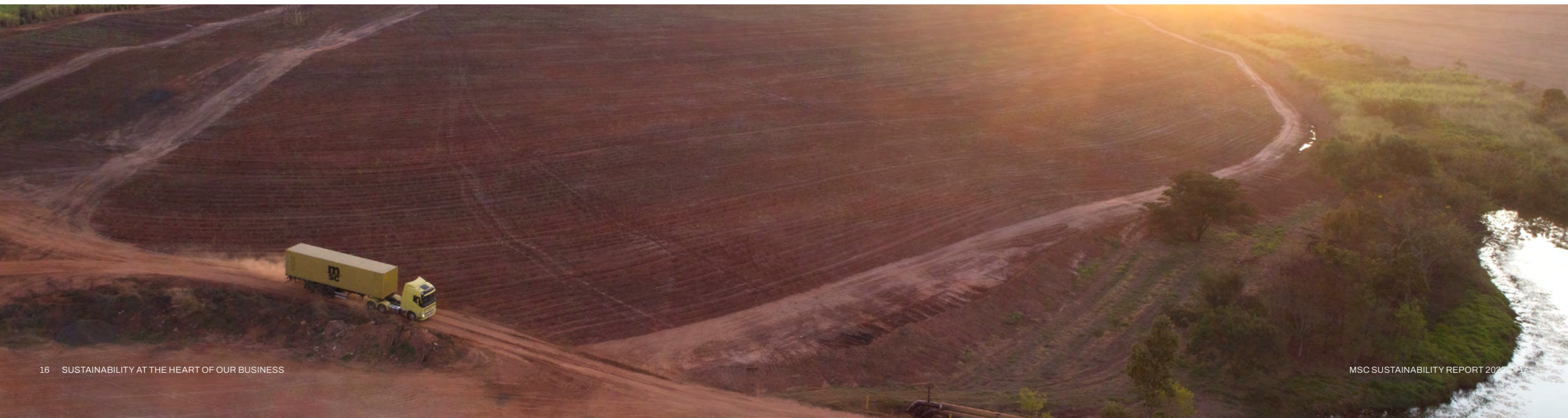
- Identify the global challenges and key trends that will shape our future
- Draw on internal expertise to understand their implications alongside stakeholder expectations
- Assess our direct and indirect impacts and adjust our approach in response to the landscape

ENGAGING WITH STAKEHOLDERS

- Map what is relevant to our stakeholders
- Address material topics and leverage interconnections
- Build partnerships and engage in ongoing dialogue with our stakeholders

DELIVERING OUR ROADMAP

- Focus on our sustainability priorities
- Continue progress on our fundamentals
- Monitor progress on commitments, targets and performance as we deliver our roadmap





RESILIENCE IN THE FACE OF A COMPLEX LANDSCAPE

As a global company and industry leader, we seek to understand the impacts of the complex landscape on our business activities taking place in more than 150 countries. Recognising the interconnections between today's global challenges, systemic risks and the megatrends as well as industry-specific trends shaping the world of tomorrow, we draw on internal expertise to consider their implications – including their direct and indirect material impacts – and how these could impact strategy and performance across and beyond our sector.

2022 saw an evolution in our external environment, with new challenges compounding, intersecting and interconnecting with existing ones and with implications

for our material topics. In addition to generating a tragic humanitarian crisis the tensions and conflict in Ukraine impacted industries and economies, exacerbating supply chain disruptions, pushing up energy and food prices as well as threatening to complicate decarbonisation efforts. The landscape of 2022 highlighted risks for which business leaders have a responsibility – and an opportunity – to address. While the crisis continues to impact lives and livelihoods there is hope¹ that it will prove a defining moment. At MSC, we remain committed to capitalise on the opportunity to accelerate the energy transition towards a more resilient world.

CLIMATE ACTION AND THE NET-ZERO TRANSITION

Our planet is facing a triple environmental crisis – climate change, biodiversity loss and pollution – that has become increasingly real as communities around the world experience unprecedented heatwaves, drought, wildfires and other extreme events impacting the liveability and natural capital across all regions and industries. Climate action continues to gain momentum, and July 2022 saw the United Nations General Assembly adopted a historic resolution declaring access to a clean, healthy

and sustainable environment a universal human right. Achieving net-zero emissions requires a transformation in the global economy that will affect all socio-economic systems and all businesses for the long term. In the face of ongoing economic and geopolitical volatility and increasing concerns about energy security, there has been a shift towards energy efficiency investments as well as the adoption of renewable energy sources. A balanced approach² will be key to ensure a fair distribution of the

costs and benefits of climate action towards a resilient and just energy transition.

Climate action remains a top priority for shipping and logistics. As the debate continued on key topics such as a global price for carbon and well-to-wake lifecycle analysis of fuels, 2022 saw a growing number of initiatives ramping up in preparation for upcoming global and regional regulation including ship carbon intensity mandatory measures introduced by the IMO³ and European Union

regulation on maritime and road transport – part of the 'Fit for 55' package – as well as research and development for zero-carbon energy sources.

Climate adaptation also presents additional opportunities to create a more collaborative logistics ecosystem, with the industry engaging, innovating and delivering as we work towards our collective net zero target – while addressing interconnecting topics such as protecting and restoring ocean health and tackling inequality.

INEQUALITY AS A GROWING SOURCE OF RISK

Inequality represents a systemic risk, undermining sustainable development and impacting people and society as well as business. The unbalanced distribution of income, wealth and wellbeing have resulted in socio-economic gaps and uneven access to opportunities to thrive, weakening the capacity of communities and companies to address critical challenges. Recent developments and disruptions such as conflict, the global pandemic and new technologies have widened the gaps, with a cost-of-living crisis impacting the most vulnerable and affecting jobs, incomes and prices – yet the topic of

inequality is still not high enough on the agenda. According to the World Inequality Report 2022⁴, the richest 10% of the world's people own three-quarters of all global wealth, while the poorest half of the global population owns 2% - yet the world economy has grown exponentially. The global business community has a key role to play in creating shared value, working with public and private sector stakeholders to catalyse inclusive and sustainable growth where income and wealth are more evenly distributed across the population and prosperity is shared by all.

[1] www.mckinsey.com/business-functions/sustainability/our-insights/the-net-zero-transition-in-the-wake-of-the-war-in-ukraine-a-detour-a-derailment-or-a-different-path

[2] www.weforum.org/reports/fostering-effective-energy-transition-2022

[3] From 1 January 2023 IMO regulation requires that all ships must calculate their attained Energy Efficiency Existing Ship Index (EEXI) to measure their energy efficiency and to initiate the collection of data for the reporting of their annual operational carbon intensity indicator (CII) and CII rating. www.imo.org/en/MediaCentre/PressBriefings/pages/CII-and-EEXI-entry-into-force.aspx

[4] wid.world/news-article/world-inequality-report-2022/

ONGOING SUPPLY CHAIN DISRUPTIONS

The supply chain disruptions initially triggered by the COVID-19 pandemic and extended lockdowns were further exacerbated by the outbreak of the Russia-Ukraine conflict in early 2022, deepening imbalances in supply and demand and impacting the global trade system in its post-pandemic recovery. This ushered in an additional layer of challenges for shipping and logistics, with difficult working conditions, trade lane closures and damaged or closed ports, as well as ongoing pandemic-related congestion contributing to delays. Among the steps taken to overcome disruptions were the use of alternative ports, extension of port terminals' operating hours, expansion of container fleets as well as the introduction of new routes.

In the second half of 2022 we were reminded of our sector's enabling role as critical shipments of grain and food stocks resumed following the signing of an agreement for a grain corridor by Russia and Ukraine. The extended period of disruptions and fluctuating freight rates has raised public awareness of the global network of trade, increasing political pressure to intervene and with potential ripple effects in supply chains. Although supply chain disruptions have become part of the new normal, most companies remain unprepared despite the series of recent shocks⁵. A resilient global trade system requires resilient supply networks that can withstand and overcome the disruptions of today, and those of the future.

[5] www.weforum.org/agenda/2022/05/leaders-supply-chains-davos-2022/

[6] www.ics-shipping.org/news-item/russia-and-ukraine-sign-agreement-for-grain-shipping-corridor/

CHALLENGES IN THE WORLD OF WORK

In recent years we have witnessed an evolution in the concept of work, with today's global workforce demonstrating marked changes in outlook, attitudes and expectations. Workers seek meaning in what they do and demand that their employers be purpose-driven, while proactively supporting their people. To compete in the drive for top talent companies are responding and investing to create a more attractive workplace, offering working conditions and opportunities that prioritise diversity, equity and inclusion.

The global labour market has been impacted by inequality, a growing skills gap and changing demographics. Business has a key role to play in creating jobs – including employment, training and skills for an equitable and just energy transition – that in turn create benefits and opportunities in terms of wealth, skills development and wellbeing.

2022 saw new and evolving regulations related to

employment and labour being discussed at the global and national levels, including a series of amendments to the International Labour Organization's Maritime Labour Convention 2006, as amended (MLC, 2006) drawing on lessons from the pandemic to ensure the health, safety and wellbeing of seafarers.

The conflict in Ukraine has impacted the global maritime workforce including an estimated 2,000 seafarers that were stuck on board ships in the region at the height of the crisis⁶, and the safety of seafarers, port and warehouse workers has remained a primary concern. Russian and Ukrainian seafarers – who together represent 14.5% of the global shipping workforce – have faced difficulties in joining vessels, repatriating or leaving their country due to military service-related restrictions, exacerbating the global shortage of seafarers.



ENGAGING WITH STAKEHOLDERS TO DRIVE PROGRESS

At MSC, we adopt a collaborative approach to sustainability and see our customers, colleagues, suppliers, regulators, governments and civil society as key partners along our journey. Companies like ours play an important role in helping to create the systemic change needed to face global challenges as we navigate this period of transition. The relationships we have built with our stakeholders over more than five decades have been instrumental in advancing the **United Nations Sustainable Development Goals (SDGs)**, and they continue to be critical for the delivery of our sustainability roadmap. We are in constant dialogue with our growing community of stakeholders to become familiar with their perspectives, priorities and expectations, as well as to understand their interpretation of and response to the evolving landscape.

Our engagement, reporting and decision-making are guided by a materiality assessment informed by an open dialogue with key stakeholders, based on the principles of transparency, inclusiveness, consistency and accountability. In 2022 we intensified our engagement activities, capturing additional insights that identified topics of mutual concern and areas where we can make a collective positive impact. Complementing this engagement, we take into consideration upcoming regulatory and societal developments, lessons from other sectors and forthcoming research – which combined ensure that our defined sustainability roadmap remains relevant today and in the future. In 2022, to gain a deeper understanding of our stakeholders' expectations we conducted an analysis of the ESG ratings and benchmarks landscape, identifying those of specific

relevance for MSC customers while ensuring they continue to align with our sustainability priorities. The criteria used by the selected ratings will serve as a proxy for further

mapping our stakeholder expectations, as well as providing complementary guidance as we continue to expand our perimeter of disclosure on targets and performance.

PARTNERING WITH CUSTOMERS TO BUILD TRACEABLE AND SUSTAINABLE SUPPLY CHAINS

As a result of our longstanding partnership with the supply chain solutions company Czarnikow (CZ), we joined their **VIVE Sustainable Supply Programme**⁷ – a continuous improvement initiative aimed at creating value and addressing the entire agricultural ingredient value chain, from field to end-user – to support the development of its Container Shipping Module, accounting for sustainability risks associated with container vessels for transporting essential ingredients. Consisting of modules focused on chain of custody, farm, facility and shipping, the programme offers traceability and differentiation across operations and activities, contributing to the sustainability of supplied ingredients.

[7] www.viveprogramme.com



INTERCONNECTING AND INTEGRATING MATERIAL TOPICS

MSC's sustainability approach is both dynamic and forward-looking in nature, based on an assessment of the sustainability issues of relevance to MSC's business that considers our impacts on the world as well as how we are impacted. Our sustainability roadmap is continually adapting to reflect the evolving landscape and the identified material topics that are shaping our world today as well as those with implications for tomorrow, ensuring business resilience to anticipate, withstand and overcome disruptions.

In 2022 MSC applied the principle of double materiality for the first time (see materiality model on page below), guided by the **Ten Principles of the UN Global Compact** and the **UN Guiding Principles on Business and Human Rights** and taking into consideration the business specifics and geographical differences across our Cargo Division. As part of this process, we identified those material topics where we have a clear responsibility to both address and mitigate our potential adverse impacts on society and on the environment, while also taking steps to increase our

positive impacts in parallel. Using the same approach, we evaluated those material topics that may create significant short- or long-term financial or strategic risks and opportunities to our business.

With our topics grouped into three categories – environmental challenges, social challenges and business resilience – our materiality assessment is aligned with MSC's enterprise risk management (ERM) framework, and is reviewed and validated by the Leadership Team

on an annual basis to ensure its ongoing relevance and informing strategic decision-making.

The 2022 materiality assessment process indicated that the topics previously identified and prioritised continue to be relevant in light of the external environment and our stakeholders' expectations. Over the past year we have deepened our understanding of how these material topics are increasingly interconnected, applying them to an MSC context for their integration across the entire Cargo Division.



ADDRESSING CHALLENGES THROUGH COLLECTIVE ACTION

Today's complex operating environment calls for collaboration and cooperation, requiring actors across and beyond our ecosystem to converge. The extended period of uncertainty and disruptions has reinforced our mutual dependence and highlighted the need for joint efforts to withstand and overcome the challenges the world faces. In 2022 MSC intensified cooperation with partners, further strengthening existing relationships and creating new alliances to innovate, find solutions and maximise

our collective value. We work with private and public stakeholders, industry associations, fuel-specific partnerships, governments, non-governmental organisations and others to address our material topics and deliver our sustainability roadmap, in line with **SDG 17: Partnership for the Goals**. In addition to pooling complementary knowledge, technical expertise and resources as well as sharing risk, we see our collaborative relationships as an opportunity to align interests around a common vision.

In assessing potential partnerships and engaging in multi-stakeholder platforms, we consider the extent to which the collaboration promotes sustainable development through coalescing interests, resources and collective learning, leading to concrete action. We use our partnerships to help us prepare for and adapt to an evolving and maturing sustainability landscape, driving action internally as well as encouraging change among our industry peers, across value chains and throughout our wider spheres of influence.

We continue to actively participate in cross-sectoral decarbonisation forums, uniting with our industry peers and engaging with regulators and civil society at key international meetings. We are also collaborating with our customers through a range of initiatives to decarbonise supply chains, enable trade and build resilience, protect oceans and biodiversity and promote the business and human rights agenda, among other topics.



European Clean Hydrogen Alliance

European Sustainable Shipping Forum

Sustainable Biomethane Alliance

Silk Alliance

The Conference Board: Corporate Responsibility & Sustainability Council

World Economic Forum Supply Chain and Transport Industries Community

DELIVERING OUR SUSTAINABILITY ROADMAP

MSC's commitment to advancing the global agenda for sustainable development is rooted across all areas of our business and supports all **UN Sustainable Development Goals**, with the aim of making a transformative impact on thirteen SDGs. We actively promote the **Ten Principles of the UN Global Compact** and the progressive implementation of the **United Nations Guiding Principles on Business and Human Rights** throughout all entities and functions to ensure alignment with our roadmap, while taking into account the specifics of our end-to-end logistics business as well as applicable regulatory frameworks.

Reflecting our **Purpose**, our **Sustainability Roadmap** is MSC's sustainability strategy, establishing our **Fundamentals** and sets out our three **Sustainability Priorities** to ensure all material topics are incorporated and that sustainability is embedded across MSC's entire Cargo Division. The roadmap is supported by a comprehensive and time-bound **Sustainability Plan** – setting out clear milestones for the short-, medium- and long-term – for which entities and functions collaborate on the execution and implementation of projects under each sustainability priority as well as our fundamentals.

Despite a challenging external environment impacting directly on our operations, we continued advancing on our sustainability plan. Experts across the Cargo Division convened regularly to monitor progress of projects against targets and commitments, making adjustments and including improvement actions in response to the evolving landscape to ensure they continue to deliver our strategy and address our sustainability priorities. In parallel, in 2022 we launched an assessment of the sustainability ambitions and strategies of businesses acquired during the year, to define next steps to align and integrate them into

MSC Cargo Division's sustainability roadmap and plan. As a fast-growing global company in shipping and logistics, we understand we have a responsibility to take leadership and act with urgency to build resilient, inclusive and sustainable supply and value chains. We are committed to advancing our industry's decarbonisation journey; catalysing economic growth by supporting local players in their engagement in global trade activities; while ensuring the respect of human rights across the whole value chain and these remain central to our sustainability approach and decision-making at all levels.



OUR GOVERNANCE FRAMEWORK

Aligning our core values and corporate culture with our long-term business strategy, MSC's purpose – the first in our industry – reflects how our business delivers value to all our stakeholders, making a positive and unique impact to advance the sustainable development agenda. To bring our purpose to life, we have built a robust sustainability governance structure with strong commitment from our company leadership.

Our governing body – the **MSC Cargo Division Executive Sustainability Steering Committee** – serves as the highest sustainability decision-making authority. Led by the MSC Group President and MSC Chief Executive Officer and composed of senior executives representing key entities and business functions across the Cargo Division, the Steering Committee reflects our leadership's commitment to supporting a strong culture of sustainability.

In 2022, this governance structure facilitated cross-functional collaboration and alignment across the company, expanding engagement with experts on strategic topics, actions and projects to advance our sustainability strategy. During the reporting year the Steering Committee convened on two occasions to review progress on the sustainability plan, build on achievements and consider any adjustments or improvement actions to continue moving forward.

Integral to the implementation of our sustainability plan are **Priority Teams**, composed of subject matter experts with a diverse range of skills and competencies and representing entities and business functions across the Cargo Division. Guided by a **Priority Lead** – also a member of the Steering Committee – Teams work in an open and highly collaborative manner, meeting regularly and promoting cross-functional dialogue and division-wide cooperation as well as with key external stakeholders and partners. In 2022 all three Priority Teams focused on implementing and monitoring progress on the Plan, including proposing new critical initiatives; enhancing the integration of sustainable development topics into relevant procedures, processes and management systems to ensure these comply with evolving requirements; as well as strengthening engagement with our colleagues at country and local level to support their active participation.

Topics related to our Fundamentals – such as business ethics, occupational health and safety and compliance with applicable regulatory frameworks – continue to be addressed through a central governance structure in charge of defining specific programmes and initiatives to be implemented at global level.

The **Sustainability Team** acts as an enabler to support the embedding of sustainability into the Cargo Division's day-to-day operations, coordinating and overseeing the implementation of the sustainability plan. Connecting internal experts with external stakeholders, the Team is also responsible for monitoring developments related to the global sustainable development agenda, keeping the Steering Committee updated on emerging sustainability risks and opportunities and engaging with colleagues to ensure these are taken into consideration in our sustainability activities.

As our company grows, we will progressively incorporate the sustainability activities of the new entities we created and acquired throughout 2022 in MSC Cargo Division's scope of work. By adopting an inclusive approach that respects business specifics, we intend to capitalise on the opportunities and build on achievements to date to maximise impacts across key geographies.





EMBEDDING INTEGRITY ACROSS OUR BUSINESS

The **MSC Code of Business Conduct** sets out the common standards, behaviours and policies that guide how we operate worldwide. We all have a responsibility to follow our Code of Business Conduct and raise concerns about potential misconduct. Building on our efforts of the preceding years, in 2022 we continued cultivating a culture of compliance and conducted 37 training sessions on our Code of Business Conduct worldwide. A network of 166 local Compliance Champions plays a critical role in monitoring compliance in accordance with local requirements, and we remain focused on our goal of creating an open and accountable working environment where everyone feels safe and supported to speak up. This was reinforced during our 2022 campaign

encouraging all employees to report any violation of our Code of Business Conduct or misconduct via the **MSC Speak-Up Line**.

MSC pledges to ensure effective protection of privacy and data protection rights when processing personal data from its customers and vendors, as well as its employees. They can easily exercise, among others, their access rights and/or rights to be forgotten at any time. MSC has implemented strong rules and requires that all its employees follow several e-learning modules specially designed to fit their daily job activities. In 2022, 8,842 employees completed data protection e-learning modules. This protection is further reinforced with robust and binding contractual stipulations, wherever the data is located and to whom it is transferred.

related to MSC's global operations including human rights. MSC is exposed to a range of physical risks due to much of our infrastructure and operations being located in areas that are susceptible to extreme weather events, such as floods, droughts and hurricanes as well as in conflict-affected regions. We expect these risks will grow in the coming years and decades, with direct and indirect implications for our business: liveability and workability, food systems, physical assets, infrastructure services and natural capital.

In the course of 2022 we were reminded once again of how low-likelihood events and sustainable development topics can evolve and emerge with potentially high direct impacts on our activities. For this reason we have fully

integrated these topics in our sustainability roadmap with the corresponding mitigation actions, to anticipate and respond to new challenges to shipping, inland logistics and terminal operations.

The current complex and fast-evolving socio-economic and geopolitical context is transforming the way we manage risks, shaping our approach to measuring progress across the value chain management system and advancing other sustainability-related priorities. As part of our risk identification process and to address today's complex, uncertain and volatile external environment, we recognise the need for enhanced cross-sectoral collaboration and concerted action and are evaluating the potential expansion of our external stakeholder engagement and partnerships.

MANAGING EMERGING AND EVOLVING SUSTAINABILITY RISKS

MSC's management of sustainability-related risks emphasises consistency through a structured and holistic approach to address material issues in the short- and medium-term, while maintaining a long-term view. In particular, our material topics are taken into consideration as part of an annual review, informing the identification, assessment as well as the prioritisation and mitigation of risks.

When assessing our risk landscape, MSC considers

sustainability-related risks at both the collective and individual levels to understand their likelihood and potential impact. All key risks identified in 2021 continued to be relevant in 2022, two risks are climate change-related and include progress on our decarbonisation targets, as well as the mitigation of physical risks to which our people and operations are exposed including costs related to disruptions and damages. Other risks concern the social impacts of our business, addressing social and economic factors

OUR APPROACH ←

Using our **ERM framework**, we undertake a cross-functional process to identify risks of relevance to the company's longer-term value in the context of our evolving landscape and with potential impact on our business strategy and global operations.

The **Risk Management Team** conducts interviews with the main executives, with the findings consolidated and forming the basis for a comprehensive risk landscape that is presented to the Leadership Team who makes the final decision and sets out the key risks for the company.

Once finalised, each key risk is addressed as per the leadership's prioritisation by providing the adequate levels of control and mitigation action plans. Risk mitigation progress and developments for each key risk are monitored and reported throughout the year.

NAVIGATING A DYNAMIC REGULATORY LANDSCAPE

MSC is fully committed to ensuring our global activities and operations are in line with applicable sanctions regulations, and compliance with Swiss and European Union sanctions regulations remain at the core of MSC's business model. In 2022 MSC instigated a thorough review of our sanctions compliance programme to ensure ongoing alignment with sanctions regulations applicable to our business. During the reporting year we closely monitored the situation in Ukraine and the escalation of the conflict significantly impacted our business, requiring specific actions to ensure compliance with new and fast evolving sanctions restrictions enacted by governments and international organisations. On 1 March we instructed to halt all cargo bookings to/ from Russia, covering all access areas including Baltics, Black Sea and Far East Russia – with the exception of essential goods such as food, medical equipment and humanitarian supplies. This reflects our company's focus on acting responsibly to support affected communities despite operational challenges and uncertainties in a rapidly evolving crisis.

The fight against corruption is at the heart of MSC's compliance efforts, which includes an internal policy dedicated to anti-bribery. MSC's anti-corruption programme includes trainings and e-learning focusing on anti-bribery that in 2022 were completed by 7,212 employees. Engaging with external partners is key to driving change and addressing issues relating to anti-bribery and corruption, and we work with both **Trace International** and the **Maritime Anti-Corruption Network (MACN)** on these topics. We are engaging with over 180 companies through the MACN – spanning Flag State registries, port agents, shipping companies, cargo owners and ship management companies – with whom we collaborate on raising awareness and promoting public-private actions to tackle the root causes of corruption. Throughout 2022, MSC further engaged with MACN and supported actions against corruption in India and Egypt. In recent years we have seen an increase in criminal activity related to the illicit trafficking of drugs and counterfeit goods, the wildlife trade and human trafficking, with oceans and

waterways becoming important highways for illicit and illegal trade. This is an industrywide issue affecting all modes of transport, from ships to trucks, trains and planes. Like others in our industry, we remain firmly opposed to this illegal trade and actively takes steps to counter the criminals' new techniques. MSC has significantly intensified its own security efforts over the past three years, investing in excess of USD 50 million in 2022, and will continue to do so to prevent illicit trade. MSC is today recognised amongst the leading companies for anti-smuggling efforts in our industry. In fact, there are now more than 50 different ways in which MSC seeks to detect potential illicit activity across major trade lanes, including state-of-the-art and proprietary technology based on artificial intelligence, in close cooperation with law enforcement bodies. We continue to collaborate and support authorities to address criminal activity through initiatives such as the US C-TPAT (Customs Trade Partnership Against Terrorism). While in 2022 maritime piracy and armed robbery attacks

reached their lowest recorded level in almost three decades⁸, they remain a risk to MSC's operations in certain areas, especially off West Africa, in straits around Southeast Asia and off Somalia and in the Gulf of Aden. To protect our seafarers, cargo and ships, MSC applies the industry best practices as set out in the **Best Management Practices to Deter Piracy and Enhance Maritime Security** in the Red Sea, Gulf of Aden, Indian Ocean and Arabian Sea; as well as off the Coast of West Africa including the Gulf of Guinea, deploying armed guards onboard our ship in High Risk Areas (HRAs). MSC procedures and measures are designed to detect, avoid and deter attacks against its ships. No incidents were reported in 2022, demonstrating the effectiveness of these procedures and measures. MSC engages with international navies and coastguards, security organizations and industry bodies on all matters of maritime security, including on efforts to suppress and eradicate piracy and armed robbery against ships and promote capacity-building ashore.

[8] www.icc-ccs.org/piracy-reporting-centre





MSC TRIESTE



ENABLING
**LOGISTICS
DECARBONISATION**



STEPPING UP TO THE CLIMATE CHALLENGE

Our changing climate and fast evolving weather patterns are threatening marine and land ecosystems, causing significant damage compounded by disruptions to the lives and livelihoods of entire communities. According to the World Meteorological Organization⁹ the past eight years are on track to be the warmest on record, with unprecedented heatwaves, drought, wildfires and flooding affecting millions and costing billions, with the rate of sea level rise doubling since 1993. Between 1970 and 2019, reported economic losses from weather, climate and water related hazards mounted to USD 3.6 trillion¹⁰. At MSC we recognise climate change as a material topic posing a high level of risk to our business, with

potential impacts on our logistics assets, infrastructure and operations. Extreme weather caused the loss of almost half of all cargo vessels in 2021¹¹, while extreme temperatures pose serious challenges for railway infrastructure causing tracks to buckle, expand or misalign as well as damaging overhead power lines¹² resulting in shorter lifespan and increased maintenance and operational costs. Surges in sea levels of a magnitude currently expected to occur once a century may occur as frequently as once every ten years in many South American, African, Gulf, SE Asian and Pacific ports as soon as the 2030s¹³. As MSC progressively decarbonises its logistics activities at sea and on land, we seek to accelerate the transition

to net zero emissions through the development and deployment of solutions across the different segments of our business. Recognising that mitigation actions will not reverse climate change, we are equally focused on adaptation and building a resilient global value chain that can anticipate and withstand disruptions as well as ensure our customers' business continuity. We are committed to collaborating with communities and regions exposed to natural hazards. For instance, in India we work with the national and regional authorities and contribute logistics and supply chain expertise to contingency planning processes in preparation for the monsoon season. As a key part of our customers' supply chains, we see

ourselves as partners in decarbonisation and enablers of their increasingly ambitious climate targets. We have a critical role to play in deploying the assets, fuels and technologies that reduce the amount of carbon emitted by the logistics services transporting our customer's cargo – while simultaneously reducing our own carbon footprint. MSC has been engaging in an unprecedented renewal of its assets including ensuring readiness for new fuels and technologies. New more carbon-efficient vessels, inland vehicles and onshore equipment are being progressively phased in, while existing assets are being retrofitted with energy-saving technologies, systems and fuels. By adopting an end-to-end perspective we are also developing enhanced

[9] public.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate
 [10] public.wmo.int/en/resources/library/wmo-atlas-of-mortality-and-economic-losses-from-weather-climate-and-water-extremes
 [11] www.agcs.allianz.com/news-and-insights/reports/shipping-safety.html

[12] www.sciencedirect.com/science/article/pii/S2772411522000052
 [13] unctad.org/news/climate-change-impacts-seaports-growing-threat-sustainable-trade-and-development



AIMING FOR **CARBON NEUTRALITY**
 SUPPORTING **LOGISTICS TRANSITION SOLUTIONS**
 MAINTAINING **A FOCUS ON ENERGY EFFICIENCY**

intermodal solutions to promote a shift from road to rail and last-mile optimisation. In parallel, partnerships are built with technology providers and energy suppliers with the aim of addressing the obstacles preventing at-scale deployment of the propulsion modes of the future.

As our industry transitions to different energy sources, we are seeing a complex and interconnected set of social impacts emerge. Decarbonising logistics will have a direct impact on the creation of markets and opportunities, the evolution of local industries and supply chains, as well as the need for new jobs and skills. For example, previously untapped areas may be developed into sustainable industrial districts, while green power required for hydrogen production will rely on the development of photovoltaic panels and wind turbines in remote areas connected by logistics infrastructure.

In 2022 we continued to work on reducing the carbon footprint of our ocean operations, which generate the majority of our emissions. Besides ramping up our fleet through newbuilding and retrofits, we are also advocating for policy frameworks to incentivise their production and

adoption. We anticipate the evolving regulatory landscape will ultimately lead to a more level playing field, with the introduction of carbon pricing likely to increase the attractiveness of alternative fuels and accelerate our industry's decarbonisation.

Inland logistics are a vital part of decarbonising global supply chains. 2022 saw the ongoing expansion of our inland network and operations, prioritising solutions that leverage intermodality as well as shifting from road to rail wherever possible. Creating synergies across the logistics ecosystem is integral to our approach as this offers opportunities to further improve our energy efficiency and reduce emissions. Disruptions in the first half of 2022 shone a light on the role of ports in global supply chains, particularly at times of crisis. In addition to serving as gateways between inland and maritime logistics, ports are important hubs and can lessen the impacts of congestion. We intensified efforts to improve the operational efficiency of our terminal operations throughout the year 2022, ensuring the readiness of equipment according to the vessel class and number of moves required to minimise vessel time at port.

JOINING FORCES TO DECARBONISE

The 27th UN Climate Change Conference of the Parties (COP 27) held in November 2022 in Sharm el-Sheikh was an opportunity to demonstrate leadership and further accelerate the momentum to decarbonise. The need to align shipping with other sectors was recognised by leaders attending COP 27 as key to moving towards a carbon-free world, ensuring resilient and prosperous societies. Since the adoption of the Clydebank Declaration at COP 26 by 24 governments, 20 green corridors – specific shipping routes where the technological, economic and regulatory feasibility of the operation of zero-emission ships is catalysed by a combination of public and private actions¹⁸ – have been announced, including the **Silk Alliance** in which MSC is participating. COP 27 also saw increased attention given to the role of seafarers in decarbonising shipping, including the launch of a position paper by the **Maritime Just Transition Task Force** to which MSC contributed on the importance of a just and equitable energy transition for our people at sea (more on just transition on page 112). The inland logistics sector was also recognised at COP 27 for its enabling role

in multi-modal transport systems and contribution to the global logistics network and infrastructure.

Through our active participation in various trade associations, we continued to advocate for the establishment of an International Maritime Sustainability Funding and Reward (IMSF&R) mechanism by the **International Maritime Organization (IMO)**, combined with a flat rate contribution system, as an economic measure to reduce GHG emissions from international shipping as well as a net zero target for 2050 to accelerate shipping's decarbonisation.

At **Marine Environment Protection Committee** meetings during 2022 IMO Member States discussed the forthcoming revision of the IMO initial strategy on the reduction of greenhouse gas emissions from ships, as well as the ongoing preparation of fuel lifecycle guidelines and the development of a basket of policy measures.

At the regional level we are preparing for the entry into force of new regulation on maritime and road transport, the **European Union's (EU) 'Fit for 55'** package of proposals aiming to reduce the EU's total emissions by 55% by

[18] Green Corridors: Definitions and Approaches www.globalmaritimeforum.org/content/2022/08/Discussion-paper_Green-Corridors-Definitions-and-Approaches.pdf



EXTERNAL FACTORS IMPACTING OUR INDUSTRY'S ENERGY TRANSITION

GLOBAL POPULATION GROWTH

- World population growing and expected to reach 9.7 billion by 2050¹⁴

RECORD CARGO VOLUMES AND GROWING DEMAND FOR GLOBAL FREIGHT

- 12 billion tons of cargo was shipped in 2022¹⁵ (4 times more than in 1980)
- Maritime trade volumes are set to triple by 2050 vs 2021¹⁶

GLOBAL ENERGY CRISIS TRIGGERING A SWITCH TO OTHER ENERGY SOURCES

in the short term, potentially resulting in higher emissions for all industries¹⁷

HISTORIC SUPPLY CHAIN DISRUPTIONS DUE TO GLOBAL EVENTS

have resulted in increased emissions

ACCESS TO GLOBAL TRADE SYSTEM

directly impacting on growing inequality



CHALLENGES

- Energy efficiency measures make incremental improvements, but are not game-changers
- Limited availability, scalability and outstanding issues (toxicity, hazard risk, low fuel density) related to low- and zero-carbon fuels
- Lack of alternative fuel supply networks and infrastructure at port level and inland
- Scale and urgency of required newbuildings, retrofitting of assets and port infrastructure to shift to zero-carbon fuels
- Rapidly evolving climate regulation and international standards

OPPORTUNITIES

- Scaling-up of investments in energy efficient assets and infrastructure
- Boosting the uptake of low-carbon transition fuels at sea and inland
- Enhancing the uptake of renewable energies at global level
- Pilots and trials of innovative and scalable solutions across the value chain
- Optimisation of network performance and shift to low-carbon modes of transport
- Upskilling and reskilling of the workforce
- Strategic partnerships and synergies on R&D across and beyond the industry
- Public-private sector collaboration to accelerate the transition

[14] population.un.org/wpp/

[15] www.ics-shipping.org/shipping-fact/shipping-and-world-trade-driving-prosperity/

[16] www.oecd.org/ocean/topics/ocean-shipping/

[17] unctad.org/rmt2022

2030 towards full decarbonisation by 2050¹⁹, including the introduction of the FuelEU Maritime Regulation. The expansion of the EU Emissions Trading System (ETS) to include shipping will have a tangible impact on our industry, including higher operating costs related to the need for purchasing EU Allowances for each ton of CO2 emitted. While regional in scope, this regulation is expected to have global impacts, with the higher costs passed on to the end consumer. EU regulation will also have implications for our terminal operations as it promotes greater usage of shore power as well as bunkering of low- and zero-carbon fuels at ports, while new CO2 emissions performance standards and regulation on road transport are expected to affect our inland logistics.

In September 2022 we attended the first **Global Clean Energy Action Forum** alongside representatives from 34 countries and the clean energy community, participating in ministerial roundtables on key topics related to decarbonisation and the energy transition.

The scale and complexity of the climate challenge calls for action in collaboration with others across and beyond our

industry. While MSC is a major global player, we cannot address this challenge alone, and we believe in leveraging our partnerships and working with our business partners to innovate and scale up sustainable solutions. In 2022 we continued our active engagement in key industry associations and the decarbonisation agenda, including the **International Chamber of Shipping, BIMCO** and the **World Shipping Council**. We also participated in multi-stakeholder initiatives, collaborating with customers, governments and businesses within the maritime, energy, infrastructure and finance sectors such as the **IMO's Global Industry Alliance to Support Low Carbon Shipping** (Low Carbon GIA), **Clean Cargo** and the **Getting to Zero Coalition** to decarbonise shipping.

MSC is the current chair of the IMO's Low Carbon GIA, and we have been actively engaged in a number of initiatives, including key publications such as the 'Practical Guide to the Selection of Energy Efficient Technologies for Ships' as well as the training programme 'An Introduction to Energy Efficient Ship Operations' that to date has been completed by more than 6,000 participants.

In 2022 we intensified our engagement with the **Smart Freight Centre (SFC)**, contributing feedback on emissions reporting and 'Book and Claim' chain of custody framework, participating in training and sharing best practice as well as collaborating with shippers and carriers through SFC's global network on decarbonising logistics. We welcome the expansion in 2023 of SFC initiatives both within maritime shipping through Clean Cargo as well as beyond, including the **Global Logistics Emissions Council (GLEC)** focusing on inland decarbonisation as well as the upcoming air freight decarbonisation programme.

As a member of the Getting to Zero Coalition we continue to collaborate with our peers – representing shipping, cargo, energy, finance, ports and infrastructure – towards our collective ambition of getting zero emission vessels into operation by 2030, despite an uncertain and evolving policy landscape. As a member of the Silk Alliance, a cross-supply chain corridor initiative established by Lloyds Register Maritime Decarbonisation Hub, MSC is contributing to the development of a fleet fuel transition strategy to enable the establishment of a highly scalable green corridor cluster.

The Silk Alliance has evolved into a programme to develop a green corridor roadmap based on a decarbonisation plan for a fleet that predominantly operates and refuels in Singapore including different vessel types trading across multiple ports from Pacific Islands, South East Asia, North Asia to East Africa.²⁰ We continue to advocate for more green shipping corridors and expanding industry engagement with other actors such as fuel providers, port operators and governments.

MSC is also supporting the development of green and digital shipping corridors in partnership with the Port of Rotterdam, the Port Authority of Singapore and the **Digital Container Shipping Association (DCSA)**, combining decarbonisation and digitalisation to create seamless trade lanes between the two ports thanks to the availability of data and standards to enable just-in-time (JIT) arrival and ship-berth compatibility, efficient port clearance/call and flow of goods and electronic bills of lading (eBL). MSC's ongoing digitalisation process saw the progressive shift from traditional data centres to more efficient cloud-based computing resulting in 10,666 mtCO2e savings in 2022.

[19] www.consilium.europa.eu/en/policies/green-deal/

[20] www.lr.org/en/resources/silk-alliance-experience-initial-lessons-from-green-shipping-corridor-cluster/

INVESTING AND INNOVATING WITH OUR PARTNERS

MSC continued investing in research, trials and pilots through partnerships to explore a wide range of low- and zero-carbon fuels, including various types of second-generation biofuels, energy conversion and efficiency technologies, as well as advancing work on a multifuel flexible concept vessel. Securing access to zero-carbon fuels capable of meeting future demand is of critical importance to our industry, driving our collaboration with partners across and beyond shipping and logistics. Following the signing of a Memo of Understanding towards the mutual goal of decarbonising shipping, Shell and MSC continued our collaboration to identify abatement opportunities, including the use of alternative fuels and related technology to reduce emissions from existing transportation assets as well as sharing common approaches toward the development of a future design concept vessel.

MSC also actively engages with targeted bodies aimed at accelerating innovation as well as the adoption and scaling up of marine fuels, such as the **Methanol Institute** focusing on methanol as one of the long-term fuel solutions available, the **Hydrogen Council** and the **European Clean Hydrogen Alliance**, both dedicated to support the large-scale deployment of clean hydrogen technologies.

Having joined the **Roundtable on Sustainable Biomaterials (RSB)** in 2021 we have been following the recent pilot of a 'Book and Claim' chain of custody model using biofuel for the aviation sector, to apply learning for MSC's own carbon insetting programme (see box on page 47) as well as contribute to pilots in the shipping sector and collaborate on the further development of the RSB Book and Claim System in 2023.

MSC is a member of the **Society for Gas as a Marine Fuel** and the **Sustainable Biomethane Alliance**. As a founding member of the **Methane Abatement in Maritime Innovation Initiative** MSC is collaborating with others to conduct a study to monitor, measure and help abate methane emissions in the maritime supply chain.

Further to initial exploratory discussions in 2020, MSC entered into a partnership with fuel supplier Quadrise in 2022 whereby MSC vessels will be used for proof of concept tests and operational trials using oil-in-water emulsion fuels bioMSAR™ and MSAR® – producing 25% less NOx and lower CO2 emissions – for potential adoption.

Through MSC's Memorandum of Understanding with the **China Waterborne Transport Research Institute**, an

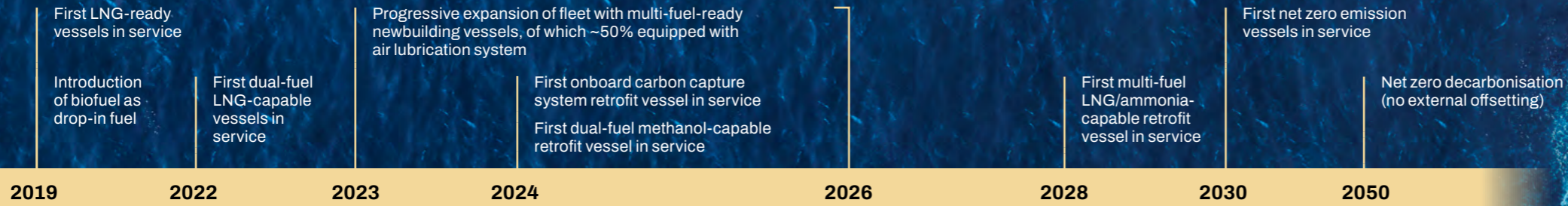
agency under China's Ministry of Transport, we continue to explore innovative ways to jointly cooperate on technical research and development, knowledge-sharing and activities to accelerate innovation.

In 2022 we participated in the cross-industry study 'Future Fuels Risk Assessment', joining with eight industry partners of **Together in Safety** coalition to evaluate potential operational risks of future fuels. The study concluded that as our industry migrates through the energy transition, there will be inherent risks requiring mitigation.

As a member of the **Global Industry Peer Learning Group of the Maritime Just Transition Task Force**, MSC contributed to a study on equipping our global workforce with the specific skills, education, training and familiarisation needed to operate new technology systems and manage new fuels (see box on page 112).



OUR DECARBONISATION PATHWAY



JOURNEY TO NET ZERO

- Incorporation of fleet performance, network and route optimisation solutions
- Retrofits aimed to improve energy efficiency across the fleet
- Partnerships for R&D, pilots and trials, policy frameworks to advance decarbonisation
- Training of our global workforce on new technology and future fuels

CHARTING A COURSE FOR NET-ZERO SHIPPING

The mounting climate crisis calls for heightened ambitions and a swifter path towards a net zero maritime industry. MSC aims to go beyond the current levels of ambition^[21] set forth by IMO and we are working to accelerate the energy transition towards the target of achieving net zero decarbonisation by 2050, without relying on external carbon offsetting. MSC envisages a long-term future that will see shipping draw on a combination of net zero-carbon fuels. While recognising the uncertainty around their availability – due to a wide range of factors, some of which are beyond our control – we expect net zero-carbon fuels will become increasingly available from 2030 onwards following which our industry will see a sharp acceleration in deep emissions reductions. Our focus is on ensuring the readiness of our fleet to adopt zero-carbon fuels as they become available, and our decarbonisation pathway is under continuous review and revised periodically as necessary. Decarbonising logistics value chains will require massive investments in research and development on future zero-carbon energy sources that are currently not available at scale today, largely due to a lack of green hydrogen production capacity. MSC is actively exploring potential partnerships with technology licensors and developers of green hydrogen-based marine fuels, including generation of renewable electricity from solar and wind energy and

hydrogen electrolysis, as well as the subsequent possible production of synthetic fuels such as synthetic methane, green methanol and green ammonia. Second-generation biogenic feedstocks will constitute a net-zero drop-in component in the fuels of the energy transition phase. MSC believes **bio and synthetic Liquefied Natural Gas (LNG)**, **synthetic** and **bio-methanol** and **green ammonia** may become fuel choices for larger ocean-going vessels. We see fossil-based LNG being progressively replaced by LNG produced from biomass and renewable electricity and anticipate that in the early to mid 2030s there will be sufficient availability of bio- and synthetic LNG to meet half of the demands of our industry, increasing to 100% availability by early to mid 2040s. In parallel we are actively partnering with energy providers to develop future supply chains for bio-methanol despite challenges regarding the availability of production plants and facilities at the port level. **Green hydrogen** as a drop-in fuel may be used for a number of smaller vessels with shorter refuelling cycles in addition to being a critical feedstock for synthetic fuels. **Batteries** and **hydrogen fuel cells** may also be deployed for short-sea shipping and to supplement existing power storage and generation. Like many in our industry, we continue to monitor the development of a range of other alternative future propulsion options such as molten salt

reactors that may hold some promise both for shipboard application or as an electricity source for e-fuel production. While there remain regulatory gaps at the IMO level governing the measurement of the carbon intensity for the above fuels, upcoming IMO MEPC meetings are expected to address this by recognising well-to-wake (WTW) emission factors for non-conventional fuels. In addition to the safety and technical issues that need to be addressed, zero-carbon fuels also have implications for the design of the ships they will power in the future. The lower energy density of most future fuels such as methanol, LNG, and ammonia imply greater onboard (and onshore) tankage – thereby leaving less space for containers and consequently decreasing the energy efficiency per unit of shipped cargo. As a shipowner with assets of a lifespan of 25-30 years, MSC seeks to manage uncertainty in the current and future fuel landscape while minimising the risk of stranded assets. Our approach aims to maintain a vessel's lifetime competitiveness, ensuring flexibility in our vessels so they are able to accommodate future fuel and technology options. Our newbuildings are considered 'fuel-ready', referring to an additional class notation^[22] that indicates that while they can burn conventional or transition fuel options today, the vessels may be prepared for a later conversion to ensure a

smooth transition to zero-carbon alternative fuel options. Once retrofitted to accommodate the zero-carbon fuel, the vessel is considered 'fuel-capable'. In the nearer term, MSC has been pursuing the design, development and piloting of multiple fuel-ready and fuel-capable vessels in preparation for future fuels as they become available at scale. MSC has also been investing in a range of technologies and engaging with partners such as shipbuilders and technology providers on retrofitting projects for existing vessels – including the development and trial of onboard carbon capture and storage systems, with the first onboard carbon capture system retrofit vessel in service in 2024 – as well as cooperation to design the ships of the future. Despite their high cost of carbon abatement, Direct Air Carbon capture (DAC) and on-board Carbon Capture and Storage (CCS) have great potential to reduce emissions. MSC continues engaging with leading technology providers on carbon capture projects, evaluating their feasibility for either future newbuildings or retrofits depending on vessel trade, design and shore-based development for collection of the captured carbon. The captured carbon may also provide a reliable source of feedstock for e-fuels such as e-methane and e-methanol, among others – contributing to accelerate the reduction of our industry's emissions.

[21] The IMO initial strategy on the reduction of GHG emissions from ships (2018) set out a target of reducing the total annual GHG emissions by at least 50% by 2050 compared to 2008, while, at the same time, pursuing efforts towards phasing them out entirely by the end of the century. www.imo.org/en/MediaCentre/HotTopics/Pages/Reducing-greenhouse-gas-emissions-from-ships.aspx

[22] Classification societies may use different terminology, for example www.dnv.com/rules-standards/index.html

At MSC we are committed to achieving our net zero by 2050, and seek to adopt near- and long-term targets that are rooted in science and aligned with the Paris Agreement to ensure that global warming does not exceed 1.5°C above pre-industrial levels. Since 2021 we have followed the development of the **'Science Based Target Setting Guidance for the Maritime Transport Sector'**²³ that was published in December 2022, and we are currently

[23] sciencebasedtargets.org/sectors/maritime-sector

evaluating emission reduction targets in line with the Science Based Target Initiative's internationally recognised Net Zero Standard²⁴.

The decarbonisation of shipping requires a long-term, holistic yet pragmatic approach taking into consideration the steps that can be taken today in addition to the actions that can be progressively implemented in the short, medium and longer terms.

[24] sciencebasedtargets.org/net-zero

DEPLOYING TRANSITION SOLUTIONS

As part of our decarbonisation pathway, MSC is pursuing transition solutions with the potential to accelerate the energy transition, including the adoption of low-carbon marine fuels. Currently, second-generation biofuels provide immediate emission reductions without requiring adjustments to be made to existing onboard propulsion technologies. Fossil-based LNG offers opportunities to transition to bio- and synthetic LNG as these fuels become available at scale, and we anticipate that our vessels will first use bio-LNG from 2024 and synthetic LNG in the late 2020s. Newbuildings as well as the retrofitting of existing vessels with flexible fuel burning capability are also key to the transition to sustainable energy sources.

In 2022 MSC saw its first five newbuilding dual-fuel LNG-capable vessels in operation. In the coming years MSC will be retrofitting one vessel to accommodate LNG and ammonia in addition to conventional fuel, as part of a series of trials conducted in collaboration with California's Air Quality Management District (AQMD) and a leading technology provider. This innovative multi-fuel conversion of two-stroke main engines comprises the retrofitting of an MSC vessel

with a multiple fuel flexible injection platform and gas supply system by 2025. In addition to an estimated 25% reduction in carbon emissions, the first phase of conversion to operate on LNG is also expected to ensure negligible methane slip and reduce NOx emissions by 70%.

We are also collaborating with the European Commission as part of the 'Horizon Europe' project focused on demonstrating two types of dual-fuel marine engines – four-stroke and two-stroke – operating on ammonia as a main fuel. With an anticipated completion in 2025, the project is expected to result in at least 80% less emissions (including nitrous oxide emissions), with NOx emissions below IMO Tier III regulations and a negligible ammonia slip below 10ppm. We will also retrofit eight existing vessels to accommodate methanol alongside conventional fuel, with the first conversion expected to be ready in 2024. Following the conversion these vessels are expected to operate on green methanol, depending on the trade of the vessels.

MSC's new LNG-capable vessels feature high-pressure engines designed to minimise methane slip during combustion. New technology used for the retrofit conversion

of two-stroke main engines features longer combustion times, with reduced unburned fuel quantities and related methane emissions. In addition to our participation in global collaborative initiatives such as the **Methane Abatement in Maritime Innovation Initiative**, we joined with a range of companies and associations to support scaling up sustainable bio-LNG in Europe by signing the **Biomethane Declaration** that was presented to the European Commissioner for Energy. On a note of caution, low-carbon fuels are not yet available at scale and are bunkered at a limited number of ports,

posing challenges for their wide deployment across our ocean-going fleet. To address this issue and meet rising customer demands for a reduced carbon footprint in their supply chain, in 2022 we launched our Journey to Net Zero programme that leverages both current as well as future alternative fuels through a carbon insetting system.

Under this programme and upon the request of customers, we offer MSC Biofuel Solution through which we bunker certified sustainable second-generation biofuel (predominantly Used Cooking Oil Methyl Esther, or UCOME).

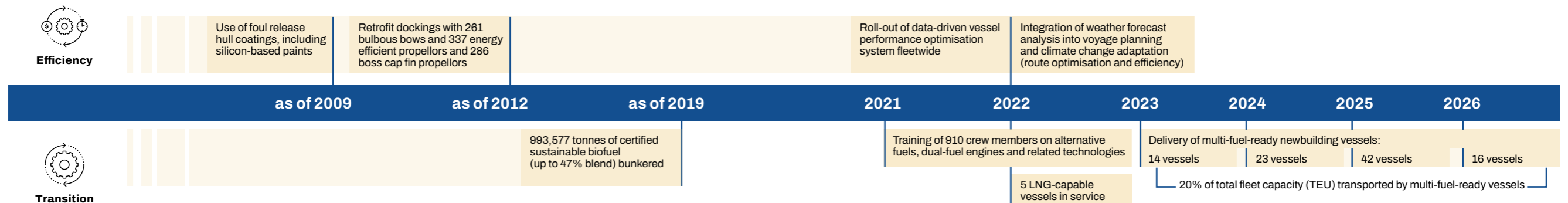
MSC'S JOURNEY TO NET ZERO: CARBON SAVINGS THROUGH CARBON INSETTING

MSC's **Journey to Net Zero** programme reflects our commitment to procure low-carbon fuels and transfer the related carbon savings at the request of our customers by way of a 'Book-and-Claim' system, based on a carbon insetting mechanism. Carbon insetting reduces emissions through carbon savings achieved within MSC's own value chain, facilitating carbon savings for shipments – regardless of the bunkering port, trade lane or route of the concerned service – with the biofuel used within MSC's global maritime network. Carbon savings are calculated as the difference between the emissions that would have otherwise been emitted using conventional marine fuel ('baseline' emissions) and those emitted using low-carbon fuel.

MSC has developed a transparent and robust accounting system for our Journey to Net Zero programme including our current offering **MSC Biofuel Solution**. In addition to providing documentation certifying the sustainability of the biofuel bunkered, customers also receive external verification of the accuracy and integrity of the carbon insetting process. We have witnessed a growing interest in this programme, reflecting customers' increasingly ambitious decarbonisation targets, including freight forwarders and shippers seeking to reduce their Scope 3 emissions. In light of the high costs associated with today's low-carbon marine fuels, carbon insetting is an opportunity to partner with customers interested in reducing the carbon footprint of their supply chain, and by opting for MSC Biofuel Solution they reap the associated carbon savings.

We continue to collaborate with fellow members of the Roundtable on Sustainable Biomaterials (RSB) on the establishment of an independently run 'Book and Claim' registry to register, trade and retire carbon savings including the transfer from carriers to customers, ensuring fully traceable transactions.

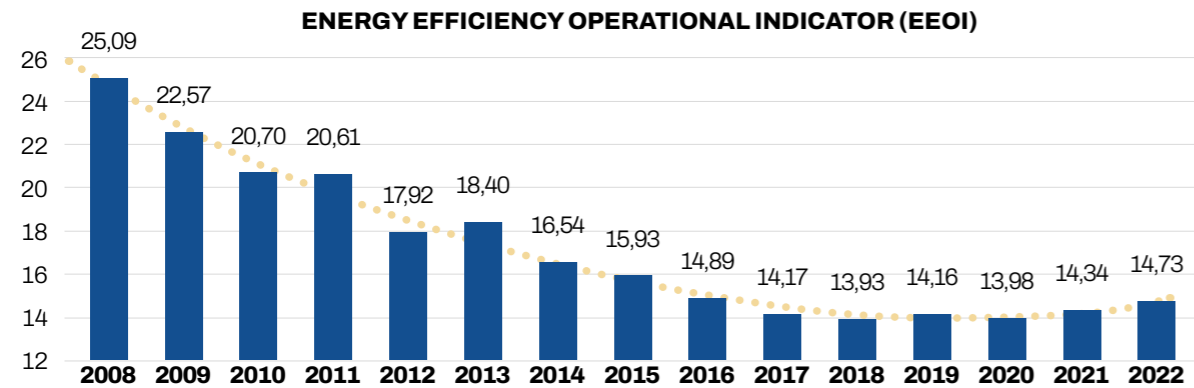
PROGRESS ALONG OUR PATHWAY



MAINTAINING OUR FOCUS ON ENERGY EFFICIENCY

Improving the energy efficiency of our vessels remains a key pillar of MSC's decarbonisation agenda. We are committed to reducing our carbon intensity (using the IMO's Energy Efficiency Operational Indicator, EEOI) and since 2008²⁵ we have seen a progressive decrease – as a result of implementing an array of efficiency measures, the addition of new, larger and more efficient vessels to our fleet as well as the progressive phasing out or retrofitting of older vessels. However, in the last two years we saw an increase in our **EEOI**, which in 2022 rose slightly to 14.73 (+2.7% from 2021), reflecting pandemic-related supply chain disruptions and impacts relating to the conflict in Ukraine, as well as an

increase in the average age of our fleet due to the integration of second-hand vessels to meet significant customer demand. The easing of such disruptions across the shipping sector and the introduction of the IMO Carbon Intensity Indicator (CII), combined with the stepped-up delivery of new and efficient vessels as well as ongoing implementation of MSC's retrofit programme over the coming years will see our EEOI resuming the downward trend in line with our decarbonisation goals. Efficiency measures regarding our maritime operations revolve around three axes, including our fleet renewal and retrofitting activities, optimising vessel performance and route optimisation.



[25] 2008 is the baseline year against which IMO has set carbon intensity and GHG reduction targets

PREPARING FOR IMO 2023

IMO 2023 refers to a package of amendments to annex VI of the MARPOL Convention²⁶ taking effect as of 1 January 2023 comprising two short-term measures to reduce GHG emissions from shipping, the **Energy Efficiency for eXisting ship Index (EEXI)** and **Carbon Intensity Indicator (CII)** respectively.

EEXI is a design index whose value once in the lifetime of the vessel must attain a maximum acceptable level, determined by ship type, ship capacity and principle of propulsion, for the vessel to be allowed to sail. As a result of retrofits involving bows and propellers, the majority of vessels in MSC's fleet will already be in compliance with the GHG limits as specified by the EEXI. For the remainder of vessels we will conduct additional retrofits including air lubrication systems on the hull on selected vessels and Engine Power Limitation (EPL) devices that will ensure their EEXI compliance by the first periodical survey in 2023 at the latest.

CII is an operational index which limits the total carbon emissions of a vessel each year, using a rating system of A to E, where A is the most efficient, E the least and C marks the acceptable threshold. MSC is committed to ensuring all vessels will be rated C or better. Actions we have been undertaking with a view to contributing to CII compliance include a major network overhaul, constant monitoring and progressive optimisation of all voyages, extensive fleet digitalisation with the installation of a fleetwide high-frequency data collection system, a global underwater hull inspection and cleaning scheme, as well as the installation of onboard energy-saving devices (such as shaft generators and waste heat recovery systems) and the deployment of transition fuels as they become available at scale. In exceptional cases where factors beyond our control, such as congestion at ports or possibly other disruptions along the transportation value chain may result in D- and E-rated vessels, a corrective action plan will be developed as part of the Ship Energy Efficiency Management Plan (SEEMP), setting a course to achieve a higher rating.

[26] www.imo.org/en/ourwork/environment/pages/air-pollution.aspx



FLEET RENEWAL PLAN

With the introduction of IMO 2023 will come the need to address capacity challenges due to a portion of MSC's fleet steaming at lower speeds to meet the requirements relevant to the CII. 2022 saw the introduction of additional vessels as well as extra services and routes within our global network, ensuring sufficient capacity resulting from longer transit times.

Over the course of the year, our far-reaching retrofit programme continued to progress targeting largely our second-hand vessels and improving their efficiency by up to 30%. Retrofit dockings included the exchange of thirty-one boss cap fin propellers and thirty-one bulbous bows, of which almost one-third were second-time propeller retrofits requiring longer drydock time and structural modifications to adjust the line of the ship to a significantly new and more efficient design.

Additional energy-saving measures have been implemented such as the deployment of engine tuning equipment as well as the installation of economisers on the auxiliary engines, of shaft generators and autopilot systems.

In the coming years MSC's fleet will continue to expand with the delivery of 14 multi-fuel-ready newbuilding vessels in 2023, 23 in 2024, 42 in 2025 and 16 in 2026, of which half will potentially also feature the air lubrication system for further improving fuel efficiency. The addition of these newbuildings will see over 4% of MSC's fleet capacity (TEU) consist of multi-fuel-ready vessels in 2023, progressively increasing to 9% by 2024, 16% by 2025 and about 20% by 2026. With the delivery of energy efficient newbuildings we will progressively phase out and retire less efficient vessels, ensuring that we maintain a modern fleet that will advance progress towards net zero decarbonisation. In the near term, conventional fuel vessels will be replaced by dual-fuel LNG/ammonia-capable vessels. As fuels become increasingly available from 2030, conventional fuel vessels will be replaced by zero emission fuel-capable vessels (LNG, ammonia or methanol).

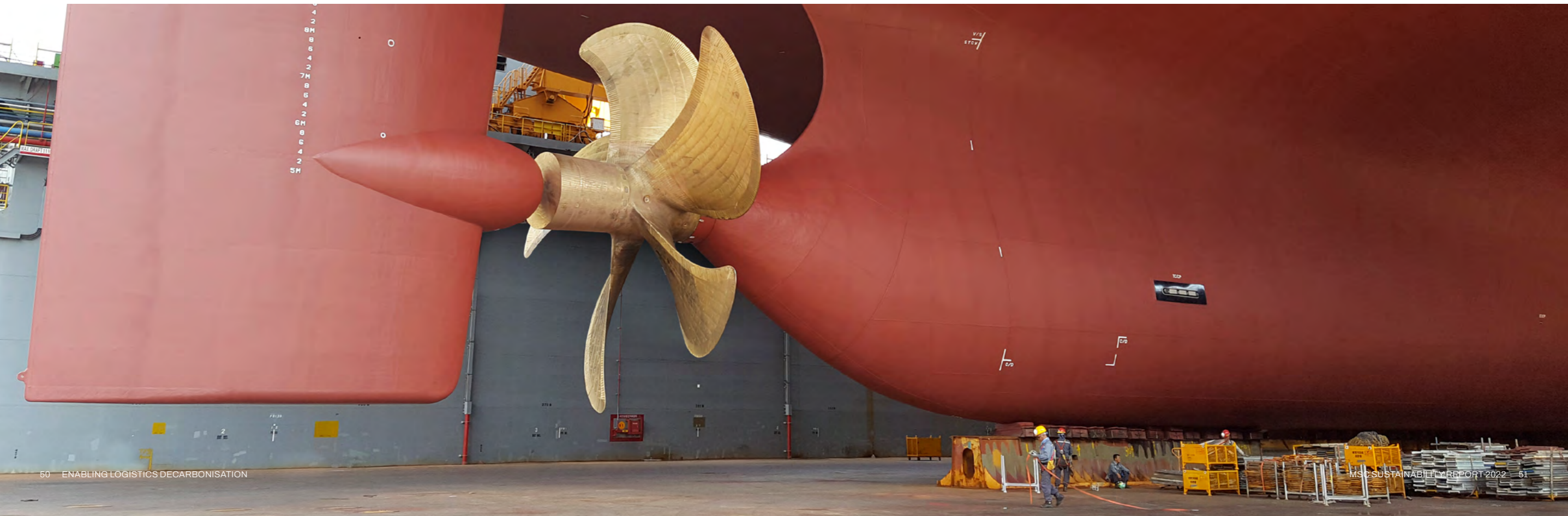
VESSEL PERFORMANCE AND ROUTE OPTIMISATION

Among the vessel performance optimisation activities include the enhanced set-up of energy-saving devices connected to the vessel engines – the cut-out of turbochargers, continuous adjustment of autopilot systems, among others – the use of foul release hull coatings including silicon-based paints, as well as the roll-out of robot-actuated proactive hull-cleaning systems. In 2022 we initiated the implementation of an innovative data-driven vessel management system (based on an onboard high-frequency data collection system operating on all energy saving devices). This system is being rolled out to MSC's entire fleet, enhancing analytics through the use of machine learning and Artificial Intelligence (AI). MSC Shipmanagement embarked on a project to measure the fleet's fuel consumption performance, engaging in a number of activities to curb fuel consumption and ensure optimum performance, including optimal dry-docking planning for hull treatment. Additional pilots are underway to minimise the content of unburnt fuel going into the engine (usually 2-5%), with a purpose-

built instrument installed onboard one of our ships to monitor the content of unburnt fuel in the exhaust gas. Recognising the important role of our crew in efficiency, we have also developed training programmes to raise awareness and upskill our crew, ensuring alignment with our decarbonisation goals.

MSC determines the passage plans and the speed of vessels in consultation with vessels' Masters along our service routes to ensure the safe and timely transport of cargo, facilitating maximum energy efficiency and controlled fuel consumption. We use voyage planning, weather forecast, analysis and optimisation tools to ensure that weather conditions at sea do not negatively impact voyage performance.

In conjunction with the data-driven vessel management system, we are further enhancing the tool with real-time weather forecasts specific to vessel location and the Requested Time of Arrival (RTA) to identify the optimum route and speed and, in the event of port congestion, also takes into account the expected out-of-port waiting time.



PLAYING OUR PART IN DECARBONISING INLAND LOGISTICS

As our global logistics business continues to grow – both organically and through acquisitions – we recognise that our role goes far beyond reducing the impacts generated by our assets. Global trade is changing at an unprecedented speed, with trends of near-shoring and reshoring reshaping highly interdependent supply chains. Inland logistics networks have been rapidly adapting to this evolving external environment and in response to unpredictable shocks and disruptions, participating in a collaborative logistics ecosystem. While our customers seek stability and reliability in their most critical supply chains to ensure business continuity, climate goals remain at the top of the agenda, with shorter and digital value chains becoming part of the solution. MSC continues pursuing a holistic approach aiming to serve as a catalyst for change, working with our customers and partners as we prepare for our industry's current and future challenges. From strategic commitment into

action, we have been exploring opportunities and piloting low-carbon solutions to understand their potential for deployment and scalability. Adopting a system-thinking perspective, we consider convergence and cooperation with a diverse range of industry players as an opportunity and means of accelerating the energy transition. Connecting the hinterland with the sea, MSC's inland logistics business is expected to significantly contribute to greater flexibility and efficiency for our customers' Scope 3 emissions across their supply chain. The quest for an optimal balance among supply chain actors' carbon footprint remains a challenge, it is a journey we need to pursue with our operational partners. Through logistics hubs and fast corridors development, MSC has been progressively optimising intermodal logistics, drawing on the respective strengths of different transport modes to decarbonise the entire logistics value chain.

LEVERAGING EFFICIENCIES FOR SMARTER JOURNEYS

Our decarbonisation journey capitalises on our intra-regional inland network that spans coastal and landlocked countries. Working with customers and energy providers towards the creation of synergies across and beyond our logistics ecosystem further accelerates progress towards a shared goal of mitigating our collective impact, by reducing our emissions. The interoperability of logistics networks and infrastructure – both private and public sector – has become a critical factor for energy efficiency and related emissions reductions in today's increasingly complex supply chains. Through strategically located logistics hubs and infrastructure – including MEDLOG's extensive network of depots and warehousing solutions – we enable the adoption of new and efficient intermodal solutions by creating closer links to local industries, combining economic and energy efficiency. As an extension of sea routes, inland routes are adapted with a view to facilitating and optimising processes and flows via integrated logistics systems. Conscious that MEDLOG's growing inland logistics services by road, rail and waterways will result

in additional emissions, we continue our efforts to reduce our carbon intensity by optimising our operations through strategic triangulations, shortening routes and lowering empty mileage. For instance, in Valencia (Spain), the cold store infrastructure deployed by MEDLOG in 2022 supports local fruit industries by shortening the distance by 2700 km to key trade centres for international fruit export and import (Barcelona and Madrid), generating the related emissions savings. During the reporting year we saw new acquisitions significantly expanding our global inland network across Africa and the Americas, with our road fleet growing. Ninety per cent of our newly acquired vehicles have the highest performing energy class (EURO 6), bringing the average age of our truck fleet to six years. We also strengthened our network of inland waterways solutions, with our barge and feeder fleet in Turkey, Nigeria and Thailand and offering our customers more efficient intermodal solutions. While continuing our efforts to enhance inland data transparency, we aligned our emissions data management

INTERMODALITY: THE FUTURE OF FREIGHT TRANSPORT

Intermodal transport and multimodal logistics are the way forward in tomorrow's freight transport landscape, creating new strategic corridors and facilitating the connection between land and sea. According to the European Commission's Sustainable and Smart Mobility Strategy²⁷, rail freight traffic will double and nearly all new heavy-duty vehicles will be zero-emission by 2050. At MSC we continue our efforts to implement the modal shift from road to rail wherever possible, in line with the European targets outlined in this strategy. Through MEDLOG and MEDWAY, in 2022 we moved 900,000 container units globally, including slot train and block train, tripling movements via rail compared to 2021. Over recent years MEDWAY has seen our rail business support the emergence of interconnected regional hubs across Europe: Spain and Portugal; Italy and Austria; Germany, Netherlands and Belgium. The regionalisation of our operations further enhances our connectivity, offering customers the flexibility they need and ensuring we respond swiftly to market requirements. Connecting landlocked countries to maritime trade via rail also shortens door-to-door delivery and avoids additional transshipment. The economies of scale from an expanded rail freight set-up ultimately support the transport mode shift, abating emissions while building resilience during the energy crisis in Europe. By 2022 MEDWAY's rail network extended across seven European countries, the latest being **MEDWAY Belgium** in July 2022 comprising seven locomotives, four corridors and 100,000 TEUs expected per year. Strengthening our rail network forms part of our services' interchangeability, ensuring business continuity and swift action in the face of unforeseen conditions including increasingly frequent weather-related extreme events. While in 2022 our barge operations in Belgium were impacted by drought, rail complements existing MSC offerings as well as providing our customers with more efficient connections, saving time and transshipment-related costs.

[27] eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789



process with the Smart Freight Centre's globally recognised industry standard, the **GLEC Framework**²⁸, to better understand the impacts of our inland logistics business and further develop our decarbonisation strategy. Our industry's fragmented supply chain continues to present challenges for operations visibility including the collection of our own Scope 3 emissions data. To ensure progress in this area, we focused on refining our mapping process to update and quantify the impacts of our logistics suppliers at a more granular level, collaborating with our supply chain partners to evaluate potential solutions for future deployment and scalability. At MSC we recognise that reducing our impacts will continue

[28] www.smartfreightcentre.org/en/how-to-implement-items/what-is-glec-framework/58/

EVALUATING SOLUTIONS AT SCALE FOR OUR FACILITIES AND FREIGHT

Amidst the uncertainty surrounding the energy sources that will power our future transport system, MSC continues to explore scalable solutions and market opportunities, catalysing actions in collaboration with stakeholders across the value chain in search of low- and zero-carbon energy sources. In the coming years we anticipate a diverse and evolving energy landscape that considers regional and local specificities, with countries responding to a complex set of related challenges as they address emissions across the full lifecycle. We believe that a holistic 'well-to-wheel' approach is needed to truly decarbonise freight, taking into consideration emissions related to energy production, transmission and storage and avoiding the view that reducing emissions ends at a vehicle's tailpipe.

As a global operator, we seek to leverage the diverse geography of our operations while recognising the varying availability of infrastructure and clean energy sources to support landside decarbonisation. While the momentum around zero-emission trucks continues to grow – particularly with electric vehicles in Europe – their widespread adoption remains affected by regulatory challenges, uncertainty on upstream and operational emissions, technological bottlenecks, as well as infrastructure capacity investments that have not yet reached the maturity level required to meet market demand. Despite these challenges, we continue exploring new technologies and fuels with energy providers – including electric/batteries, hydrogen, biofuel, Compressed Natural gas (CNG), Liquefied Natural Gas (LNG), internal combustion engine (ICE) trucks powered by low- and zero-carbon fuels such as biofuels

to be largely dependent on our ability to achieve further energy efficiencies through optimisation. Digitalisation will be key, with the progressive adoption and integration of digital platforms and corridors presenting additional opportunities for emission abatement. The infrastructure of the future will facilitate the collection of data to optimise fuel consumption and ensure responsive logistics services, as well as net load factor improvements, empty or below-capacity mileage reduction and higher fleet utilisation. Real-time supply chain visibility has also risen in importance for our customers, calling for the technological innovation and digital infrastructure to further strengthen internal processes and promote more efficient operations.

or synthetic fuels (synfuels). Such exploration includes an initial investment in trials and pilots, with the intention to progressively deploy and scale up solutions as part of our long-term decarbonisation pathway. Due to the recent energy crisis following the conflict in Ukraine, the increase of gas prices led to a review of our future procurement of LNG trucks to mitigate risks and ensure business stability and continuity in a fast-changing context.

At our facilities level, the number of lifting equipment pieces – empty handlers, reach stackers and forklifts – used at MEDLOG globally increased by 8.5% compared to 2021. In parallel, we have been working on optimising consumption and related emissions while also testing hybrid empty handler solutions to reduce our diesel consumption by up to 60%. We have also been engaging with different providers for batteries and hydrogen solutions to mitigate our impact overall.

In addition to continuing to invest in more efficient modes of transport and alternative energy sources, we have been improving the efficiency of our buildings. MEDLOG enhanced its action plan and strengthened internal capabilities on integration of sustainability requirements for infrastructure design and construction projects, working towards securing sustainable building certifications (e.g. BREEAM) as well as installing renewable energy sources and using sustainable building materials.

MSC has initiated work on a plan to reduce the HFC emissions generated by the cold stores we operate – such as those associated with our reefer containers and facilities – incorporating the adoption of lower impact refrigerants

to ensure compliance with upcoming regulations related to the phase-down of hydrofluorocarbons (HFC). HFCs are commonly used as refrigerants and as greenhouse gases with high Global Warming Potential (GWP), they contribute significantly to global warming. The average age of MSC reefer containers is less than seven years old and we are investing in energy efficient units using refrigerant technology with the lowest GWP commercially available today. Half of our reefers are R513A gas ready while our

2,000 NaturaLINE reefers already use R744 gas, with both gases having a significantly lower GWP value than conventional hydrofluorocarbon refrigerants. MSC is exploring with partners a reclaimed reefer refrigerant project whereby refrigerant gas from reefer containers is recovered, purified and certified for reuse, reducing our HFC emissions and delivering around 4,000 kg of CO₂ savings per reefer.

ON THE ROAD TO LOW- AND ZERO-CARBON SOLUTIONS

Since commencing operations in January 2022, MEDLOG Hungary has focused on improving efficiency while exploring alternative energy sources to reduce the carbon footprint of their rail and road inland solutions in parallel. To minimise empty container movements and avoid unnecessary emissions, MEDLOG Hungary performed 2,474 triangulations that resulted in an 84.5% increase in efficiency or 259,000 kg CO₂ savings. Through efficient triangulations, 825 days of drivers working time were saved as well as 125 hours of terminal activity (4,948 terminal liftings).

Within its first year of operation MEDLOG Hungary launched the first MEDLOG E-truck in December 2022, expected to commence operations in early 2023. The e-truck joins a fleet of 40 trucks which includes new generation vehicles saving 15% of energy consumption and related emissions. To address infrastructural challenges including the network coverage required for charging E-trucks, MEDLOG Hungary has been collaborating and co-investing with customers through the adoption of a shared charging strategy that secures electricity generated by clean energy sources. These initiatives will serve as a basis for learning and further developments exploring different low- and zero-carbon solutions to be deployed in the future.



DECARBONISING THE GATEWAY BETWEEN LAND AND SEA

Terminals can play a pivotal role in accelerating the energy transition in the logistics chain by providing access to shore power for vessels at berth, providing railway and fluvial connections for inland logistics and by facilitating the uptake of low- and zero-carbon fuels for cargo handling equipment, and in the future, for ships.

As an integral part of MSC's business, Terminal Investment Limited's (TiL) portfolio of terminals in over 30 countries have a key role to play in decarbonisation and one of TiL's key objectives is to reduce direct emissions through the improvement of operational and technical efficiency, also achieved by reducing unproductive moves at terminals and thereby aligning business imperatives and sustainability objectives. In addition, we are also aiming to reduce indirect emissions by sourcing electricity from renewable sources of energy.

TiL is taking a techno-economic approach to designing an energy transition plan at portfolio- and terminal-level by modelling the impact of equipment replacement plans, electricity procurement, onsite electricity production from renewables, energy efficiency measures and productivity improvements on its long-term business plans. In 2022 TiL launched its energy transition programme to proactively engage terminals on TiL's goals and map the challenges and opportunities faced by our terminals on decarbonisation. Based on the decarbonisation potential of each terminal, TiL is assessing levers of action based on currently available technology and modelling emission reduction scenarios that will inform TiL's decarbonisation pathway in a way that aligns the economics of its investments with its sustainability objectives.

REDUCING EMISSIONS AND SOURCING CLEAN ELECTRICITY

Reducing dependency on fossil fuels, either by electrifying or transitioning to lower carbon fuels for container handling equipment, is a key way in which our terminals can decrease the direct emissions of their operations. While quay cranes at the majority of our terminals are already electrified by default, several of our terminals are also transitioning or have already transitioned to electrified and hybrid diesel-electric vertical container handling equipment on the yard. Some of our newer terminals are using Automated Stacking Cranes (ASCs), which are inherently electrified, including **Abu Dhabi Terminals** (United Arab Emirates), **Pusan Newport International Terminal** (South Korea), **Hadarom Container Terminal** (Israel), and **DMT** (Rotterdam). Terminals using Rubber Tyred Gantry cranes (RTGs) in their operations are also transitioning to electrified or hybrid versions, including **APM**

Terminals Callao (Peru), **Lomé Container Terminal** (Togo), **Adani International Container Terminal** in Mundra (AICT – India), **Ningbo Gangji Terminal** (China), **Marport** (Turkey), **Asyaport** in Terkidag (Turkey), **Portonave - Terminais Portuarios de Navegantes** (Portonave - Brazil), **Brasil Terminal Portuario** in Santos (Brazil), **Exolgan Container Terminal** in Buenos Aires (ECT - Argentina), **MSC Terminal Valencia** (MSCTV - Spain), and **PSA Sines - Terminais de Contentores** (Portugal). A critical challenge remains the decarbonisation of horizontal container handling equipment yet some of our terminals are already making progress in this domain. **MSC PSA European Terminal** (MPET – Belgium) is introducing hybrid (battery-diesel) straddle carriers into its fleet and some terminals are also trialling low- or zero-carbon alternatives for horizontal container transport,





including **PSA Sines - Terminais de Contentores** and **Portonave** carrying out a proof of concept trial with an electric prime mover in 2022 or **MSC Terminal Valencia's** ongoing project to trial a hydrogen-powered reach stacker as part of a joint European Union and Hydrogen Europe programme²⁹. In 2022, **AICT** in Mundra (India) also began introducing electrical Terminal Tractors (TTs) with a view to gradually phasing out its diesel TT fleet by 2023.³⁰ To reduce indirect emissions, certain terminals are also switching to low-carbon electricity, including by partnering with renewable energy producers to provide onsite or site-adjacent electricity production. In 2022, **Port Newark Container Terminal** (PNCT – New Jersey, USA) embarked on a 7.2 megawatt photovoltaic solar project to generate power in the terminal and reduce indirect emissions.³¹ The full project, carried out in partnership with a US renewable energy company, is due to be completed by the end of 2023 and will produce approximately 50% of PNCT's annual electrical demand, reducing both electrical demand from the Newark area electrical grid and PNCT's carbon footprint. PNCT has already taken important steps to reduce the emissions of its operations, including converting all terminal lighting to LED fixtures, installing hybrid straddle carriers and energy-efficient cranes and installing a 1 megawatt natural gas generator. In addition to **Marport**, other TiL terminals that developed onsite electricity generation from solar photovoltaics (PV) in 2022 include terminals in **Pusan, Callao, Mundra** and **Valencia**, with a project underway at **LCT** in Lomé. TiL terminals also have projects aimed at reducing

energy consumption through efficiency gains. Measures implemented at our terminals include installation of LED lighting and automatic 'turn on-off' lights on cranes and buildings, as well as introducing energy management software to monitor and act on energy consumption patterns. TiL also seeks to address its emission reduction objectives in its greenfield and expansion projects. One of the largest terminals in North America, **Total Terminals International's** (TTI – California, USA) aims to achieve carbon neutrality by 2030, in line with California's Clean Air Action Plan, by gradually introducing lower emission container handling equipment including, so far, replacing six legacy diesel RTGs with battery-diesel hybrid versions and replacing two forklifts with electric versions. TiL's investment in **Terminal Porte Océane/Terminaux de Normandie MSC** in Le Havre (TPO/TNMSC – France), announced in 2022, will also see the installation of electric RTG cranes³². In another greenfield development at **Sparrows Point** in **Baltimore** (USA), TiL also plans to develop a terminal that maximises the use of low- or zero-carbon cargo handling equipment³³. Terminals can also facilitate the reduction of emissions from ships at berth through the installation of onshore power systems (OPS), and OPS development projects are underway at a number of ports where TiL has terminals. Currently, shore power is available at four terminals including **TTI** (California, USA), **SSA Terminal 5** in Seattle (Washington, USA), **Hadarom Container Terminal** (Israel) and **Ningbo Gangji Terminal** (China). In 2022 at **TTI**, 87% of the hours vessels were alongside berth

were plugged into OPS. Through California's Low Carbon Fuel Standard programme, TTI collects revenue by selling

carbon credits generated by the shore power service and reinvests it in projects supporting electrification.

COLLECTIVE ACTION TOWARDS NET ZERO

TiL continues to engage its terminals on its decarbonisation goals, and in 2022 conducted a workshop on energy efficiency at the first Technical Forum held in Geneva with the maintenance and engineering teams of TiL terminals around the world, aimed at better understanding the challenges and capitalising on the opportunities in shifting to less carbon-intensive equipment and switching to renewable energy sources.

We continuously monitor technological innovations on our terminals, proactively engaging with key external

stakeholders – including port authorities, industry groups and the key original equipment manufacturers (OEM) – to remain abreast of the latest developments. We are also embedding sustainability into operations by incorporating emissions metrics into internal benchmarking reports and building analytical tools to visualise energy-related data to enable the Operations and Asset Management teams in Geneva to enhance their ongoing dialogue with terminals and help catalyse change.

BUILDING THE TERMINALS OF TOMORROW AND PREPARING FOR CLIMATE CHANGE

Connecting shipping and inland supply corridors, terminals are 'resilience gateways' whose infrastructure face some of 'the most urgent and costly climate related impacts'.³⁴ TiL is inventorying the acute climate-related events that took place in 2022 at our terminals in order to prepare a global response to the physical and financial risks linked to climate change. In its greenfield projects, TiL aims to take into consideration the risks and potential impacts of our changing climate and adapting the design, construction and operation of our terminals in a way that anticipates,

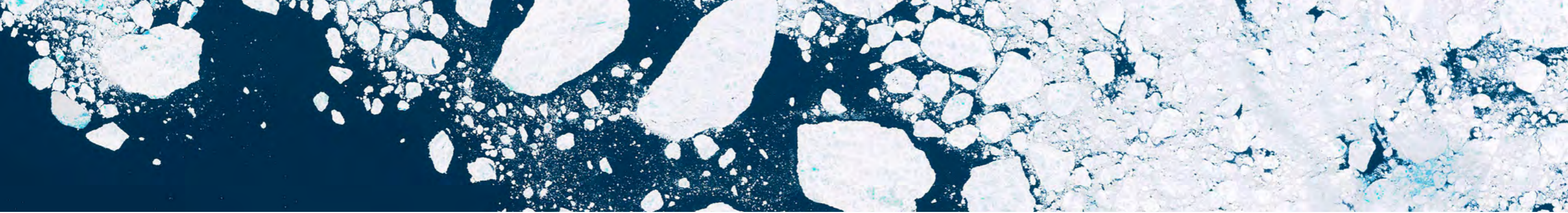
prepares for and adapts to climate-related impacts. Among the activities underway at our terminals to address climate change-related risks are climate impact assessments, mangrove afforestation to reduce the impact of storm surge as well as the development of disaster management plans to ensure our preparedness in the event of disasters. This work is not done by TiL terminals alone, and in a number of ports, the port authorities are also taking measures to improve disaster resilience, prevent coastal erosion and face rising sea levels.

[29] h2ports.eu/ [30] origin-webapp.adaniports.com/-/media/Project/Ports/Investor/Investor-Downloads/Operational-Highlights/Investor-Presentation.pdf
 [31] standardsolar.com/news/newark-mayor-ras-baraka-attends-event-announcing-pncts-photovoltaic-solar-energy-project-to-reduce-greenhouse-gas-emissions-and-improve-air-quality-for-the-newark-region/
 [32] www.porttechnology.org/news/tiL-unveils-e700-million-investment-for-le-havre/
 [33] www.msc.com/en/newsroom/press-releases/2022/october/terminal-investment-limited-baltimore

[34] climatechampions.unfccc.int/wp-content/uploads/2022/11/maritimeresiliencebreakthroughs.pdf



PROTECTING
OUR BLUE PLANET



CONTRIBUTING TO HEALTHY AND PRODUCTIVE ECOSYSTEMS

Never has protecting the environment featured so highly on the global agenda. 2022 was marked by the UN General Assembly declaring a healthy environment a universal human right, a resolution expected to accelerate the implementation of environmental and human rights obligations by national governments. The UN Environment Assembly adopted a landmark agreement in 2022 aiming to end plastic pollution which will see the forging of an international legally binding agreement by 2024, while in late 2021 the IMO adopted a strategy³⁵ to address harmful marine plastic litter from ships, with a target of zero plastic waste discharges by 2025. Our marine, coastal and land-based ecosystems are vital to the prosperity of communities around the world, yet they are currently at risk. Our changing climate, a decrease in biological diversity, pollution and waste and unsustainable resource management are all threatening precious natural resources. Securing ecosystems brings new opportunities and solutions for climate mitigation and adaptation, contributing to a thriving blue economy as well as supporting the people whose livelihoods are dependent on it.

At MSC we are committed to protecting our blue planet, working in partnership with a wider set of stakeholders and collaborating with our ocean sector peers to make a positive contribution and ensure our ecosystems are healthy, productive and resilient. We seek to ensure that our activities remain aligned with the principle of 'Do No Significant Harm³⁶' as highlighted in the EU Taxonomy, contributing to social and environmental objectives while not inadvertently harming others. As our business continues to grow, we are conscious that we have a responsibility to draw on all available resources, innovating and leveraging technologies to minimise and mitigate our impacts. We seek to understand the impacts of MSC's shipping and inland logistics activities on marine and land-based ecosystems, as well as those of our terminal operations to protect natural resources and preserve the coastal environments where we operate. For this reason we have been evaluating targets and exploring ways of measuring how our business affects life below water and life on land.

RESTORING AND PROTECTING OUR OCEANS

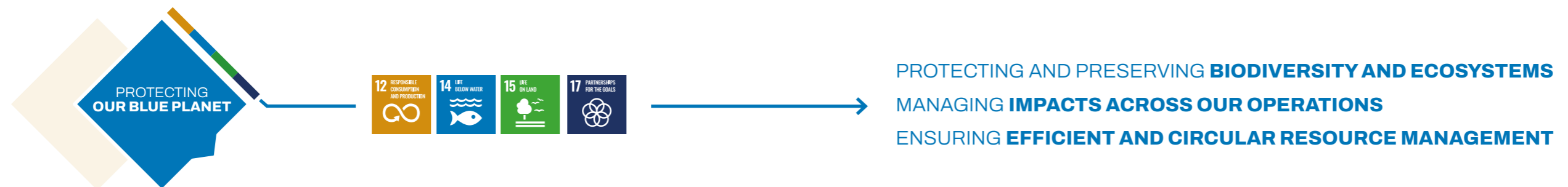
The world depends on a healthy ocean for food security, climate mitigation and economic livelihoods. Climate change, overfishing, pollution and unsustainable and inequitable development are damaging the health of the ocean and seas. MSC participated in the **UN Ocean Conference** in Lisbon which focused the world's attention on the dire state of our oceans and their importance for climate action, calling for greater ambition to address "the global emergency facing the oceans". After ten years of talks, in March 2023 the Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ) adopted the 'High Seas Treaty', a legal framework aiming to place 30% of the world's oceans into protected areas by 2030, reflecting a global commitment to ocean protection and marine conservation.

As a leading company within the ocean-based industry, MSC has a key role to play in fostering sustainable ocean business and supporting ocean stewardship. Our participation in the **UN Global Compact Ocean Stewardship Coalition** reflects this. In 2022 we joined over 150 stakeholders in signing the **Sustainable Ocean Principles³⁶**, demonstrating our commitment to ocean sustainability and serving as a framework for implementing responsible business practices covering ocean health and productivity, governance and engagement and data and transparency. Our ongoing participation as a member of both the **World Ocean Council** and the **North American Marine Environment Protection Association (NAMEPA)** provides the opportunities to come together with other blue economy companies with the goal of advancing ocean business leadership.

[35] www.imo.org/en/MediaCentre/HotTopics/Pages/marinelitter-default.aspx

[36] [eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC0218\(01\)](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC0218(01))

[37] www.unglobalcompact.org/take-action/ocean



PROTECTING OUR BLUE PLANET



CONTRIBUTING TO HEALTHY AND PRODUCTIVE ECOSYSTEMS

- Restoring and protecting our oceans
- Contributing to the blue economy
- Improving ocean science and data

MANAGING IMPACTS ACROSS OUR OPERATIONS

- Minimising and managing waste
- Reducing air and water pollution



OUR COMMITMENTS



PROTECTING BIODIVERSITY AND LIFE BELOW WATER AND ON LAND

- Addressing biodiversity loss
- Protecting marine life
- Fighting illegal wildlife trafficking

ENSURING EFFICIENT AND CIRCULAR RESOURCE MANAGEMENT

- Managing and conserving water
- Extending the lifecycle of containers
- Ensuring responsible ship recycling



IMPROVING OCEAN SCIENCE AND DATA

The **UN Decade of Ocean Science for Sustainable Development**^[38] (2021-2030) is a reminder of the importance of scientific data in understanding our changing ocean and fostering ocean innovative science solutions, including mitigation and adaptation activities to address climate change.

MSC is committed to improving the quality of ocean data in collaboration with public sector actors, the scientific community and non-governmental actors, such as our engagement in Voluntary Observing Ship Scheme of the **Global Ocean Observing System**^[39] (GOOS). Co-sponsored by the **World Meteorological Organization, Intergovernmental Oceanographic Commission of UNESCO, UN Environment Programme** and the **International Council for Science**, the GOOS is a global monitoring system that provides an overview of the state of our oceans to which fifty MSC vessels retrofitted with meteorology and oceanography instruments are actively contributing weather observation data through Germany, New Zealand and the US.

MSC maintains an advanced weather monitoring system that informs the guidance provided to our ships – including rerouting, reducing speed and navigation in ports – and ensures the safety of our crew and cargo, reducing container losses as well as supporting international ocean data initiatives such as the GOOS. Since 2021 we have participated in a pilot project with five MSC vessels tapping a global network of weather sensors collecting real-time ocean data. The buoys measure and calculate the surface wave spectrum, wind speed and direction, surface current and direction, sea surface temperature, barometric pressure and rain detector. The data collected by the buoys complements satellite data which combined provides more accurate and reliable forecasting, helping with route optimisation as well as enabling more efficient fuel consumption.

In 2022 we continued conducting trials installing high resolution thermal cameras on five vessels to leverage AI and computer vision-based technologies to monitor weather conditions, improve situational awareness and

[38] www.oceandecade.org

[39] public.wmo.int/en/programmes/global-ocean-observing-system



safety as well as identifying objects as far as 15 miles away. The camera system ensures correct navigation, avoids potential collision with other vessels or whales as well as alerting the crew if the ship is rolling more than 5 degrees to trigger prompt action and minimise the risk of container loss. The system is expected to be rolled out throughout our entire fleet as of 2023.

MSC is proud of our close and longstanding partnership with **Team Malizia** and its German Skipper Boris Herrmann. For the first time, Team Malizia is participating in the Ocean Race on their innovative race boat powered by solar panels and hydro generators, the **Malizia-Seaexplorer**. MSC also supports the Team's mission to raise awareness and promote learning on the topics of protecting our oceans and climate action. Team Malizia's science and climate

action aims to inspire and educate with the 'My Ocean Challenge' programme, helping young people to better understand the changes in the oceans and the implications for our climate. Their onboard laboratory, the 'Ocean Pack', collects key oceanic data such as CO2 concentration, water temperature and salinity levels, which is unique and highly relevant for the global science community as it provides a complete dataset from the most remote and unexplored ocean regions around Antarctica. The data shows terrifying trends: rising water temperatures, an increased heterogeneity in CO2 concentration across ocean regions with strong local impacts on biodiversity and water chemistry, changing levels of salinity with direct risks and consequences to ocean currents and water exchange.

PRESERVING BIODIVERSITY AND LIFE BELOW WATER AND ON LAND

The earth's biodiversity is declining at unprecedented rates, with one million species at risk of extinction^[40] and ecosystems and biodiversity loss potentially triggering a loss of USD 2.7 trillion in global GDP by 2030^[41]. At the **UN Biodiversity Conference (COP15)** held in Montreal in December 2022 the **Kunming-Montreal Global Biodiversity Framework**^[42] was adopted with an ambitious

agenda including an agreement to protect 30 per cent of the planet's lands, coastal areas and inland waters by the end of the decade. 2022 saw reducing biodiversity loss rising on the global agenda, with increasing expectations for business action and more granular data on the topic including in sustainability standards and reporting frameworks.

With our global operations at sea, on land and in the sky,

MSC is committed to protecting biodiversity and stand firm on our position to avoid trade routes in fragile marine ecosystems and vulnerable environments such as the Arctic. We will not use the Northern Sea Route to avoid black carbon emissions and potential accidents or spills, as well as protecting the air quality and sea ice.

For our operations on land, we seek to continuously improve and ensure that our infrastructure design and construction projects benefit the surrounding natural environment, supporting and protecting local biodiversity. In 2022 MEDLOG focused on the incorporation of sustainability requirements in future construction projects of new buildings, and we are working towards further expanding the sustainability certifications such as BREEAM^[43] across our facilities and buildings worldwide. As our business continues to grow, we have a responsibility to consider potential impacts and ensure that these are incorporated in the design and construction of new facilities, including respecting local biodiversity and supporting nature restoration activities. During the reporting year, our terminals worked with local partners on reforestation projects at our **Exolgan Container Terminal** in Buenos Aires (ECT - Argentina), **Adani International Container Terminal** in Mundra (AICT - India) and **PSA Panama International Terminal** (Panama) and at MSC offices

in Bolivia, Dominican Republic and Madagascar. We are also supporting mangrove planting at the MSC office in Côte d'Ivoire, at **Lomé Container Terminal** (Togo), and **Freeport Container Port terminal** (FCP - Bahamas) also have mangrove restoration projects. In November 2022, FCP employees participated in planting over 700 mangrove plants in an area that was greatly impacted by Hurricane Dorian in 2019.

MSC Shipmanagement won the **Environment Keeper Award** at the 2022 Cyprus Environment Awards. Presented by the President of Cyprus, the Award recognises organisations that manage environmental issues as an integral part of their business policy, adopting best practices and taking action to protect the environment, reduce the consumption of natural resources and contribute to sustainable development. The activities conducted by MSC Shipmanagement to protect and minimise its impact on the local environment include closing and sealing all sewage and grey water discharge valves 50 Nm before entering Cyprus waters on all managed vessels to keep beaches clean, participating in clean up activities as well as reducing the use of plastic. MSC Shipmanagement also supports local environmental initiatives in partnership with the **Cyprus Shipping Chamber**, **Cyprus Marine Academy** and **Cyprus Marine and Maritime Institute Ltd.**

[40] [ipbes.net/global-assessment](https://www.ipbes.net/global-assessment)

[41] www.worldbank.org/en/news/press-release/2021/07/01/protecting-nature-could-avert-global-economic-losses-of-usd2-7-trillion-per-year

[42] www.cbd.int/article/cop15-final-text-kunming-montreal-gbf-221222

[43] breecgroup.com/products/breeam/



PROTECTING MARINE LIFE

We share our oceans with marine life which we have a responsibility to protect. At MSC we take this responsibility seriously and are passionately committed to protecting endangered whales from ship strikes as well as safeguarding critical areas where whales feed and breed. MSC was the first in our industry to reroute our ships to keep away from cetaceans, reducing collision risk with endangered sperm whales off the west coast of Greece as well as blue whales off the southern coast of Sri Lanka (see box).

MSC's approach prioritises keeping away from whales by rerouting and slowing down our ships, using data and technology to detect whale activity and create alerts. For the fourth consecutive year, MSC received the Sapphire award for the **Protecting Blue Whales and Blue Skies**

programme following the reduction of speed of MSC ships in the San Francisco Bay Area to less than 10 knots, protecting blue whales inhabiting the area.

We have been exploring the use of data and new technologies to detect whales, including trials with high resolution infrared cameras combining artificial intelligence and data for potential use in monitoring whale activity 15 miles away. Our crew training programme includes awareness raising as well as technical training for all deck officers to ensure high levels of attention – particularly during whale breeding season - and enable swift action in response to alerts. No incidents involving whales were recorded in 2022. Throughout the reporting year we continued our close collaboration with **OceanCare**, the **International Fund for Animal Welfare (IFAW)**

and other major environmental NGOs, engaging with the international community and catalysing industry action to reduce the risk of collision with these giants of the sea.

MSC continues advocating and engaging with members of the maritime community and shipping forums, port authorities and the coastguard; scientific bodies, civil society and governments calling on others to join us in protecting whales. Our ongoing engagement with peers through the **World Shipping Council** is exploring digital solutions, including the potential development of a database to enable access to real-time information on areas where restrictions are in place and areas of whale activity, informing both crews onboard and shoreside employees. We believe that our industry has a responsibility to simultaneously address both challenges of

decarbonisation and biodiversity – in line with the principle of 'Do No Significant Harm' – to avoid an exclusive focus on emission reductions at the expense of the wellbeing of cetaceans, which themselves represent a valuable means of sequestering carbon.

We welcome the IMO Sub-Committee on Ship Design and Construction's ongoing review of the 2014 Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life⁴⁴, and following their expected approval by the Marine Environment Protection Committee in 2023, MSC will integrate their recommendations into our operations.

[44] www.imo.org/en/MediaCentre/HotTopics/Pages/Noise.aspx

ADJUSTING COURSE TO PROTECT BLUE WHALES

Reflecting our commitment to protecting marine life, MSC took a major step to help protect blue whales and other cetaceans living and feeding in the waters off the coast of **Sri Lanka** by being the first in our industry to modify navigation guidance in line with the advice of scientists and other key actors in the maritime sector. In mid-2022 we began to voluntarily re-route our vessels passing by Sri Lanka, on a new course approximately 15 nautical miles to the south of the current traffic separation scheme (TSS) for commercial shipping. Simulations indicate that moving the TSS to the south would reduce the risk of collision by 95%.

Our decision follows guidance based on research surveys completed by the International Fund for Animal Welfare (IFAW), with the World Trade Institute (WTI), Biosphere Foundation, University of Ruhuna (Sri Lanka), Raja and the Whales and University of St Andrews (UK), and additionally endorsed by the World Wide Fund for Nature (WWF), to change the routing for our vessels. With the exception of embarking and disembarking for safety reasons in Galle and smaller feeder ships at a reduced speed of less than 10 knots, the traffic of this busy trade lane is limited to protect the cetaceans' habitat.

MSC continues to engage with fellow members of the World Shipping Council and International Chamber of Shipping to advocate for the creation of a new official marine traffic scheme in Sri Lanka that is fully separated from the blue whales' feeding area so all large-scale commercial marine traffic moves to the more southerly zone that MSC ships now follow.



©Christian Loader/IFAW



FIGHTING ILLEGAL WILDLIFE TRADE

While threats to biodiversity come from multiple sources, the illegal wildlife trade contributes significantly to the problem and remains a challenge for our industry, with criminals exploiting weaknesses in supply chains to expand their networks. Trafficking wildlife and animal parts have diverse and far-reaching implications beyond endangering species and biodiversity; there are also social implications associated with illegal trade, affecting economic growth and governance, fuelling insecurity and criminality as well as impacting livelihoods.

MSC has a crucial role to play in eradicating the illegal wildlife trade, including strict control management and policies related to illegal and forbidden wildlife trafficking and maintaining a strict policy banning the carriage of shark

skins, animal hunting trophies and protected timber. We are a signatory of the **Buckingham Palace Declaration** and are an active member of the **United for Wildlife Transport Taskforce**⁴⁵. We continue our advocacy efforts to break the chain between the demand and supply of this illegal trade and are pleased to see the expansion of the United for Wildlife community including our industry peers at the **International Cargo Handling Coordination Association (ICHCA)** who joined in 2022.

MSC welcomes the IMO's 2022 Guidelines for the Prevention and Suppression of the Smuggling of Wildlife on Ships Engaged in International Maritime Traffic, and new regulation on illegal trade such as the recent adoption of the US Shark Fin Sales Elimination Act in December 2022.

[44] unitedforwildlife.org/taskforces/transport-taskforce/

MSC'S GLOBAL TARGETING CENTRES AGAINST ILLICIT TRADE

MSC has three **Global Targeting Centres** located in Greece, India and Switzerland focused on the prevention of illicit and illegal trade. Working across specialised screening hubs, our proprietary detection system draws on the latest artificial intelligence and machine learning technologies and issues alerts for shipments possibly containing wildlife or products for illegal trade. If there is reasonable doubt on the contamination of the container, such cases are subsequently investigated and the relevant custom offices notified accordingly.

Our process is continuously updated with information and data provided by a wide variety of organisations, institutions, NGOs and associations. It also draws on information received through our customers and is complemented by a 'Know your Customer' programme to ensure that all new MSC customers are vetted and ongoing customers maintain verified track records. In 2022 seven cases of illegal wildlife trade were detected by the Global Targeting Centre and confirmed by the local authorities following inspection.

Furthermore, MSC teams located in countries with higher risks of illegal wildlife trafficking – including countries across West Africa, East, South and Southeast Asia, as well as Italy, Portugal and Spain in Europe – undergo training which will be reinforced by additional mandatory training as of 2023. In 2022, 14 trainings on illegal wildlife trafficking were delivered to MSC employees as well as key stakeholders such as customers, governments and intergovernmental organisations with whom we are engaging, as part of our efforts to sensitise and educate on the risks and impacts of this illegal practice at the local level.

MANAGING OUR IMPACTS

At MSC we are committed to limiting and reducing the negative environmental and social impacts of our assets and operations at sea and on land. Our growing business implies a potentially wider and more complex set of short- and long-term impacts, requiring a clear understanding and proactive approach to managing waste and reducing pollution. MSC's ocean and inland activities are ISO 14001: 2018 certified and this certification process helps us monitor and better understand our impacts, supporting continuous improvement in our approach and practices towards the achievement of our targets. We seek to go beyond compliance and make a positive contribution to the conservation and restoration of ecosystems and biodiversity, partnering with local institutions and others to deliver on our commitments such as selected recycling facilities and service providers.



MINIMISING AND HANDLING WASTE

MSC's approach to waste management ensures our full compliance with the **International Convention for the Prevention of Pollution from Ships (MARPOL)**, as well as complying with applicable waste management legislative requirements in the countries in which we operate. During the reporting year we continued our efforts to minimise and mitigate our waste footprint and in 2022 generated 315,178 tonnes of waste. This marks a 5% increase on the previous year reflecting our expanded operations as well as progressive improvements in our data collection process. We are working with partners to understand waste supply chains, exploring opportunities to reduce packaging and evaluating alternative and longer lasting materials. During the reporting year we continued to further limit the use of single use plastics across our fleet, including avoiding plastic bottles used for drinking water as well as for vessel maintenance and cleaning products. Across our terminals, waste management systems have been adopted with a view to reducing waste and increasing the recycling or repurposing of materials. A number of our terminals, such as **Portonave – Portuarios de Navegantes** (Brazil) and **Adani International Container Terminal** (India),

have set targets on recycling and are implementing various initiatives to divert waste from landfill. A composting project was initiated at **Exolgan Container Terminal** (Argentina) preventing almost three tonnes of organic waste from being disposed in landfills, with the resulting compost used as fertiliser for trees and plants around the premises and distributed among employees. For our inland depots, we partner with approved vendors to ensure appropriate waste management, recycling as well as the safe disposal of organic waste such as through composting. MSC crew undergo regular training on the handling, recycling and disposal of waste to ensure the implementation of our vessel waste management plan, which includes targets related to generating less waste as well as recycling practices onboard. Awareness raising programmes on waste reduction are also conducted for employees onshore. MSC works with terminals to ensure the appropriate handling, recycling and disposal of solid waste from our vessels. We continue following industry discussions related to marine litter to learn from peers in the maritime and other sectors to identify innovative solutions, technologies and partnerships to address the topic.

FACING THE WASTE CHALLENGE AT THE LOCAL LEVEL

To reduce the impact of waste on coastal areas, MSC teams across the world participated in clean up events to help keep natural landscapes litter-free. In September 2022, **MSC Israel** and the **Etgarim Association** engaged in a joint initiative to clean beaches of Shikmona Nature Reserve located on the coast of Haifa. MSC volunteers cleaned up the beaches while the Etgarim Association used nets to clean the sea close by using sailing boats donated by MSC Israel, as part of our ongoing cooperation supporting activities to promote the inclusion and empowerment of people with disabilities through extreme sports in nature. **MSC Qatar** joined Qatar's leading beach clean-up movement, the Doha Environmental Actions Project, to help clean up the beautiful Singing Sand Dunes to the south-west of Doha as part of the fight against plastic pollution across the country. Around 150 volunteers, including 24 MSC colleagues, pitched in to support the #keepqatarclean campaign, removing around 400 kg of rubbish and plastic waste in just one hour. In Argentina, **Exolgan Container Terminal** donated gloves and bags to local clean up community activities for the fourth year as part of the annual World Clean Up Day campaign. For the second year **MSC France** organised beach clean-up operations in Le Havre in the country's north, as well as in Marseille in the south, with MSC employees and their families removing waste from local beaches. To mark World Environment Day 2022 on 5 June **MSC, MEDLOG** and **Asyaport Terminal** in Terkirdag (Türkiye) teams helped clean up Gündal Beach near Asyaport terminal and have been doing so annually since 2018. A total of 80 volunteers collected rubbish ranging from cigarette butts to plastic bottles and bags.

REDUCING AIR AND WATER POLLUTION

At MSC we recognise our responsibility to conduct our business and manage our growth in a way that minimises pollution and mitigates our impact on our oceans, coastal and land-based ecosystems. We are committed to reducing our greenhouse gas, sulphur and other emissions and pollutants affecting air and water quality, with potentially harmful environmental consequences.

In addition to reducing the carbon emissions of our operations as part of our decarbonisation pathway, MSC is committed to abating our impacts on the atmosphere at local level. We have progressively cut our sulphur oxide (SOx) emissions despite the ongoing expansion of our fleet, ensuring IMO compliance by limiting sulphur emissions to well below 0.50%. In 2022, SOx emissions amounted to 55,339 tonnes, an approximate 9% reduction from the previous year, and we continue exploring and investing in new technologies and fuel options to further reduce our SOx emissions.

By the end of 2022, 35% of our fleet were retrofitted with hybrid Exhaust Gas Cleaning System (EGCS) – operating both in open and closed loops – to remove sulphur oxides from a ship's engine and boiler exhaust gases, with our crews trained accordingly to ensure their correct use. We use low sulphur fuels and turn off exhaust cleaning systems in coastal areas according to local requirements, including in IMO emission control areas (ECAs) with stricter limits,

such as the recent designation of the entire Mediterranean Sea as an ECA for sulphur oxides and particulate matter, which will take effect from 2025.

MSC is closely following the industry debate around the use of EGCS and welcome the IMO's recently updated **Guidelines for Exhaust Gas Cleaning Systems** in addition to new guidance adopted in 2022 related to the use of EGCS on risk and impact assessment of the discharge water and the delivery of residues.

We are also committed to minimising air pollution from our inland operations, such as nitrogen oxide (NOx), carbon monoxide (CO), nonmethane volatile organic compounds (NMVOCs) as well as particulate matter (PM) emissions related to heavy-duty vehicles. For this reason, in 2022 we continued focusing on fleet renewal by investing in new, more energy efficient and less polluting vehicles for our inland fleet.

Managing ballast water is key to ensure a ship's safety as well as critical to the integrity of marine ecosystems. MSC addresses these risks through our compliance with the **Ballast Water Management Convention (BWMC)** as well as through regular water sampling and continuous monitoring. By the end of 2022, 64% of our fleet were retrofitted with ballast water treatment systems using both electrolysis and UV light technologies, ensuring

our compliance with the BWMC's deadline of full fleet compliance by 2024. All MSC newbuildings have ballast water treatment systems installed, in compliance with the regulation.

Regarding the discharge of oily bilge water and unusable oil residue (sludge), MSC vessels use filtering systems onboard to ensure that only clean water is discharged. Our vessels comply with MARPOL which require that oil content does not exceed 15 parts per million (PPM), and our newbuildings go beyond MARPOL compliance with filtering systems of 5 PPM installed.

When cleaning containers, MSC uses biodegradable additive and natural solvents wherever possible to avoid polluting local waterways and to ensure that wastewater from the cleaning process is appropriately treated.

At MSC we aim for zero marine pollution incidents while recognising the importance of being prepared, conducting contingency planning on an ongoing basis to ensure our readiness to respond in the face of evolving risks. We recorded five incidents of hydrocarbon spills for the year 2022 in Belgium, Canada and Spain, following which teams were immediately deployed to address the incidents in coordination with local authorities. During the reporting year we delivered trainings and safety drills, setting out clear procedures and responsibilities to ensure an effective

response and minimise negative impacts.

During the transfer from one tank to another onboard one of our vessels, some oily water spilled into dock waters in the port of Antwerp and was immediately contained. While docked in Antwerp, a vessel suffered a crack of sounding pipe, causing an oil spill on deck and in the surrounding dock waters due to heavy rain. Oil booms were placed to contain the spillage and the vessel and dock waters were subsequently cleaned. In late 2022 an estimated 150 litres of oil were released during a voyage from Churchilldock to Deurgendok, with the spill rapidly contained and cleaned. A minor fuel spill was leaked in port waters at anchorage in Vancouver, which was immediately contained and the fuel transferred to empty tanks. Finally, an incident was registered inside the port waters in Valencia, the investigation is still ongoing.

On 28 October 2022, during a journey to Charleston from New York, the MSC Rita collided with a commercial fishing vessel in US waters to the southeast of Chincoteague, causing the fishing boat to sink. We are grateful for the ensuing rescue operation launched by the US Coast Guard and others that ensured the transfer of all 13 crew members to safety. At the time of writing, MSC continues its full cooperation with the ongoing investigation of the incident by the US authorities.



LOST CONTAINERS AT SEA

According to the World Shipping Council, an average of 1,629 containers are lost at sea each year. The impact of lost containers on the marine and coastal environments is of significant concern both in terms of the safety of ships as well as their environmental impact, with container safety further compromised with the higher probability of extreme weather events caused by climate change.

One container was regrettably lost at sea from MSC operated vessels in 2022. MSC is committed to ensuring the safety of our operations, including securing containers to prevent their loss and avoiding any related negative environmental and social impacts. MSC was the first in our industry to apply DNV's new **Anti-Roll Assist System for Containership** (ARCS) class notation in 100 vessels, enabling captains to predict and reduce the risk of parametric or synchronous resonant rolling, ensuring the safety of our crews, the cargo we transport as well as our vessels. MSC is also the first to implement a ship-specific tool to avoid container losses due to rolling.

2022 marked our second year as a founding partner of the **TopTier Project**, a multi-stakeholder initiative aimed at improving the transport, stowing, and securing of containers, including safe designs and innovations for the future. We were pleased to see its expansion to 40 participants – spanning national authorities, major carriers, classification societies, lashing manufacturers and onboard system suppliers – bringing together expertise from across the value chain to identify gaps as well as key areas for improvement based on the ongoing review of practice, incidents and feedback from crew members. A series of technical investigations comprising desk studies, onboard measurements, container and lashing gear testing and dedicated model tests are expected to be completed by mid-2024. Their aim is to validate limit criteria and securing calculations used in stow planning stage, as well as vessel routing and handling procedures for extreme rolling in transit. To date these investigations have already triggered the drafting of a notice to mariners on parametric roll in following seas.



ENSURING EFFICIENT AND CIRCULAR RESOURCE MANAGEMENT

At MSC, we strive to manage the resources we use in our operations in a respectful and efficient manner, recognising their scarcity and fostering circularity principles wherever possible. We are committed to learning ways we can improve our practices and processes, collaborating with

others to better understand our impacts and identify opportunities for more efficient resource management as well as collaborating with our business partners to create demand for 'circular' approaches and materials.

MANAGING AND CONSERVING WATER

Water is a precious natural resource whose future availability is at risk. The World Meteorological Organization's 2022 study on global water resources highlighted their critical importance to secure our planet's future, and at MSC we recognise our responsibility to protect, conserve and restore water systems.

Our crew undergo awareness training on the responsible use and conservation of water onboard MSC vessels.

Sea water is filtered, sterilised and mineralised for crew consumption, using filters fitted on the majority of our fleet. We continuously strive to reduce and reuse the amount of water used to clean containers as well as exploring more environmentally friendly cleaning products to minimise water consumption. Our maintenance facilities are equipped with filters and multiple reservoirs to ensure that water is conserved and appropriately treated. Our MEDREPAIR

facility in Antwerp (Belgium) transports wastewater from cleaning containers for treatment by local partners before being safely returned to local waterways.

A number of our terminals are engaging with water conservation and implementing measures for more efficient and circular use of water. At **Exolgan Container Terminal** (Argentina), new water flow meters have been installed to enable more effective data-based management of water consumption and therefore facilitate conservation. Similarly, **Brasil Terminal Portuario** in Santos (BTP – Brazil) has also deployed software to map use patterns of water in

each building thereby facilitating identification of leakages. Recognising that behavioural changes are key to better management of water resources, **Basra Multipurpose Terminal** in Umm Qasr (Iraq) is also training its employees on water efficiency and resource use.

A stormwater treatment system was installed at **Terminal Bettolo** in Genoa (Italy) to address emergencies deriving from spills. Our terminal in **MultiRio Container Terminal** in Rio de Janeiro (Brazil) has a sewage treatment and reuse system in place that has facilitated the reuse of over 49,000 m³ of water since 2016.

EXTENDING THE LIFE CYCLE OF CONTAINERS

We seek to respectfully use our containers and extend their lifespan by repairing, reusing, repurposing and recycling wherever possible. Containers are sourced by world-class suppliers that include sustainable solutions such as bamboo floors and refrigerant units with lower global warming potential.

When MSC containers reach their end of life, we seek opportunities to donate them for new purposes (see page 101).

We also work with container repair and recycling partners to promote the use of container materials as a valuable feedstock for new products, such as recycling of wooden floor scrap for building reclaimed wood furniture and melting and re-rolling steel scrap for concrete iron. Each year MSC repairs on average two million containers and 450,000 reefers as well as upgrading 400,000 containers.



PROMOTING SUSTAINABLE AND CIRCULAR OCEAN INDUSTRIES THROUGH RESPONSIBLE SHIP RECYCLING

At MSC we consider recycling in the context of a ship's lifecycle, from the moment a ship is designed through to the end of its operational life. We are committed to responsible ship recycling and seek to make a meaningful contribution to promote ocean industries that are sustainable and circular, protecting the rights of workers involved in the dismantling of our ships.

Ship recycling connects all three of MSC's sustainability priorities. Decarbonising logistics requires changes to ship design and retrofitting to accommodate new fuels and technologies, carrying significant implications for our fleet renewal programme over the coming years and decades – as well as for the emissions associated with the production and flow of ship materials and components. We are also contributing to local economic growth by enabling the livelihoods of those employed in the ship recycling industry as well as supporting local businesses engaged in the recycling of materials collected from ships. Health and safety are of paramount importance, and we are committed to addressing social challenges by promoting

human rights and supporting the welfare of workers among our ship recycling facility business partners.

There is increasing awareness of the opportunities for innovation throughout a ship's lifecycle, where what happens at end-of-life – including waste management and the recovery of valuable materials for resale, reuse or repurpose – is taken into consideration during the shipbuilding phase. While there remains a significant gap to close the loop – with shipbuilding yards often located far from ship recycling yards, which themselves are far from steel plants to which steel scrap is sent for recycling – there are existing opportunities to implement a circular approach. As industries pursue ambitious climate targets, we have an opportunity to support the decarbonisation of other hard-to-abate sectors such as steel, whose production process forms part of our own upstream emissions. Steel scrap can play an important role in reducing CO₂ emissions; in India, melting scrap steel can result in almost three times fewer emissions^[46] depending on the source of electricity). In 2022, for the third consecutive year, no MSC owned

ships were sent for recycling. In line with our operational requirements and fleet transition plan, the retirement of MSC vessels in the coming years will ensure our ongoing compliance with IMO-developed standards as well as contributing to the achievement of our decarbonisation target of net zero by 2050. These ships will be recycled at MSC-vetted ship recycling facilities and the process will be conducted in accordance with the **MSC Ship Recycling Policy**.

In August 2022 we conducted audits on twelve **Hong Kong Convention**^[47] compliant shipyards in Alang (India) as part of our vetting process, comprising a full review of administrative procedures and equipment, training and working conditions including accident management. All twelve yards complied with the requirements and were included in MSC's list of annually vetted shipyards, while an additional five to seven yards were identified for upgrading and potential inclusion. Further to the appointment of a dedicated MSC Safety Inspector in 2021, we have also been

working with local experts to develop additional capacity for shipyard inspections throughout the dismantling process. As of 2023 inspections will be conducted by a team of experts who will visit pre-vetted shipyards and monitor full compliance on environmental, health and safety, labour conditions and human rights and the downstream facilities for waste management and handling of hazardous materials. Inspectors have the right to stop work in the event of non-compliance with the MSC Ship Recycling Policy. MSC continues to engage with governments on the topic of ship recycling, including participation in past European Union delegation visits to ship recycling facilities in Alang, India (due to the COVID-19 pandemic no visits were conducted over recent years). We are encouraged by the significant progress in the Indian ship recycling industry, and welcome efforts to continue supporting local industries and further improving facility conditions towards the goal of inclusion in the European list of ship recycling facilities^[48] which to date does not yet include any shipyards in India.

[46] According to the World Steel Association, the production of one tonne of steel emits on average 1.89 tonnes of CO₂. worldsteel.org

[47] The MSC Ship Recycling Policy stipulates that MSC vessels be recycled at shipyards that are certified compliant with the technical provisions of the Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships (HKC). While adopted in 2009, the HKC is not yet in force due to the requirement of three criteria to be met. www.imo.org/en/About/Conventions/Pages/The-Hong-Kong-International-Convention-for-the-Safe-and-Environmentally-Sound-Recycling-of-Ships.aspx

[48] environment.ec.europa.eu/topics/waste-and-recycling/ships_en

An aerial photograph of a yellow truck with a long trailer driving on a dark asphalt road that cuts through a vast, dense green field. The truck is positioned in the center of the road, moving away from the viewer. The text 'FOSTERING INCLUSIVE TRADE' is overlaid on the right side of the image.

FOSTERING
INCLUSIVE TRADE



CREATING CONNECTIONS FOR A PROSPEROUS WORLD

The past century has seen tremendous gains in our overall development, thanks to economic growth and increased stability that have transformed people's lives and helped communities to thrive. However, in recent years a growing gap between and within societies has emerged, with global events simultaneously fuelling and feeding from existing structural and systemic inequalities and resulting in some benefitting more than others while others may be left behind. Without trade, the world cannot prosper. Recent disruptions in the global supply chain were a reminder of the importance of trade and investment and their interconnections with poverty reduction and economic growth, particularly in the face of evolving geopolitical dynamics, a changing climate

and to reduce risk of fragmentation in the global economy. Those with less resources have been disproportionately impacted, with many experiencing difficulties in accessing essential products and services at times of crisis. There is a need to converge and apply recent lessons to overcome disruptions, ensure societies are equipped to face uncertainty and secure our collective future. Business, and in particular the transport sector, has a critical role to play in building resilient supply chains, enabling trade and tackling inequality. Companies have a responsibility to think and act strategically, mobilising solutions to address these challenges while considering any inadvertent impacts that may exacerbate them as

well as working with others on a set of interrelated issues ranging from climate, digitalisation, economic development and preparing for the future world of work. As regulators of business and markets to align the diverse range of stakeholder interests, governments are key allies to leverage public-private partnerships with the potential to achieve truly sustainable and inclusive growth. Collaboration between business and government helps build a strong global trade system that can anticipate and withstand disruptions and, if shared equitably, the gains of trade contribute to resilient and prosperous societies. MSC's core business is about creating connections, supporting local economies around the world by removing

barriers to trade while providing opportunities for direct and indirect employment, innovation and growth. We recognise the implications of our business activities for the future development of the communities we serve, and this sense of responsibility is reflected in the way our global logistics network has expanded over the past five decades. MSC is committed to taking action on inequality by laying the strong foundations needed for future growth, building community resilience by enhancing access to essential products and services at times of crisis. We are equally focused on securing fragile economies by enabling market access in remote and vulnerable regions, developing local capacity and supporting the equitable distribution of benefits of business and trade.



CONTRIBUTING TO **ECONOMIC GROWTH**
 BUILDING **RESILIENCE ACROSS THE GLOBAL VALUE CHAIN**
 DEVELOPING **LOCAL CAPACITY AND KNOW-HOW**

BUILDING STRONG FOUNDATIONS FOR FUTURE GROWTH

2022 revealed to be another challenging year, adding complexity to a landscape already affected by conflict, post-pandemic recovery and climate change events that threatened access to essential products and services. MSC's commitment to addressing supply chain interruptions was reflected by our ongoing efforts to developing scalable solutions and mobilising resources to mitigate any negative social and economic impacts at the global level.

An integral part of MSC's sustainability strategy is to promote inclusive trade, and we are supporting vulnerable economies by removing trade barriers, ensuring the consistent flow of goods across borders as well as helping local businesses thrive by maintaining the market connections on which they depend. We seek to positively contribute for the long-term, helping to build the foundations for sustainable and inclusive growth for communities through significant infrastructural investments and continual upgrading of MSC's global logistics network. We are committed to continuously adapt, innovate and invest in solutions to address evolving trade flows, and disruptions

potentially impacting access to essential products and services. As a logistics provider our focus remains on working with actors across the entire value chain to ensure the safe and timely delivery of goods, including reliable cold chains for temperature-sensitive cargo and securing critical food corridors to communities in need.

Where enabling connectivity is vital for national GDP growth – particularly in remote or landlocked countries, which are often confronted with higher shipping costs due to their dependency on imported goods and services – MSC has been intensifying efforts to deploy integrated solutions to ensure secure and reliable links to ports. During the reporting year we continued progress in further strengthening the integration of our inland network enabling trade access for small- and medium-sized enterprises in emerging markets, reflected by the expansion of our business in Brazil, Haiti, Timor-Leste, and across the African continent following the recent acquisition of **Log-In Logistica** which will be further enhanced as of 2023 with the integration of **Africa Global Logistics**^[49].

During the reporting year MSC developed a range of solutions, such as a new service directly connecting India to the European continent, supporting the local automotive, apparel and pharmaceuticals industries and leveraging MSC's broad intermodal networks throughout Europe. In landlocked Ethiopia, our intermodal solution combines road and rail transport to facilitate imports and exports through connection to the Port of Djibouti, Ethiopia's main gateway. We also added new services supporting intra-Asia trade as well as enhanced existing services across the Pacific region, providing additional transshipment hubs and reducing transit time, boosting connections with key markets and presenting new business opportunities for exporters.

In West Africa, we launched a new service connecting Senegal's fruit, vegetable and frozen fish suppliers to key commercial partners across Europe, while in central Africa we commenced a new service to connect the Republic of Congo and Democratic Republic of the Congo with Asia, Europe and India to help our customers strengthen or create new business opportunities.

2022 saw MSC serve additional countries through the expansion of our global logistics network, bringing the benefits of global trade with our direct presence in two-thirds of the world's Least Developed Countries^[50]. As our ocean network continued to grow, we continued to focus our efforts on ensuring the equal distribution of our vessels to enhance the connectivity of local economies around the world.

As part of our preparation for the growing trade volumes forecasted for the coming decades, TiL continues to implement its investment plan as part of the MSC Cargo Division's growth strategy, and in 2022, acquired two new operational terminals in Busan (South Korea) and Los Angeles (USA), and announced expansion projects and major investments in other locations worldwide, including a greenfield project in Baltimore (USA).

The expansion of our network was also marked by the creation of **MSC Air Cargo**. Towards the end of the reporting year we announced our first step into the air freight market that we anticipate will present new opportunities and complement our core ocean freight business.

CREATING LOGISTICS ECOSYSTEMS TO ENHANCE LOCAL INDUSTRY

MSC enables the import and export of fresh produce around the world, with one-third of our containers transporting fruits sourced from Latin America during peak season, contributing to flourishing economic activity throughout the region. To support the growing market demand and contribute to logistics efficiency, **MEDLOG Peru** expanded the scope of its services by opening its first fruit packing and climatized storage facility in Piura, strategically located in the heart of the country's fruit industry and at only 35km from the port of Paita. With an area of 35,000m² and an operation that creates more than 2,000 jobs – of which 60% are occupied by women – this state-of-the-art facility serves avocado, grape and mango producers and exporters in the northern macro region of Peru. The packing facility complements MSC's reefer ocean transportation services, supporting our local customers' access to key trade centres as well as opening up new markets for their products.



[49] Acquisition of Bolloré Africa Logistics finalised in December 2022, rebranded as Africa Global Logistics in March 2023.

[50] unctad.org/topic/least-developed-countries/list



CONNECTING LOCAL ECONOMIES AND UNLOCKING POTENTIAL ACROSS THE AFRICAN CONTINENT

Every week, MSC's vessels make 123 calls at 60 different African ports. In addition to operating 50 weekly ocean services connecting Africa to the rest of the world, we have over 6,000 employees working in 72 sites and at our operations in terminals, trucking, depots and warehouses across the continent, with an additional 21,000 Africa Global Logistics employees set to join MSC following the acquisition of Bolloré Africa Logistics. The African Union's **Agenda 2063: The Africa We Want**^[51] sets out a blueprint for transforming the continent towards inclusive and sustainable development. Among the goals of Agenda 2063 are 'Transformed economies'; 'Blue/ocean economy for accelerated economic growth' and 'World Class Infrastructure criss-crosses Africa' – to which MSC is contributing through our global logistics network.

At the **10th Africa CEO Forum** in June 2022, MSC affirmed our commitment to the continent where we have been active since the first MSC shipping liner service in 1971. As part of our ongoing plans for growth to promote free, fair and affordable trade in Africa, we aim to contribute to the further development of maritime and inland transportation networks and seek to facilitate smoother intra-regional commerce within the new parameters of the **African Continental Free Trade Area (AfCFTA)** through flexible intermodal solutions.

MSC transports a range of commodities – key contributors to national and regional GDP such as coffee, cocoa, tea and cotton – connecting African farmers and small enterprises to markets around the world, ensuring their business continuity during the period of disruptions. For the second year, our support to the Ghanaian cocoa trade was recognised and we received the **Ghana Cocoa Board's Shipping Line of the Year** award. We recognise our enabling role to support access to emergency supplies and essential goods for communities, and in 2022 continued our collaboration with international and local partners to secure humanitarian supply chains, including food and trade corridors, across the African continent.

[51] au.int/agenda2063

MSC remained focused on adapting our network and adjusting our services to meet the needs of our customers, whose business was particularly impacted by the constantly changing external environment that also posed challenges for supply chain management. With disruption becoming the new normal, our industry's evolution is accelerating at an unprecedented pace, and we expect this transformation to continue in the coming years, with direct implications for local economies. MSC's business model is designed to anticipate and adapt through the development of innovative and scalable solutions in cooperation with our customers as well as other partners, maximising the value we create while minimising our impacts.

MSC has stepped up its investments in this area, opening new logistics hubs to address today's increasingly complex and fragmented supply chains. Our approach responds to an emerging regionalisation of the global economy, with remote markets converging and connecting with consumers around the world through trade flows via the sea. Today's logistics ecosystem is changing configuration, bringing together and interconnecting physical and digital infrastructure to facilitate competition and cooperation as

[52] www.mckinsey.com/featured-insights/mckinsey-on-books/the-ecosystem-economy

[53] Piano Strategico Nazionale della Portualità e della Logistica

well supporting local economies through their access to global trade. This transformation has seen the emergence of cross-industrial, ecosystems, organising themselves according to customer needs and potentially impacting on around one-third of the global GDP by 2035^[52].

As an example, MSC is contributing to enhance the connection between the Italian logistics network to the 'new domestic' market of Europe, signing a **Memorandum of Understanding (MoU)** in September 2022 with **FS Group**. Aligned with Italy's National Logistics Plan^[53] that promotes public-private partnerships for sustainable transport, the MoU sets out our joint ambition for a more reliable and sustainable supply chain through the development of intermodal solutions using maritime and rail transport. As an initial step, we activated shunting services and rail transport between **Gioia Tauro** port terminal and the intermodal hub **Interporto Padova**, linking southern Italy with one of the country's key international logistics hubs. Assessments to evaluate the potential for further synergies at the national and European levels will be undertaken on terminals, backport areas and inland ports as well as on the intermodal rail network, including

the sharing of assets such as locomotives and wagons. This strategic partnership directly impacts the local economy through employment creation as well as contributing to Italy's overall competitiveness. The intermodal hub attracts other logistics actors who themselves derive significant advantages from positioning their facilities within close distance. This new logistics ecosystem is an important enabler to foster synergies through the sharing of resources and services, also benefitting local small- and medium-sized enterprises.

As MSC continues the expansion of our ocean, road and rail, terminal and air operations we will continue to promote this collaborative approach, exploring new trade opportunities and promoting equitable access to markets. With our widely distributed global network enabling faster and more seamless connections, we are committed to investing, cooperating and actively contributing to the evolution and transformation of logistics ecosystems in the coming decades.

DRIVING LOCAL ECONOMIC GROWTH THROUGH LOCAL INFRASTRUCTURE INVESTMENT

The development of new terminals brings opportunities for local partnerships and economic growth, creating value through improved infrastructure and opportunities for increased direct and indirect employment. As part of our investment plan, in October 2022 TiL entered a partnership with Tradepoint Atlantic on a joint investment to develop a 67-hectare terminal with an on-dock rail facility at **Sparrows Point** in Baltimore (USA). The project will see the transformation of the former Sparrows Point Steel Mill into the area's third container terminal, significantly expanding container handling capacity and enabling the rapid transit of cargo to the Washington metropolitan area, the third biggest consumer market in the US. With Baltimore serving as a gateway to US domestic and global markets, the new terminal's intermodal yard will also offer the closest rail connection from the US east coast to the mid-west.

The announcement of this partnership will initiate a multi-year process of public engagement, design, permitting, and construction phases, in consultation and cooperation with local stakeholders. During this process TiL and Tradepoint Atlantic will also establish a dredge containment facility to support the terminal's development that will become part of the overall Sparrows Point environmental remediation strategy.

The new venture is expected to create more than one thousand jobs once operational – plus 17,000 direct and indirect jobs during its development – and will serve as a major driver of economic growth in the US Mid-Atlantic region.

SUPPORTING ACCESS TO TRADE THROUGH DIGITALISATION

Digitalisation is critical in the evolution and efficiency of trade against the fast-changing global landscape, addressing disruptions and supply chain bottlenecks and with related benefits that support our industry's energy transition. At MSC, we embrace innovation and are energised by our industry's ongoing digital transformation. We believe that by equipping ourselves with technology and digital tools, we are strengthening our business to face the challenges of tomorrow.

Technology has become a core part of shipping and logistics, with digitalisation playing an important role in improving MSC's global operations as well as shaping our relationships with key stakeholders including how we engage and partner with ports. This is why we incorporated blockchain, robotics and drone technologies to enhance existing processes, conducted virtual reality seafarer training as well as used artificial intelligence to improve our energy efficiency and lower our CO2 emissions.

One of the most important trade documents for shipping, the bill of lading accounts for 10-30%⁵⁴ of total trade documentation costs. Moving away from paper-based and manual processes towards digitalisation builds resilience into supply chains, avoiding unnecessary costs and enabling trade while making available information on which to base decision-making and swift action. In addition to reducing paper waste, the **electronic bill of lading (eBL)** enhances customer experience as it can be immediately processed, as well as ensuring security as e-documentation cannot be

lost nor forged. The use of MSC's eBL solution increased by 65% compared to 2021, providing our customers with greater visibility and resulting in more secure, reliable and cost-efficient shipping and logistics services – particularly for small and medium-sized enterprises. Alongside our Digital Container Shipping Association (DCSA) carrier members, we are committed to transition to a 100% fully standardised eBL by 2030 to accelerate the digitalisation of trade.

MSC's **IoT-enabled** (Internet-of-Things) **smart containers** generate useful data that facilitates better visibility and traceability of cargo, including the possibility of geo-tracking containers, as well as ensuring their integrity and safe delivery. Smart containers also provide data to monitor container door opening and closing, preventing illicit trafficking, enabling early detection of smoke and protecting our crew and communities. During the reporting year, MSC continued exploring how to improve the detail and accuracy of tracking data, including on temperature and humidity levels.

MSC Technology supports the digital journey of MSC's business as well as that of our wider industry, with a team of more than 2,500 people – in Belgium, Chile, Greece, India, Italy, Latvia, Singapore, Switzerland and the US – specifically focused on digitalisation, cybersecurity and logistics process automation, facilitating more seamless access to the global trade system for all our customers.

[54] www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/the-multi-billion-dollar-paper-jam-unlocking-trade-by-digitalizing-documentation



PARTNERING ON DIGITAL TRADE AND STANDARDS

As a founding member of the **Digital Container Shipping Association⁵⁵ (DCSA)**, MSC works with industry peers to promote neutral open-source digital standards to facilitate data sharing, enable interoperable digital solutions as well as the widespread adoption of new technologies.

In 2022 MSC welcomed the creation of **Future International Trade (FIT) Alliance⁵⁶**, bringing together five leading industry associations to standardise digital trade through common and interoperable data standards and common legislative conditions across international jurisdictions and platforms.

As part of our collaborative approach to improve efficiencies, MSC joined the **Freight Logistics Optimization Works⁵⁷ (FLOW)** data sharing initiative led by the US Department of Transportation, working with supply chain partners including port authorities, terminal operators, shipping and logistics companies as well as other businesses to develop a new digital tool for supply chain data sharing, improving information exchange and leading to faster delivery time as well as reduced costs for consumers.

[55] dcsa.org

[56] FIT Alliance members include: DCSA, BIMCO (Baltic and International Maritime Council), FIATA (International Federation of Freight Forwarders Associations), ICC (International Chamber of Commerce) and SWIFT (Society for Worldwide Interbank Financial Telecommunication)

[57] www.whitehouse.gov/briefing-room/statements-releases/2022/03/15/fact-sheet-biden-harris-administration-announces-new-initiative-to-improve-supply-chain-data-flow



BUILDING RESILIENCE ACROSS THE GLOBAL VALUE CHAIN

The global economy is powered by a trade system that is reliant on supply chains to function. Resilient logistics and supply chains are key to catalysing the transformation of fragile economies and ecosystems as well as boosting their ability to address challenges related to insecurity, geopolitical instability and our changing climate. At MSC we are committed to building resilience in logistics, supporting our customers and contributing to economic development through sustainable and inclusive value chains whose benefits can be enjoyed by all communities. Working towards a more equitable world requires

addressing the root causes of inequality, including the structural transformation needed to close social and economic gaps. With our operations across all continents, we seek to show leadership and actively contribute by adapting MSC's business model, working closely with our key stakeholders to address new and evolving challenges. For this reason in 2022 we joined the **Business Commission to Tackle Inequality⁵⁸ (BCTI)**, a cross-sector multi-stakeholder coalition of more than 60 organisations focused on the challenge of mounting inequality.

[58] tacklinginequality.org

JOINTLY CATALYSING ACTION TO TACKLE INEQUALITIES

At MSC we believe there is a clear and compelling case for action to tackle inequality, contributing to a restoration of trust in our systems, enhancing the stability of societies and generating sustainable economic growth. Our business also stands to benefit such as securing license to operate, attracting and retaining talent as well as strengthening the relationships with customers and our value chain partners.

MSC is working closely with global leaders from business, intergovernmental organisations, civil society and academia in the context of the **Business Commission to Tackle Inequality (BCTI)** – launched in 2021 by the **World Business Council for Sustainable Development (WBCSD)**, of which we are a member – to put addressing inequality at the heart of business' agenda for sustainable growth.

Alongside our fellow BCTI Commissioners we seek to jointly catalyse action to address inequality as a systemic risk, generating shared prosperity for all by driving greater levels of business awareness, investment and action in proportion to the urgency and scale of the challenge. MSC actively engages in the BCTI, sharing case studies and collaborating with our peers to set out an agenda for action, rooted in respect for human rights and a commitment to equity and social justice, that we as a business community can leverage to drive impact at scale. MSC welcomes this interconnected agenda and its accompanying set of actions, to ensure that the underserved in our communities have better access to essential products and services; to create and sustain jobs and economic opportunities for all; to distribute value and risk equitably; and to support and encourage governments in playing their role effectively. The agenda for business action to tackle inequality must also include efforts to arrest climate change and nature loss, as well as mitigate their impacts on the most vulnerable.



As the period of uncertainty continued throughout the year, MSC maintained its focus on resilience-building with a flexible approach, working with customers and other stakeholders towards the goal of a robust and reliable supply chain system capable of withstanding unexpected shocks. Reliability and accountability became increasingly relevant for our business partners, and to ensure continuity of trade we leveraged our agile business model and efficient decision-making to address congestion and supply chain disruptions. To support our customers' operational resilience and ensure their business continuity, we drew on our expansive and strategic asset ownership and integrated network to act quickly, continuously reassessing our internal processes and adjusting existing and opening new temporary routes in response to the unpredictable events including those resulting from the conflict in Ukraine. Sanctions imposed on and by Russia and Belarus have had a massive impact on international trade, affecting direct trade with these countries, severing key transport links with the

rest of the world and disrupting trade. Russia's connections to European ports have been cut and exports to other destinations continued to be constrained, while Ukraine's Black Sea ports have been blockaded or occupied, leaving the country few route options for its commodity exports. Transport by rail through Russia has been slowing due to sanctions compliance checks and further rounds risk halting rail transit entirely, with consequences ranging from a shortage of food products, raw materials and components to cancelled trade routes, fluctuating demand and price increases – serving as a reminder of the dependence of global supply chains on shipping and logistics. Since March 2022 MSC has been collaborating with the **EU-Ukraine Domestic Advisory Group-DG TRADE** to ensure the implementation of efficient alternative inland logistics solutions to re-route shipments from Ukraine via neighbouring countries such as Poland, Romania and Moldova. Our integrated network of rail, barges and trucks has also been instrumental in maximising intermodal and

transshipment operations via the Port of Trieste. Drawing on our expertise we advocated and contributed to the creation of preferential corridors to expedite empty containers crossing the borders to avoid adding to existing congestion in ports and depots while facilitating the continuity of trade. In parallel, MSC has been working to mitigate further disruptions generated by new or changing custom restrictions, compliance requirements and policy measures introduced by others in the logistics and financial sectors affecting our ability to serve ports and inland destinations. The conflict in Ukraine has presented an additional layer of inequality challenges in terms of the accessibility and affordability of essential products and services – both in the immediate area of conflict as well as more remote regions. With more than half of the World Food Programme's wheat coming from Ukraine, the conflict impacted access to the essential grain for many developing countries, with potential implications for inflation and their stability. African countries who had previously sourced large quantities of

grain from Ukraine have been forced to transport the same volumes from suppliers located further away. As access to essential goods is among the fundamentals needed for social prosperity, we concentrated our efforts on finding solutions and defining new corridors – including rail and road – to avoid ports impacted by the conflict and ensure the safe and timely delivery of goods. In compliance with the sanction regime and regulations applicable to bookings to and from Russia, MSC only accepted and screened shipments of food, medical and humanitarian goods, subject to the inspections and operational constraints. New patterns of global trade development have emerged, along with changing dynamics that are expected to play a crucial role in transforming the industry and impacting business models. The importance of crisis preparedness and response was emphasised, as well as the need for a resilient global supply chain to support customers and communities during times of need. MSC, at the request of the White House COVID-19 Response Team, swiftly



arranged complex logistics operations to help US healthcare organisations receive essential medical equipment from Japan in record time. To overcome the severe congestion affecting West Coast ports and terminals, MSC altered the cargo's routing, saving a month's worth of shipping time. The cargo, consisting of over 14 million blood collection devices, was redirected to Canada and then transported to its final destination by rail.

Also affecting the resilience of our global trade system are more frequent extreme weather events and rising sea levels due to climate change. Supply, transport and distribution chain infrastructure are increasingly exposed to such disruptions, directly impacting productivity due to supply shortages with potential implications for costs of trade in the short-term. In the longer term, our changing climate is expected to affect the competitive advantages of countries in terms of their participation in global trade,

with uneven knock-on effects across regions. Smaller economies and landlocked countries trading through a limited number of ports and routes can suffer significant trade disadvantages and bottlenecks from climate-related disruptions.

Trade and climate action are imperative to sustainable development. As a global logistics operator MSC is particularly exposed, with maritime transport being more affected by climate change than other modes. We are leveraging our role as an enabler of trade to make a positive contribution to addressing climate risk, taking active steps in prevention, reduction and preparedness. For this reason we are working to better understand the potential opportunities and costs related to climate adaptation while ensuring our readiness to support our customers and secure the connections they need for resilient supply chains.

As organisations and economies thrive, jobs are created, incomes rise and the increased demand stimulates innovation and new investments. Companies play an important role in building more inclusive societies, with education and employment opening up opportunities that go beyond the worker and with an impact that can last for generations.

MSC generates value by fostering economic growth through employment opportunities and the development of local capacity, transferring the technical knowledge needed to participate in international trade and equipping tomorrow's workforce with the skills to face future logistics challenges. The infrastructure and operations related to our maritime, terminals and inland logistics businesses – including depots and warehouses – offer opportunities for upskilling and reskilling, further empowering our industry's workers as they navigate supply chain disruptions and the energy transition.

We recognise the indirect impacts of our activities on local business partners as we create demand for technical expertise and competencies in key areas such as digitalisation, decarbonisation, shipbuilding, dry-docking and retrofitting and their related supply chains, developing specific expertise across the whole value chain. Our key role in the blue economy extends to our interactions and activities related to land-based marine actors.

With our growth following the recent strategic acquisitions, we are expanding our presence in parts of the world and are in a unique position to positively contribute in countries where education, safe and secure employment are key factors in reducing inequalities. We have a responsibility to invest in human capital, and for this reason we are pursuing all opportunities to maximise our impact through the direct and indirect development of competencies, across and beyond shipping and logistics.

ADAPTING AND RESPONDING TO FLOODS IN PAKISTAN

Among the record-breaking extreme weather events that took place in 2022, floods in Pakistan affected 33 million people, with 1,700 losing their lives and displacing more than 8 million people⁵⁹. Affecting 9-10% of the country, a World Bank assessment estimated total damages to exceed USD 14.9 billion and total economic losses to reach about USD 15.2 billion.

Inland logistic operations were paralysed along the River Indus for several weeks, with services using the already weak rail and road infrastructure becoming blocked. Roads and rail tracks were washed away by the unprecedented rains, and there was a severe lack of fuel and food supplies in the transit routes during and after the floods. Export cargo from the north and import northbound cargo suffered stranding and destruction, resulting in a significant drop in export volumes.

In response to the exceptional situation, **MSC Pakistan** reacted swiftly to support customers affected by the disaster, extending free time for northbound import cargo, reducing cut-offs and requesting terminals to waive rollover and storage charges for export cargo delayed by road blockages from Pakistan's north, to ensure connections with departing vessels. We offered continuous support to our customers, facilitating the entry of cargo into the port after hours as well as provided flexibility in cases of bookings amendments due to the crisis. In cooperation with the **MSC Foundation**, we have also been collaborating with the Pakistani authorities through the local non-governmental organisation Lasoona, providing access to safe drinking water and rehabilitating communal and public water supply schemes for people affected by the floods. Schools will be targeted for rehabilitation of water, sanitation and hygiene (WASH) infrastructure including the construction of latrines, handwashing facilities as well as the rehabilitation of water supply by the end of 2023 supporting 1,500 households impacted by the floods and living in extreme poverty.

^[59] www.worldbank.org/en/news/press-release/2022/10/28/pakistan-flood-damages-and-economic-losses-over-usd-30-billion-and-reconstruction-needs-over-usd-16-billion-new-assessme





BUILDING A RESILIENT OPERATING MODEL WHILE INVESTING IN HUMAN CAPITAL AT OUR TERMINALS

Taking a long term view, we seek to build an operating model that evolves and adapts to the landscape, leveraging the opportunities presented by the future world of work. At TiL we embrace automation as an opportunity to both densify and optimise our operations as well as further developing our human capital, with job creation, attracting and retaining talent integral to our terminal automation plans.

Operating partially or fully automated terminals that move more volume will require at least the same or more workers, creating training opportunities for our workforce to upskill and develop new competencies working with new technologies. Through project development and increased volume, we also anticipate automation to become an engine for job creation on our densified terminals and beyond.

Building a resilient operating model is one the major challenges our industry is expected to face in the coming decades, requiring a broad approach and includes employee empowerment across the logistics value chain including our entire workforce as well as those of our external partners. At MSC we recognise the need to continually adapt in response to our evolving external environment including changing customer expectations, and we see this as an opportunity to unlock human potential while also fuelling innovation.

Our longstanding collaboration with educational institutions has seen us contribute maritime expertise, equipping workers with the industry know-how and skillsets needed for the future world of work. We seek to go beyond traditional

training, offering strategic insights and empowering them to consider a complex future impacted by technological evolution and the transition to net zero already underway. Specifically, we believe in creating opportunities and attracting the new generation of young workers such as the internships and on-the-job training programmes offered by **MSC Dominican Republic, MSC Mozambique** and **MSC South Africa**, developing competencies in shipping and logistics. These include sea safety certifications that open up new employment opportunities both on board vessels and ashore. In 2022 MSC and **MEDLOG South Africa** continued its collaboration with local government to train and place disadvantaged young people in the areas of hospitality, ship maintenance and repair. In addition, MSC

and MEDLOG South Africa have for several years conducted a three-year learnership programme with qualifications in international trade, clearing and freight forwarding and shipping. In the region of 900 disadvantaged young people have been upskilled through this programme, of which 150 were employed on permanent basis by MSC.

Higher education institutions are a valuable partner for exchanging knowledge, engaging with communities and expanding the local talent pool for our industry's future. **MSC Montenegro** signed a cooperation agreement with the Faculty of Maritime Studies in Kotor at the University of Montenegro, as well as with the Maritime Faculty Bar at Adriatic University, providing internships for students of their maritime and shipping

programmes. **MSC Shared Service Center Riga's** ongoing collaboration with the University of Latvia included the delivery of lectures as well as participating in mentoring programmes, while **MSC Hungary**, **MSC Lithuania** and **MSC Technology Italy** also cooperated with local universities and maritime academies.

Focusing on a more junior audience to inspire and raise awareness of maritime careers and the important contribution of shipping to global trade, MSC Shipmanagement continued to participate in the **Adopt a Ship⁶⁰** programme. Working in partnership with the Cyprus Shipping Chamber, students from primary schools in Cyprus were connected with Masters and crew members on 35 MSC ships in 2022.

[60] www.adoptaship.org

BUILDING LOCAL CAPACITY FOR PEACE, SECURITY AND DEVELOPMENT

Communities impacted by conflict often face disruptions and challenges in trade access, exacerbating inequality and threatening stability. Business has an important role to play in building capacity for long-term peace, security and sustainable development, working in close collaboration with governments and academic partners.

Following decades of conflict and insecurity, a peace agreement between the Government of Mozambique and the Mozambican National Resistance (RENAMO) – the Maputo Accord for Peace and National Reconciliation – was signed in 2019. With disarmament, demobilisation and reintegration a central component of the Accord, companies are supporting former RENAMO combatants and their families by offering employment and training opportunities to facilitate their reintegration into society, promoting their self-sustainability as well as that of their families and surrounding communities.

MSC Mozambique continued its support of the peace process, collaborating with the **Swiss-Mozambican Chamber of Commerce** as well as the **UN Peace Process Support Secretariat (PSS)** and recruiting a former combatant for its six-month internship programme. This collaboration and support for capacity development in transport and logistics was recognised by the Personal Envoy of the UN Secretary-General for Mozambique.

MSC Mozambique also collaborated with the **German Agency for International Cooperation (GIZ)**, bringing on board four interns that will form part of the future talent pipeline across MSC offices, warehouses and depots across the country. The partnership with GIZ is part of the **Employment and skills for development in Africa (E4D) project**, a public-private initiative in Ghana, Kenya, Mozambique, Nigeria, South Africa, Tanzania and Uganda aiming to boost employment, raise incomes as well as enhance the business capacity of local enterprises. The E4D project in Mozambique is expected to contribute to the country's economic development, working with local partners – including the Association of Transporters in Nampula and Lúrio University – on a digital marketplace for logistics services, providing training on business skills and health and safety in the workplace as well as facilitating access to new markets.



SUPPORTING HUMANITARIAN EMERGENCIES

MSC is committed to supporting sustainable development, building resilient global supply chains for the safe and timely delivery of lifesaving supplies, particularly at times of crisis. By capitalising on our assets and expertise and going beyond our core business we can make a difference, helping communities respond to emergencies and securing local economies in their post-crisis recovery.

In addition to the delivery of aid to communities affected by natural disasters and conflict, MSC's Cargo Division

collaborated with the **MSC Foundation** to respond to humanitarian emergencies emerging across the world through projects or initiatives in collaboration with partners with whom we have built close relationships over the years. Throughout 2022 members of the global MSC family came together to support those affected by the crisis in Ukraine, partnering with local authorities and non-governmental organisations on a range of initiatives.

We have been inspired by the innovative repurposing and reuse of MSC containers to serve communities in need.

UNITING FOR UKRAINE

MSC offices across the world united with the MSC Foundation in their support to those impacted by the conflict in Ukraine, raising funds worldwide and donating essential goods for Ukrainian refugees in collaboration with the UN Refugee Agency (UNHCR). In addition, **MSC Italy** (Le Navi) donated a container to the Italian Red Cross to support the humanitarian response in the local community, while **MSC Spain** provided twenty containers to transport 800,000 kg of relief items in partnership with the **Spanish Agency for International Development Cooperation, Spanish Ministry of Internal Affairs, Embassy of Ukraine in Spain** and the transport company TRANSFESA. MSC's Corporate Headquarters and the MSC Foundation collaborated with **Switzerland for UNHCR**, donating 40,000 sleeping bags, 10,000 folding/camping beds and 80,000 high-thermal blankets, as well as providing the transportation of forty containers with relief items from UNHCR warehouses to support refugees from Ukraine in neighbouring countries and also those who remained in-country.



For more than a decade MSC has supported **Operation Smile**, one of the largest surgical volunteer-based non-profits dedicated to improving the lives of children providing safe surgery for those born with cleft lip and cleft palate. In addition to annual fundraising activities conducted by **MSC Guatemala** and **MSC USA, MSC UK** and **MSC Madagascar** worked together to transport critical medical equipment from Grangemouth (UK) to Tamatave Port (Madagascar), which was then transported inland by MEDLOG to Joseph Ravoahangy Andrianavalona hospital in Antananarivo. **MEDREPAIR Antwerp** transported six containers of medical goods from Germany to El Salvador for the Children's Heart Clinic mobile hospital. A longstanding humanitarian partner of MSC through the

MSC Foundation, **Mercy Ships** is a global charity that uses hospital ships staffed by volunteer crews to deliver free, safe and modern healthcare and surgery. In 2022 Mercy Ships performed 12,583 surgical and dental procedures as well providing training and mentoring to 1,221 African healthcare professionals in six countries across the continent. May 2022 saw the naming ceremony of the Global Mercy in Dakar (Senegal), a 174-metre purpose-built hospital ship which will be used as a floating hospital and training centre with capacity for 950 people on board. Equipped with six operating theatres, hospital beds for 200 patients, a full laboratory and simulation training areas, the Global Mercy will enable access to life-transforming surgery for hundreds of thousands of people in its lifespan and is due to

enter service in Africa in January 2023. Through the MSC Foundation, **MSC** and **MEDLOG Belgium** transported equipment to Antwerp during the final stages of the Global Mercy's outfitting in 2021 before it set sail for Africa, while **MSC Sierra Leone** supported preparations for its arrival and received imports on Mercy Ships' behalf – including support in introductions to local stakeholders including local authorities, transporters, customs brokers, among others – over a period of 10 months prior to the vessel's arrival. We remain committed to supporting communities affected by natural disasters, working hand in glove with the MSC Foundation. The MSC Foundation through **MSC Haiti** donated eight containers for the ongoing humanitarian operation following the August 2021 earthquake, for use

as community spaces as well as for storing relief items. **MSC Belgium, MSC Pakistan** (in collaboration with **MSC Switzerland**) and **MSC South Africa** donated funds and essential goods as well as supplied containers following floods in Belgium, Pakistan and South Africa. We have also been working with the MSC Foundation to support emergency responders in Greece and Madagascar, with **MSC Greece** contributing funds for the Hellenic Fire Department to purchase 100 transponder receiver (ICT) kits. **MSC France** and **MSC Madagascar** provided transportation for firefighting vehicles (including an off road fire truck, ambulance, off road command vehicle) and equipment contributing to the establishment of the city of Antsirabe's first fire and rescue unit.

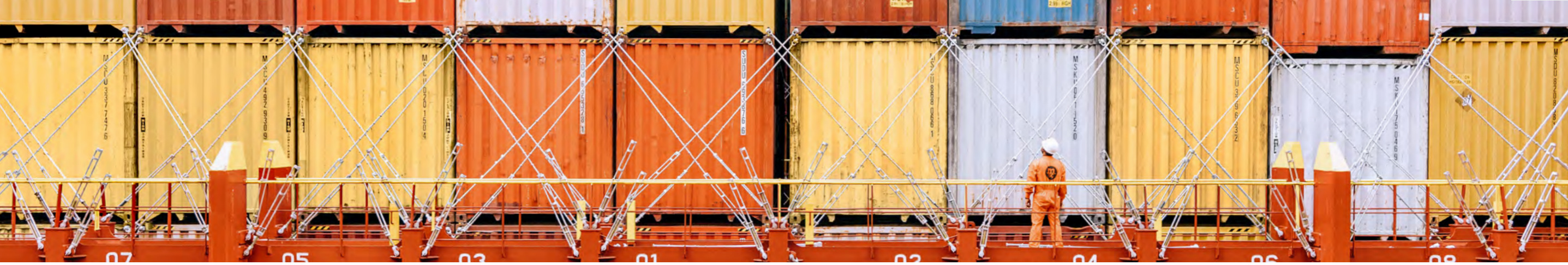


SUPPORTING COMMUNITIES WITH CONTAINERS

In addition to transporting goods, MSC containers have proven valuable to communities who have found innovative ways to reuse MSC containers. Containers donated by **MSC Ecuador** and **MSC Switzerland** in partnership with the MSC Foundation have been transformed into a mobile medical clinic (providing dentistry, psychology and general medicine) for low-income communities in Guayaquil (Ecuador) as well as four school libraries in remote areas of Burkina Faso. **MSC El Salvador** with the MSC Foundation donated five containers to the **World Food Programme** in October 2022 as part of the 'Kitchen in a Box' project that supports their school meals programme. The containers will be transformed into rural kitchens for the safe food storage, preparation and consumption of meals for students.



ADDRESSING
**SOCIAL
CHALLENGES**



PREPARING FOR THE NEW WORLD OF WORK

The increased complexity and interconnectivity of our social, economic and trade systems compounded by unpredictable and fast evolving global events have profoundly impacted our supply and value chains. This in turn has affected the world of work, requiring a new and different working environment being shaped by and adapting to the still evolving landscape. Relationships between businesses and their stakeholders are also being redesigned to address these emerging social challenges. Adopting a people-centred approach has become more important than ever. With business accounting for some 80% of all jobs worldwide⁶¹, companies play a fundamental role in people's lives and livelihoods. Ensuring equitable access to opportunities that prioritise diversity, equity and inclusion can have long-term implications and impacts on workers and their employers.

Acceleration in digitalisation, automation and artificial intelligence is already affecting jobs, workplaces and entire

sectors around the world, presenting both challenges and opportunities. The World Economic Forum⁶² estimates that by 2025, 85 million jobs may be displaced by a change in the division of labour between humans and machines, while 97 million new roles may emerge. At the same time, the energy transition is expected to eliminate 185 million jobs, while creating another 200 million⁶³. Ensuring that the workforce of today and that of tomorrow are empowered to thrive in the evolving world of work will be a priority over the next decade, requiring companies to adapt their people strategies to face the rapid technological innovation and the shift to a net-zero economy.

The complexity of today's expanding and interconnected value chains is expected to significantly impact all sectors and a large portion of the global workforce. Shipping and logistics will be highly affected by this transformation, with new job profiles expected to emerge and requiring the development of new skillsets over time. The latest Seafarer

Workforce Report⁶⁴ highlighted a current shortfall of 26,240 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) certified officers, indicating that demand for seafarers in 2021 has outpaced supply, possibly due to a reported increase in officers needed on board vessels. There is also a shortage of officers with technical experience especially at Management Level, and in the tanker and offshore sectors there is a reported shortage of Management Level Deck Officers. Our industry is also experiencing a severe labour shortage impacting supply chains on a global scale, with over 2.6 million truck driver jobs unfilled in 2021⁶⁵. Terminals are also experiencing rising strike actions from dock workers, as labour availability remains a challenge. Top of the agenda will be the adoption of a proactive approach to preparing workers and employers, attracting and retaining talent and ensuring the availability of critical competencies. Putting respect for human

rights at the centre of these efforts will be key to creating transformative change and contributing to the global imperative of improving people's lives.

From our standpoint as a global logistics player and through our expertise on keeping the world moving, we believe the majority of our value creation will come from our people. We are committed to conducting our business responsibly, promoting the respect of human dignity and the rights of people across our value chain. Engaging our customers, industry peers, business partners and the international community remained central to how we address the challenges on the horizon impacting our direct and indirect employees. With the opportunities presented by the new world of work we are committed to advancing human rights, investing in our human capital through the promotion of diversity, equity and inclusion as well as engaging our business partners and the communities in which we operate.

[61] tacklinginequality.org

[62] www.weforum.org/reports/the-future-of-jobs-report-2020/

[63] www.mckinsey.com/capabilities/sustainability/our-insights/the-net-zero-transition-what-it-would-cost-what-it-could-bring

[64] www.ics-shipping.org/publication/seafarer-workforce-report-2021-edition/

[65] www.iru.org/resources/iru-library/driver-shortage-global-report-2022



ADVANCING **HUMAN RIGHTS**
 PROMOTING **DIVERSITY, EQUITY AND INCLUSION**
 ENGAGING OUR **SUPPLY CHAIN**

PUTTING HUMAN RIGHTS AT THE CENTRE OF ALL WE DO

The protection and promotion of human rights is fully integrated in MSC's Sustainability Roadmap, addressed through cross-functional cooperation and our systematic human-rights based approach in relation to **Human Rights Due Diligence (HRDD)**, promoting a shared vision and a common framework of action while respecting the business specifics of each entity. We continued to focus our efforts on developing internal initiatives to improve processes and procedures in accordance with the current regulatory landscape as well as expected developments in local, regional and international legislations. These include developments related to mandatory corporate due diligence frameworks, sector-specific human rights-related issues and broader considerations addressing shifts in employees' expectations as a result of the global pandemic and growing labour-related challenges. We also progressed on our Sustainability Plan to ensure the integration of emerging human rights issues – including sector-specific considerations – into the work of relevant departments and entities across the Cargo Division, identifying salient emerging human rights risks impacting our employees

worldwide and our people at sea, with implications for our operations as well as impacting global supply and value chains. Key salient human rights risks were assessed through a variety of tools and resources to capture the views of both internal and external stakeholders. For our internal stakeholders, the MSC Speak-Up Line, employee surveys and social audits have informed our approach. Our external stakeholder engagement has revealed an evolution in human rights impact assessments in recent years, reflecting the pandemic and wider economic and geopolitical dynamics impacting corporate due diligence landscapes. These developments led to increased and evolving compliance expectations among our customers and business partners.

As per current practice, our reporting approach follows the **UN Guiding Principles Reporting Framework**⁶⁶, integrating the most significant impacts on human rights identified through ongoing internal and external consultative processes as well as describing our efforts to address these – both as a single company and in collaboration with relevant stakeholders.

ENGAGING WITH OUR STAKEHOLDERS TO ADVANCE THE HUMAN RIGHTS AGENDA

In line with our commitment to advance the global Business and Human Rights agenda, MSC continues advocating for the need to integrate human rights standards for seafarers into existing corporate HRDD processes by all sectors using the services of maritime freight transport. In the absence of official guidance from regulators and industry associations, since 2019, we have been developed ad hoc contractual requirements with a focus on emerging risks related to human rights of seafarers, proactively promoting their inclusion into commercial service agreements with customers and business partners. Through the **Responsible Shipping Dialogue**⁶⁷, MSC continued engaging with major cargo owners, non-governmental organisations, seafarers' representatives and others to propose practical ways of implementing the **Delivering on Seafarers' Rights Code of Conduct**⁶⁸ and developing model clauses for inclusion in contractual requirements. Building on this momentum, we collaborated with customers and business partners to raise awareness of the need to address human rights standards for seafarers in due diligence processes. Efforts

in this regard focus on operationalising the UN Guiding Principles on Business and Human Rights (UNGPs) by promoting a shift from a 'traditional' approach to HRDD to a 'risk-based approach' based on shared responsibility. This resulted in enhanced cross-sectoral collaboration, promoting improved understanding among our stakeholders as well as addressing the root causes of systemic human rights and broader social challenges across supply chains. In parallel, MSC further strengthened our advocacy work with regulators, industry associations and the international community – including at the **9th session of the UN Conference on Trade and Development (UNCTAD) Multi-year Expert Meeting on Transport, Trade Logistics and Trade Facilitation** – calling for official guidance to support companies using ocean transportation in aligning due diligence processes with the specifics of the international shipping sector. We have also called for the creation of model clauses to address seafarers' human rights risks as well as shipping's evolving operational challenges.

[66] www.ungpreporting.org

[67] www.ihrb.org/focus-areas/oceans/shipping

[68] *Delivering on Seafarers' Rights: Code of Conduct* was developed by the Sustainable Shipping Initiative (SSI), Institute for Human Rights and Business (IHRB) and Rafto Foundation for Human Rights www.sustainableshipping.org/resources/seafarers-rights-code-of-conduct/

COLLABORATING WITH OUR CUSTOMERS TO OPERATIONALISE THE UNGPS

MSC collaborated with the Australian supermarket and retailer **Coles Group** (Coles) to address the wellbeing of seafarers and other related human rights risks through our commercial service agreements. Recognising the impact of COVID-19 restrictions on human rights impact assessments and evolving modern slavery risk profiles, we engaged a range of internal functions across our respective companies – including sustainability, procurement, legal and commercial teams – to develop dedicated modern slavery clauses for incorporation in contractual requirements. Coles has since incorporated these clauses in their Modern Slavery Statement⁶⁹, adopting them as best practice for use in other international shipping commercial contracts. With the aim of putting contractual terms into practice through human rights due diligence, we also initiated a pilot project to track how human rights-related contractual compliance obligations are implemented on the vessels used to transport Coles' shipments. The first agreement of its kind between MSC and our customers, this project enabled tracking and reporting on the 24 vessels fully owned by MSC, out of more than 200 vessels used for Coles' shipments during the contract period, capturing 842 seafarers on board. We also reviewed together the trade routes used for Coles' shipments, exploring other indicators for potential tracking – beyond seafarer numbers and shore leave – including safe repatriation and crew changes, monitoring and evaluation of crew wellbeing initiatives as well as seafarer training initiatives on their rights, grievance mechanisms and reporting channels. Initial results showed ongoing challenges directly impacting our people at sea, including constant changes in COVID safety requirements at several ports - which in some instances resulted in seafarers remaining onboard vessels longer than eleven months. MSC subsequently

[69] www.colesgroup.com.au/FormBuilder/_Resource/_module/ir5sKeTxxE0ndzd00hWJw/file/Modern_Slavery_Statement.pdf

[70] unglobalcompact.org.au/wp-content/uploads/2022/12/Modern-Slavery-within-Maritime-Shipping-Supply-Chains.pdf

addressed these challenges by engaging directly and requesting permissions from the relevant flag states, with additional measures taken to support the wellbeing of our seafarers. This initiative was recognised by the **UN Global Compact Network Australia** and incorporated in their **Modern Slavery within Maritime Shipping Supply Chains**⁷⁰ guidance. MSC and Coles will continue to collaborate in order to promote and further scale human rights due diligence processes.

International standards as set out in the **Maritime Labour Convention 2006, as amended (MLC, 2006)** – are vital for ensuring decent living and working conditions of seafarers onboard. MSC welcomes the increased international attention paid to supporting the seagoing workforce, including the recent efforts to ensure that these standards and associated guidelines remain fit for purpose and updated in light of the ongoing challenges worldwide, especially those faced by seafarers. Representing the Swiss Shipowners Association as a member of the Shipowners' Group, MSC participated in the discussions on proposed amendments to the MLC, 2006, as amended. Drawing on recent experience during the pandemic, the **ILO Special Tripartite Committee (STC)** agreed on eight amendments to the MLC, 2006, as amended, recognising and supporting seafarers' health, safety and overall wellbeing. These included requiring personal protective equipment to be made available in different sizes to fit men and women seafarers, as well as clarifying access to drinking water, quality provisions and balanced diets as part of the existing food and catering rules. The Committee also agreed on a number of resolutions related to bullying and harassment onboard ships, financial protection of seafarers in cases of abandonment as well as access to means of contractual redress for seafarers. These amendments will enter into force on 23 December 2024. We also welcome the 2022 agreement of the Subcommittee on Wages of Seafarers of the ILO Joint Maritime Commission that increased the recommended monthly basic wage figure for an able seafarer, commencing on 1 January 2023.



MSC PEOPLE: OUR STRENGTH, OUR SUCCESS

MSC's people are our greatest asset, the source of our strength and central to our success. It is only with their dedication, passion and engagement that MSC can connect the world and deliver on our Purpose. In 2022 MSC's Cargo Division continued to grow organically, with more than 150 nationalities represented. In the coming years we expect to grow further, progressively integrating colleagues from our recent acquisitions and enriching all areas of the business.

Reflecting our core values and our culture, MSC's people

management approach recognises our diverse workforce at sea and onshore, valuing the unique contribution of each individual – many of whom have developed long-term relationships with our company. Our focus remains on inclusivity and capitalising on the precious expertise, technical capabilities and diverse perspectives of the global MSC family, as well as fostering a culture of authenticity and a workplace based on ethics, respect and team spirit. For the second year, we were proud to be recognised in **Forbes' World's Best Employers 2022**⁷¹.

In today's challenging and fast evolving working environment, an engaged global workforce is critical for our industry to successfully navigate the transformation underway. At MSC we seek to create a workplace where our people can thrive – both personally and professionally – and are committed to investing and supporting their career pathway and the development in preparation for the new world of work.

An integral part of MSC's people strategy is the continuous monitoring of our progress, engaging our people and

listening and learning from their feedback. In 2022 we concluded the global **MSC Employee Engagement Survey**, conducted in twenty languages and rolled out through three waves during 2021-2022. The results of this survey provided valuable insights to facilitate open dialogue among teams, identify areas for improvement including employee development and training activities and our overall way of working, as well as reinforcing the strengths that make us unique as a company.

[71] www.forbes.com/lists/worlds-best-employers/

SUPPORTING OUR COLLEAGUES AFFECTED BY CONFLICT

February 2022 marked the beginning of the Russia-Ukraine war, a conflict that has displaced millions of people, disrupted economic activities and created an unprecedented energy crisis. Since the outset of the conflict, MSC has supported affected employees and their families (more than 3,300), providing financial aid and shelter including additional medical insurance for relatives, coordinating relocations and supporting repatriation, among other initiatives. **MSC Moldova** facilitated the relocation of Ukrainian colleagues and their families from Odessa to Chisinau, while **MSC Shipmanagement** set up an emergency relief fund with donations from the company and MSC people to support our Ukrainian seafarers and their families, providing hotel accommodation and medical insurance as well as supporting repatriation for those with homes in Ukraine wishing to return to their country.

MSC employees around the world showed their solidarity by contributing to a global fundraising campaign, with donations matched by the **MSC Foundation** and directed towards the **UN Refugee Agency** (UNHCR – see page 100). MSC continues to monitor the evolving situation, adapting our protocols and support according to the needs of those affected by the conflict.

EQUIPPING OUR WORKFORCE FOR THE FUTURE

The post-pandemic global labour market is seeing a profound evolution in job profiles and skills, with new ways of working emerging and higher expectations of workers impacting the availability and location of jobs in shipping and logistics. Digitalisation, technological innovation and the energy transition are forces that will

shape our workforce, reducing manual tasks and time-consuming inefficiencies along the supply chain, creating and converting jobs at an unprecedented rate over the next decade. New opportunities will require often radically different new skillsets, with competencies having an increasingly short lifespan.

At MSC we recognise the importance of investing in human capital and preparing our people for the future, building specific technical and managerial competencies, expanding skillsets and integrating new roles to empower those working in maritime, inland and terminal operations. We are committed to equipping our workforce with the tools, knowledge and confidence to capitalise on opportunities emerging from our industry's ongoing evolution – including digitalisation and automation – promoting complementarity and collaboration between human capabilities and technology, rather than competition. Our focus remains on supporting our people in their respective pathways – many of whom have developed a depth of expertise over years and decades at MSC – and preparing them for new challenges and helping them reach their full potential. MSC is taking steps aimed at supporting access to learning and development opportunities, helping our people at sea and onshore perform and grow within the company through apprenticeships and mentorship programmes, on-the-job skill building as well as regular feedback. We draw on our most experienced colleagues for training and mentoring, who themselves serve as role models and trusted advisors to newcomers. 2022 saw the expansion

of MSC's training offerings, with self-learning and live online courses providing training to both newcomers and more seasoned MSC people interested in enriching their understanding of our complex business, with more than 45,000 e-learning completed.

The topic of sustainability is a key component of MSC's learning portfolio of training courses. MSC Headquarters onboarding training includes a session on our sustainability approach, while the global two-week MSC E-Academy programme provides the opportunity to deep dive on specific topics, including sustainable development.

As our industry transformation continues, attracting and retaining the right people will be key. MSC's global logistics offering requires an integrated people development strategy that considers competencies according to the specificities of our business, and we remain focused on securing top talent and our ongoing access to a qualified pool of professionals. The talent of tomorrow is demonstrating marked changes in outlook, attitudes and expectations, seeking flexibility and meaning through their work and to compete in this arena, MSC is investing heavily in our human capital towards a high-performing and thriving workforce.



TOWARDS AN EQUITABLE AND JUST TRANSITION FOR OUR PEOPLE AT SEA

As our industry decarbonises, we have the responsibility to actively contribute to an equitable and just transition, including through the training, upskilling and reskilling of our global workforce. MSC's people are key to achieving our decarbonisation ambitions, and we are committed to protecting the safety and health of our seagoing workforce as well as supporting their career development by ensuring they are equipped with the skills needed by our industry in the future.

Our seagoing workforce will require new technical expertise and competencies to prepare them for working on vessels with varying infrastructure, systems and equipment, which will use a range of low- and zero-carbon fuels and technologies. Global training standards will need to keep pace with developments, remaining fit for purpose by being sufficiently able to respond and adapt as necessary. Transition solutions will require the identification of different and new training to be delivered and received by our seagoing workforce, complemented by familiarisation onboard, which may eventually streamline as our industry's decarbonisation journey continues to evolve.

Launched at COP26 (Glasgow, November 2021) by the International Chamber of Shipping (ICS), International Transport Workers' Federation (ITF), United Nations Global Compact, International Maritime Organization and the International Labour Organization, the **Maritime Just Transition Task Force (MJTTF)** aims to support a just and human-centred decarbonisation of the shipping industry. As a Project Supporter and member of the MJTTF Global Industry Peer Learning Group, MSC has been engaging in dialogue with stakeholders across and beyond our industry – including international organisations, private companies, training providers, workers and academia. In 2022 we contributed to the position paper **Mapping a Maritime Just Transition for Seafarers**^[71] and the development of an accompanying 10-Point Action Plan to achieve a just transition for seafarers launched at COP 27.

As part of MSC's commitment to our people at sea, we initiated work to further embed just transition principles into our people management approach, drawing on the 10-Point Action Plan as we engaged functions and entities across the Cargo Division as part of our efforts to prepare our current and future seagoing workforce.

[72] unglobalcompact.org/library/6100

MSC is committed to investing in our current and future talent, maximising our global impact by collaborating with local partners on specialised training, upskilling and reskilling initiatives and promoting the development of competencies for application in shipping and logistics, and beyond. Through ongoing partnerships with naval academies, technical institutes and logistics-focused university programmes, we aim to remove barriers to entry by offering career-connected learning and development of young people in our industry.

MSC and MEDLOG, in partnership with the **Italian Merchant Marine Academy** in Genoa, launched a new course in logistics and transport management providing comprehensive training on multimodal logistics, the shipment of goods, intermodal carriers, warehouse management and depots. Comprising 2,000 hours of coursework, 1,200 hours of practical work and 800 hours of work experience, the course also included practical work placements with MSC and MEDLOG. MSC and MEDLOG offered employment opportunities and

[73] fondazioneadecco.org/it-nostri-progetti/lavori-in-corso/re-up/

integrated more than 95% of the successful graduates, including six placed in MEDLOG Austria; six in inland terminals, MEDLOG and Maintenance & Repair in Italy; three in MSC USA; two in MEDLOG Antwerp; and one in MSC Portugal.

We are also partnering with public and private stakeholders to address skills gaps, developing new work models and forms of employment to widen the competencies of our employees of varying professional backgrounds in key areas such as digitalisation, cyber-security and logistics process automation. In 2022 **MSC Technology Italy** participated in the 'RE_UP: Solving the gap of skills mismatch through Reskilling and Upskilling path'^[73] initiative, working with project partners the **UN Refugee Agency (UNHCR)** and the **Adecco Foundation for Equal Opportunity** by matching refugees with local businesses in Italy, through training programmes to promote their integration and for potential recruitment in the information technology sector.



SUPPORTING THE ENTRY OF YOUNG PEOPLE INTO THE WORKFORCE

MSC Brazil's partnership with non-profit organisation **CAMPS** (Centro de Aprendizagem e Mobilização Profissional e Social - Centre for Learning and Professional and Social Mobilization) saw the apprenticeship programme continuing its success in 2022, supporting young people aged 14-24 through training and educational opportunities to equip them with new skills and insights on maritime operations. CAMPS's 2022 cohort comprised 54 people trained, with MSC delivering training on controlling cargo flows, warehouse and logistics management, customer service and administration as well as mentoring and facilitating debates on sustainability-related topics such as the role of shipping in global trade and decarbonising logistics. For CAMPS' 55th anniversary, MSC hosted a photo exhibition highlighting the programme's impact over the years, including the training of more than 120,000 young people and recruitment of 61 CAMPS graduates by MSC in Brazil and other offices worldwide.



VALUING AN INCLUSIVE, DIVERSE AND EQUITABLE WORKFORCE

Creating a diverse, equitable and inclusive workplace where individuals are empowered to participate and reach their full potential is at the core of our people strategy. Our aim is to create a working environment where MSC people from all walks of life feel a sense of belonging and are treated with respect and dignity throughout their journey with us. Many of our employees have developed their careers and experienced professional growth with us over the long term.

MSC's ambition is for a diverse global workforce where people feel supported, can advance in their career pathways and thrive through equitable access to opportunities. We believe that diversity and inclusivity are directly linked to better business performance and consider our people as a key driver of MSC's success.

Our focus remains on attracting, developing and retaining the right people, celebrating as well as capitalising on the different cultural backgrounds, perspectives and experience that make up the MSC family. We are committed to removing barriers, avoiding and preventing stereotypes and eliminating any discriminatory practices to promote an equitable professional journey.

We recognise gender imbalance in the shipping and logistics sector, and MSC continues our efforts to address

the challenge of increasing representation at company level. 2022 saw the establishment of a new global Diversity, Equity & Inclusion (DEI) team to leverage our inclusive culture, further promote diversity and ensure alignment at the global level.

To make advances in addressing DEI and defining near and long-term targets across the different areas of our business – while taking into account their respective specificities – we focused on enhancing our data monitoring on gender, nationality and level of diversity to inform our career development programmes as well as recruitment and talent acquisition processes, helping us progress towards our ambition of an even more diverse and equitable workforce.

While there has been some progress in recent years, gender imbalance in shipping and logistics remains a challenge, with women representing less than 1.2%^[74] of the global seagoing workforce and with similarly low representation in leadership, warehousing, road transport and terminal operations. While we have seen significant interest among women candidates in global positions at MSC Headquarters and country offices, other areas of our business continue to face challenges. We are committed to promoting greater participation of women in

our industry's workforce, expanding career opportunities and removing barriers to increase the attractiveness of working in shipping and logistics. To support women at all levels, the 'MSC Inspiring Women' mentoring programme was launched with the contribution of managers and heads of offices around the world.

The Women's Empowerment Principles^[75] (WEPs) are a set of seven principles as part of a framework to deliver on the gender equality objectives of the UN Sustainable Development Goals, with the aim of helping businesses to promote equality and women's empowerment in the workplace, marketplace and community. Developed by UN Women and the UN Global Compact, the WEPs are based on international labour and human rights standards and address key topics including equal pay for work of equal value, gender-responsive supply chain practices and zero tolerance against sexual harassment in the workplace. Coordinated by MSC's Diversity, Equity and Inclusion team, twenty-five MSC and seven MEDLOG offices have become WEP signatories^[76], promoting equal opportunities for women and implementing more than 60 actions in 2022. These range from the MSC

Inspiring Women Programme focusing on gender equality awareness, gender-based violence, harassment and diversity and inclusion as well as activities to promote mental health and co-parenting.

At **Portonave – Portuarios de Navegantes** (Navegantes, Brazil) a series of 'maternity and career talks' support pregnant women and new mothers in their reintegration in the workplace. Portonave also collaborates with the local community college to promote employment for women in ports through the 'Port for Her' initiative, offering courses on port logistics and MNR, with 466 applications for the port logistics course and 147 applications for the MNR course received in 2022. At **San Pedro Container Terminal** (Cote d'Ivoire) TiL has been actively seeking to hire and train women for roles in its technical department to improve gender diversity at the terminal.

Beyond our own workforce, we recognise the opportunity of engaging our supply chain partners to further embed DEI across value chains and for this reason we remain open to exploring new partnerships and initiatives in all countries where we operate.

[74] www.imo.org/en/OurWork/TechnicalCooperation/Pages/WomenInMaritime.aspx

[75] www.weps.org

[76] MSC WEPs signatories: Argentina, Austria, Bahamas, Bolivia, Brasil, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Germany, Guatemala, Honduras, Israel, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saudi Arabia, Uruguay and Venezuela. MEDLOG WEPs signatories: Argentina, Austria, Bolivia, Chile, Costa Rica, Germany and Uruguay.

BUILDING A CULTURE OF PREVENTION ACROSS OUR BUSINESS

SUPPORTING WOMEN-LED EMPLOYMENT AND ENTREPRENEURSHIP

In 2022 **MEDLOG Bolivia** opened an Eco Café to serve its depot employees and truck drivers, inviting the local community to participate in an innovation challenge to propose healthy home-cooked meals and food options. Working with a local non-governmental organisation with expertise in women's rights, the **Gregoria Apaza Foundation** (Centro de Promoción de la Mujer Gregoria Apaza, CPMGA), selected candidates participate in a one-to two-year training and employment programme with training conducted in collaboration with health and nutrition experts. Upon completion of the programme, candidates are supported to start their own service and hospitality businesses.

MSC is committed to creating a working environment where our people feel safe, treated with respect and dignity and are valued for their individual contribution. We do not tolerate harassment and bullying of any kind. We maintain a firm position against all forms of discrimination and violence, reflected in a specific employment policy on the protection of employee integrity as well as promoting grievance mechanisms including the MSC Speak-Up Line. In 2022 we continued a number of initiatives

to raise awareness among our people at sea and on shore, raising awareness of the **MSC Speak-Up Line** and encouraging all MSC people to report any cases of bullying or harassment without fear of retaliation. By increasing awareness across the company we hope to create a safe space for open dialogue and foster trust among employees. All complaints are addressed promptly in accordance with internal procedures.

At MSC we have a responsibility to protect the health and safety of our people, without whom we could not connect the world by sea, road and rail in the face of a challenging operational context. We seek to continuously improve by implementing measures to address emerging areas of occupational risk and to prevent work-related illnesses and accidents impacting workers, including those of our supply chain partners. Such incidents also have implications for public health systems and communities, with today's complex and evolving landscape requiring companies to adopt a proactive and agile approach to manage uncertainty and avoid any adverse economic impacts. Our aim is to go beyond compliance by adopting robust and resilient health and safety practices. We continuously monitor regulatory developments in relation to health and safety, integrating them in our management systems, policies and procedures and translating them into preventive actions across the Cargo Division to protect

our people, assets, infrastructure as well as our customers' cargo. MSC complies with sector-specific international standards and applies guidance, including those of the **World Health Organization (WHO)** and the **International Labour Organization (ILO)** as well as national legislations in the countries where we operate. As chair of the Safety and Security Council of the World Shipping Council, we continue working with our industry peers to promote a culture of prevention. As part of our focus on strengthening supply chain resilience through digitalisation, we are fostering innovation and harnessing technology to support our workers, prevent human error and address unforeseen circumstances. The wellbeing of MSC people is a top priority and we continue to integrate this in our protocols to protect their health and safety, including preventing mental health risks and tackling potential security challenges.





PROTECTING THE HEALTH AND SAFETY OF OUR PEOPLE

While regulatory developments, multi-stakeholder platforms and evolving design and technological improvements in equipment used on our vessels as well as in our inland logistics networks and terminals have all contributed to enhanced safety standards and management systems, workplace safety in the shipping and logistics industry remains impacted by supply chain disruptions and extreme weather events. MSC's focus remains on addressing emerging challenges by continually improving health and safety processes across our operations, fostering a culture of prevention. This extends to our proactive approach to protecting the mental health of our employees, for example the introduction of initiatives such as workplace **Mental Health First Aiders** (MHFA) at **MSC UK** and access to qualified professionals for mental health support at **MSC Australia** and **New Zealand**.

As our business continues to grow – particularly in the

inland logistics segment – we are preparing to engage with new third-party contractors in different countries which will require actions to ensure their compliance with MSC safety standards. In 2022 we continued strengthening the safety of the workplace to keep our people and business partners safe and prevent any injuries or fatalities. We recognise the importance of mitigation actions, such as awareness-raising and training, in avoiding potential accidents or incidents and ensuring that safety considerations are fully embedded in the way we operate.

Regrettably four lives were tragically lost in 2022. This number indicates the need for further improvement to deliver on our ambitions and to prevent recurrence of such incidents. In addition to enhancing existing measures and protocols, we are also exploring new technologies to further embed safety across our operations as well as expanding our risk assessment process.

MARITIME OPERATIONS

Crew safety onboard our vessels and onshore is a top priority for MSC and our decades of experience in shipping have informed the development of strong health and safety standards. MSC's risk assessment process shapes our approach to health and safety procedures, and we continuously review our Environment, Health, Safety, and Quality (EHSQ) procedures and conduct training to ensure our standards are maintained and further developed so they are fit for purpose. Our training programme is delivered through drills, videos and on-the-job training, and crew members are encouraged to report safety risks through the Look, Act, Report and Prevent (LARP) system. Our crews are trained to ensure the safe operation and handling of cargo according to the Cargo Securing Manual that accompanies vessels and onboard machinery. All operational procedures are aligned with the 'four pillars of the international regulatory regime for quality shipping'⁷⁷ that represent the foundations upon which we improve our practices and protocols.

We have a direct communication channel with MSC crews,

where our people onboard are encouraged to signal should they feel unsafe and need to stop working as well as to report any incidents. In such cases, corrective actions are immediately taken with a full investigation process conducted to avoid recurrence. Recent events have served as a reminder of the critical importance of respecting seafarers' human rights and wellbeing for securing resilient and sustainable global supply chains, and it remains central in MSC's safety management system.

In 2022 MSC Shipmanagement began supplying **'Medical Bridge Kits'** to all vessels to provide immediate assistance to unwell crew members while the vessel is at sea until they can be referred to a doctor onshore. To prevent mental health risks and ensure the safety of our crew, we continue implementing key actions including conducting a monthly review of our Shore Leave Policy and incorporating updates on outbreaks⁷⁸. In 2022 MSC Shipmanagement and MEDLOG were again recognised for their safety standards and both certified ISO 45001:2018.

[77] International Convention for the Safety of Life at Sea (SOLAS); International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW); International Convention for the Prevention of Pollution from Ships (MARPOL); and Maritime Labour Convention (MLC).

[78] More information on how we address emerging mental health issues can be found in our 2021 Modern Slavery Transparency Statement www.msc.com/en/sustainability/msc-modern-slavery-transparency-statement

SUPPORTING NEW STANDARDS FOR DANGEROUS GOODS

Handling special, critical and dangerous cargo shipments requires the highest level of care and expertise. It is therefore critical to have robust processes and accurate information about such shipments by enhancing transparency and data sharing in a standardised way. MSC's know-your-customer (KYC) and cargo booking screening protocols reduce the risk of undeclared or misdeclared cargo entering the supply chain. We are also promoting the development of new standards for 'Critical and Dangerous Cargo', working with the Cargo Incident Notification System (CINS) and **Ship Message Design Group (SMDG)**, non-profit organisations managed by and for entities in our industry, from carriers to container terminals.

INLAND LOGISTICS

Our inland logistics business is intrinsically exposed to safety risks, from which we have a responsibility to protect our people and business partners working at our facilities and while they are on the road. In 2022 we further strengthened our health and safety management processes, focusing on further aligning our entities across the world and promoting continuous improvement by cascading protocols and measures to ensure compliance with local legal requirements. We continue exploring potential opportunities for collaboration on the topic of road safety, such as through awareness-raising initiatives and safety driving training at local level. During the reporting year we also improved our data quality and increased

the scope of internal safety performance monitoring, including for the newly acquired entities of our inland network. We consequently recorded a greater number of incidents at global level, leading to the subsequent implementation of new protocols designed to prevent and minimise work-related injuries and accidents. Analysis of the main incidents was conducted to understand their context and root causes, leading to a more standardised approach to developing and implementing effective preventive, corrective and improvement actions. To further strengthen our prevention culture we followed sector-specific safety issues and continued sharing best practices.

TERMINAL OPERATIONS

Extending to all areas of our business, health and safety are of high importance in our terminal operations, where challenging conditions related to global supply chains disruptions and the progressive adoption of automation requiring new skills add further complexity. In line with MSC's health and safety ambitions, we monitor the evolving global landscape and strive to adapt our tools and measures to protect our people working across our terminal operations. In 2022 TiL joined the

International Cargo Handling Coordination Association (ICHCA), an independent not-for-profit organisation dedicated to improving the safety, productivity and efficiency of cargo handling and movement worldwide. During the reporting year TiL participated in an ICHCA panel discussion on increasing safety onboard for both terminal and vessel personnel, contributing to the forthcoming publication of guidance on safety and risk reduction.

PREPARING FOR TOMORROW'S SAFETY AND SECURITY CHALLENGES

With our world evolving and changing at a rapid pace, our global operations have been under unprecedented pressure, requiring us to adapt and quickly react. Recent unexpected crises have been a reminder of the need to prepare and anticipate the safety and security challenges of tomorrow, including those related to digitalisation.

With the expansion of MSC's global operations and in light of disruptions emerging from geopolitical instability as well as climate change-related risks, in 2022 we further enhanced our protocols to monitor security conditions in our operations and sites, with a particular focus on high-risk countries. In parallel, a review of the key processes was undertaken to ensure our people are safe and protected and business continuity is guaranteed.

As the world's connectivity grows, our exposure to cybersecurity risks also grows. At MSC we take cyber and data security seriously, protecting our customers' data and supporting international trade as well as reducing the potential impacts affecting our operations or disrupting supply chains. We have adopted a structured approach to coordinate cybersecurity activities, focused on the prevention of cyberattacks, mandatory cybersecurity training for all employees, detection of threats and system vulnerabilities – with advances in digital platforms, cloud computing and artificial intelligence playing a strategic role in preventing disruptions. In 2022 our efforts to maintain the highest level of security and continually improve our management systems were reflected by being certified – ISO 22301:2019 and ISO/IEC 27001:2013.





OUR
PERFORMANCE

The table below provides a summary of quantitative indicators prepared in reference to GRI and additional (non-GRI) disclosures. Further information on the scope and methodology is available on page 126 and the GRI content index is available at [msc.com/sustainability](https://www.msc.com/sustainability).

GRI INDICATOR	2020	2021	2022	Scope	Notes	
ENVIRONMENT						
302-1	Total energy consumption (MWh)	-	-	120,272,955*	Cargo Division	We report total energy consumption, including direct, indirect and self-generated energy. Direct energy consumption includes all directly consumed fuels reported in terms of gross energy content. Indirect energy includes consumption of electricity, district cooling and district heating, in terms of gross energy content. Self-generated energy refers to the energy content of fuels used for the production of heat and electricity for self-consumption purposes.
	Direct energy consumption (MWh)	-	-	119,353,949		
	Indirect energy consumption (MWh)	-	-	915,388		
	Self-generated energy (MWh)	-	-	3,618		
	Electricity (MWh)	-	439,471	658,074*	Cargo Division	We report the consumption of electricity, including purchased electricity (green and not green) as well as self-generated electricity. * The consolidation approach adopted for 2022 resulted in an expanded scope (addition of 17 TIL joint venture terminals for which we account 50% of impacts), which contributed to the increase in electricity consumption for 2022 compared to 2021.
	of which green electricity (MWh)	-	-	115,271		
of which self-generated (MWh)	-	-	1,889			
Additional (non-GRI) disclosure	Total fuels (GJ)	-	-	423,282,707	Cargo vessel fleet	We report the quantity of fuels consumed by our cargo vessel fleet including Heavy Fuel Oil, Ultra Low Sulphur Fuel Oil, Very Low Sulphur Fuel Oil, Diesel, Liquefied Natural Gas, expressed as gross energy content.
Additional (non-GRI) disclosure	Biofuels (GJ)	27,549,055*	1,347,942	4,135,822**	Cargo vessel fleet	We report the quantity of biofuel consumed by our cargo vessel fleet, expressed as gross energy content based on the assumption of biofuel energy content to be 37.2 MJ/kg, as per the EC (EU RED) and used by the RSB GHG Calculator Too. * In 2020, MSC participated in the Dutch Government's biofuel incentive programme which explains the high value for 2020 compared to 2021. ** In 2022, MSC introduced MSC Biofuel Solution which contributed to the increase in biofuel consumption for 2022 compared to 2021.
303-3	Water withdrawal (m³)	402,814*	753,513*	991,384	Cargo Division	We report the quantity of water withdrawn from all sources. Referred to as water consumption in 2021 Sustainability Report. * 2020 and 2021 data restated due to an error in the relevant measure units by MSC Cameroon for 2020, and both MSC Cameroon and MSC Uganda for 2021.
303-4	Water discharge (m³)	-	-	124,442	MSC, MEDLOG	We report the total quantity of water discharged from all types. Excludes cargo vessel fleet.
305-1	Direct (Scope 1) GHG emissions (tCO ₂ e)	29,766,646	33,802,506	33,069,731°	Cargo Division	We report our direct GHG emissions in accordance with the GHG Protocol, including carbon dioxide (CO ₂) only. Direct emissions deriving from biocomponent in biofuel blends were calculated using the same emission factors as those of the conventional fuel component as no official IMO-approved emission factors for biofuel are currently available.
305-2	Indirect (Scope 2) GHG emissions (tCO ₂ e)	-	-*	223,904***	Cargo Division	We report our indirect GHG emissions in accordance with the GHG Protocol, including carbon dioxide (CO ₂) only. Excludes emissions related to shore power. * 2021 data not reported. In 2021 no country-specific emission factors were applied for Scope 2 emissions as granular information was not available at the time. Scope 2 emissions were calculated based on an average world-wide emission factor resulting in data that is not comparable with 2022 data. ** For 2022 data location-based emission factors were applied.
305-3	Other indirect (Scope 3) GHG emissions (tCO ₂ e)	-	-	7,513,212	Cargo Division	We report carbon dioxide (CO ₂) emissions related to the production and distribution of fuels consumed by MSC as well as related to the production and distribution of energy sources used in the local power grid to generate electricity purchased by MSC (GHG Protocol's Category 3).

GRI INDICATOR	2020	2021	2022	Scope	Notes	
ENVIRONMENT						
305-4	GHG emissions intensity (EEOI – g CO ₂ /tons of cargo*miles)	13.98	14.34	14.73	Cargo vessel fleet	We report the value of IMO's Energy Efficiency Operational Indicator (EEOI) related to our cargo maritime fleet, expressed as grams of CO ₂ per unit of transport work. (tons of cargo times miles travelled).
305-7	Nitrogen oxides (NOx) (t)	796,635*	801,180*	770,698	Cargo Division	We report NOx and SOx emissions produced by fuels consumed in our direct operations. Includes MSC, MSC Air Cargo, MedTug, MEDLOG. Excludes TIL. * Includes cargo vessel fleet only.
	Sulphur oxides (Sox) (t)	63,658*	60,919*	55,344	Cargo Division	
306-3	Waste generated (t)	-	300,494*	315,178	Cargo Division	We report total waste generated by our direct operations, including paper, cardboard, plastic, metals, biomass, other unspecified non-hazardous waste as well as hazardous waste. * 2021 data restated due to an entry error by the Houston Terminal.
	of which hazardous	-	-	239,651	Cargo Division	
Additional (non-GRI) disclosure	Hydrocarbon spills	-	4	5	Cargo vessel fleet	
Additional (non-GRI) disclosure	Containers lost at sea - direct (n.)	-	0	1	Cargo vessel fleet	We report container losses that occurred while transported by MSC-owned and chartered vessels.
	Containers lost at sea - indirect (n.)	-	546	0	Cargo vessel fleet	We report container losses that occurred while transported by carrier partner vessels.
SOCIAL						
2-7	Total number of employees	48,703*	57,838*	69,961	Cargo Division	We report the total number of permanent and temporary employees working full-time and part-time, across all management levels and including males, females and undefined gender. Reported as headcount. We also report as a separate headcount the total number of women from the above categories. * 2020 and 2021 data restated based on the consolidation approach adopted for 2022. (see Methodology Note).
	of which women	20%	22%	19%		
2-8	Total number of workers who are not employees	-	5,493	3,528	Cargo Division	We report the total number of indirect employees that are not directly hired by MSC but whose work is controlled by MSC. Reported as headcount. Includes MSC, MSC Air Cargo, MedTug, MEDLOG. Excludes TIL.
401-1	New employee hires	-	8,684	14,760	Cargo Division	We report all new employee hires whether permanent or temporary, full-time or part-time, across all management levels and including males, females and undefined gender. Reported as headcount.
403-9	Number of recordable work-related injuries (TRC)	423*	343*	844	Cargo Division	We report the number of recordable work-related cases covering lost-time incidents of any degree of severity as well as incidents not resulting in lost work time. * Includes seafarers only.
	Number of fatalities as a result of work-related injuries	-	3	4	Cargo Division	
404-1	Average hours of training per year per employee	14	15	20	Cargo Division	We report the average number of training hours per direct employee (headcount) delivered over the reporting year.
404-3	Percentage of employees receiving regular performance and career reviews	-	-	80%	Cargo Division	We report the number of direct employees receiving regular performance and career reviews expressed as a percentage of all direct employees (headcount).
405-1	Women in Governance bodies# (%)	25%	25%	25%	Headquarters (MSC, MedTug MEDLOG, TIL)	We report the number of women whether permanent or temporary, full-time or part-time. Reported as headcount. # Refers to MSC's Board of Directors. ## Refers to senior executives directly reporting to the Board of Directors.
	Women Executives## (%)	7%	12%	16%		
	Women Managers (%)	29%	29%	30%		
	Women white collar (%)	39%	41%	43%		
	Women blue collar (%)	29%	18%	0%		

METHODOLOGY NOTE

REPORTING PERIOD, BOUNDARY AND SCOPE

MSC Cargo Division's 2022 Sustainability Report is the seventh edition of this document and aims to provide a clear overview of our commitment and capacity to contribute to the United Nations 2030 Agenda. Referring to the period 1 January – 31 December 2022⁷⁹, this report has been prepared under the coordination of the Cargo Division's Sustainability Department in consultation with all relevant Departments, entities, offices and with our Leadership Team. Unless otherwise specified in the table in the preceding pages, the reporting boundary includes entities across maritime (MSC, MedTug), air freight (MSC Air Cargo, commencing operations in 2023), inland (MEDLOG) and terminal (TiL) operations (Cargo Division). WEC Lines has operated independently from MSC since May 2012 and is not accounted for in this Report. The acquisitions of Log-In

Logistica, Atlantic Forwarding and Africa Global Logistics (AGL), were completed in January, August and December 2022 respectively, with the ongoing onboarding process ensuring alignment and integration into MSC systems for future reporting. As an active participant of the **United Nations Global Compact**, MSC's annual Sustainability Report forms part of our Communication on Progress to demonstrate progress made and detailing our activities to embed the UN Global Compact's Ten Principles into our strategies and operations, as well as our efforts to support societal priorities. This report also forms part of our commitment to the **Sustainable Ocean Principles** on data and transparency in relation to our ocean-related activities, impacts and dependencies.

DATA COLLECTION AND CONSOLIDATION APPROACH

This report includes a set of non-financial indicators, with reference to the **Global Reporting Initiative Sustainability Reporting Standards** ('GRI Standards' – published on 30 June 2022) and in line with their reporting principles of accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness and verifiability. The table in the preceding pages provides a summary of GRI quantitative indicators, with a GRI content index available at [msc.com/sustainability](https://www.msc.com/sustainability).

The data collection process was conducted in coordination with offices in more than 150 countries in which MSC operates and in line with data collection guidance and training to ensure the accuracy and consistency of data in line with the GRI. Data was collected for indicators related to our material topics for the years 2020, 2021 and 2022 to highlight three-year trends where available. In cases where data from previous years was not collected or not comparable due to changes in methodology, no data has not been included in the table on the preceding pages. We have adopted the financial control approach for our reporting: we account for 100% of the impacts of our subsidiaries (operations of which MSC owns more than 50% of equity). In accordance with the **GHG Protocol**, for the following quantities we account for 100% of the

impacts related to our subsidiaries and for 50% of the impacts related to our joint ventures (operations of which MSC owns 50% of equity):

- Greenhouse gas emissions across scopes 1, 2 and 3
- Energy consumption within the organisation
- Electricity

Regarding the MSC fleet, all data refer to vessels MSC operated during the reporting period.

For the following data points we applied proxies based on a pro-rata approach when data was not available:

- Waste produced by MSC (proxies used for 1% of data) and MEDLOG (0.6%) offices: a per-capita (headcount) average was calculated across offices that submitted data, with the average subsequently multiplied by the number of employees of those offices missing data to determine the proxy value of the waste produced (listed as 'non-hazardous waste (unspecified)').
- Electricity consumed by MSC (proxies used for 10% of data) and MEDLOG (3%) offices: a per-capita (headcount) average was calculated across offices that submitted data, with the average subsequently multiplied by the number of employees of those offices missing data to determine the proxy value of the electricity

- consumed (listed as 'purchased electricity (non-green)').
- Electricity consumed by container depots (proxies used for 10% of data): an average of consumed electricity per unit of moved volumes was calculated across container depots that submitted data, with the average subsequently multiplied by the volume of containers moved by those container depots missing data to determine the proxy value of electricity consumed (listed as 'purchased electricity (non-green)').

In 2022 a new tool was implemented with the aim of ensuring a more reliable and robust data collection process. In this report we have expanded our data disclosure, and as we continue to progress towards a more complete dataset, we aim to progressively widen the scope and granularity of data against the reported indicators to ensure their relevance to our stakeholders. These activities are expected to also result in more comprehensive data in future reporting and an improved understanding of our sustainability progress and performance.

EMISSIONS CALCULATIONS

2022 emissions were calculated using a different methodology to previous years, with calculations reflecting the full geographical scope and various business segments within MSC's Cargo Division and with country-by-country emission factors applied. Calculation of Scope 1 emissions related to all operations of MSC's Cargo Division excluding those related to our vessels are based on the **UK Department of Environment, Food and Rural Affairs (DEFRA) Environmental reporting guidelines** and the **GaBi Databases**. Scope 1 emissions related to our vessels were calculated based on the quantity of fuels bunkered over the reporting years and company-

specific emission factors approved by Clean Cargo. Scope 2 emissions were determined based on location-based **International Energy Agency's Emission Factors 2022**, with proxies used for electricity consumption by MSC offices and container depots as described above. Scope 3 emissions were determined based on International Energy Agency emission factors, covering the GHG Protocol's Category 3 Fuel- and Energy-Related Activities associated with the production and distribution of fuels consumed as well as the production of energy sources used in electricity generation.

HUMAN RIGHTS FOCUS

In addition to the GRI Standards 2022, MSC also adheres to the **UN Guiding Principles on Business and Human Rights** (UNGPs) Global Reporting Framework. This report addresses human rights-related issues in line with:

- The Ten Principles of the UN Global Compact and related human rights considerations
- Current and expected developments at the international level and in applicable domestic legislations, including in applicable reporting frameworks
- Relevant international human rights standards and principles

- A wide range of sector-specific human rights and health and safety regulatory frameworks and related international standards, sector-specific requirements and regulations, defined by maritime and labour conventions adopted at the international level by the United Nations, including the **International Maritime Organization (IMO)** and the **International Labour Organization (ILO)**
- Relevant standards developed by the **International Organization for Standardization (ISO)** and recognised classification societies and their recommendations during periodic audit processes or assessments.

CERTIFICATIONS AND ASSESSMENTS

MSC is regularly assessed and certified under the standards of ISO by recognised classification societies. Our commitment to compliance with ethical practices and international standards – as well as to continuously

improve existing environmental and social processes and practices – is demonstrated by the receipt of various awards and certifications, available at www.msc.com/sustainability/certifications.

[79] On page 10 data on number of vessels and employees are updated as at 31 March 2023.

To the Management of

MSC Mediterranean Shipping Company SA, Geneva

Lausanne, 21 June 2023

Independent Assurance Report on energy and emissions indicators in MSC Mediterranean Shipping Company's Sustainability Report

We have been engaged to perform a limited assurance engagement (the engagement) on the energy and emissions indicators disclosed in MSC Mediterranean Shipping Company's (the "Company") Sustainability Report (the report) and its consolidated subsidiaries' (the Group) in the chapter "Our Performance" of the report for the reporting period from 1 January 2022 to 31 December 2022. The following KPIs (the "KPIs") are included in our scope, referenced with a "o" in the report:

- ▶ Total energy consumption (MWh)
- ▶ Direct (Scope 1) GHG emissions (tCO₂e)
- ▶ Indirect (Scope 2) GHG emissions (tCO₂e)

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the report, and accordingly, we do not express a conclusion on this information.

Applicable criteria

The applicable criteria (hereafter "Applicable Criteria") defined by the Company and used to prepare the KPIs consist of reporting guidelines which are prepared with reference to GRI Standards. The Applicable Criteria are included in the "Methodology Note" chapter disclosed in the report. We believe that these criteria are a suitable basis for our limited assurance engagement.

Responsibility of the Management

The Management is responsible for the selection of the applicable criteria and for the preparation and presentation, in all material respects, of the disclosed KPIs in accordance with the applicable criteria. This responsibility includes the design, implementation, and maintenance of internal control relevant to the preparation of the KPIs that are free from material misstatement, whether due to fraud or error.

Independence and quality control

We have complied with the independence and other ethical requirements of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies the International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our responsibility

Our responsibility is to express a conclusion on the above mentioned KPIs based on the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information. This standard requires that we plan and perform this engagement to obtain limited assurance about whether the KPIs in the report are free from material misstatement, whether due to fraud or error.

Summary of work performed

Based on risk and materiality considerations we have undertaken procedures to obtain sufficient evidence. The procedures selected depend on the practitioner's judgment. This includes the assessment of the risks of material misstatements in the above mentioned KPIs. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in scope than, for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Although we considered the effectiveness of management's internal control when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal control. Our procedures did not include testing control or performing procedures relating to checking aggregation or calculation of data within IT systems.

The Greenhouse Gas (GHG) quantification process is subject to scientific uncertainty, which arises because of incomplete scientific knowledge about the measurement of GHGs. Additionally, GHG procedures are subject to estimation (or measurement) uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

Our limited assurance procedures included, amongst others, the following work:

- ▶ Assessment of the suitability of the underlying criteria and their consistent application
- ▶ Interviews with relevant personnel to understand the business and reporting process, including the sustainability strategy, principles and management
- ▶ Interviews with the Company's key personnel to understand the sustainability reporting system during the reporting period, including the process for collecting, collating and reporting the KPIs
- ▶ Checking that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the applicable criteria
- ▶ Analytical review procedures to support the reasonableness of the data
- ▶ Identifying and testing assumptions supporting calculations
- ▶ Testing, on a sample basis, underlying source information to check the accuracy of the data

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the KPIs for the reporting period from 1 January 2022 to 31 December 2022 have not been prepared, in all material respects, in accordance with the applicable criteria.

Ernst & Young Ltd

Laura Meadwell
Partner

Claude-Aline Dubi
Manager



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