







Global Maritime Issues Monitor

2022







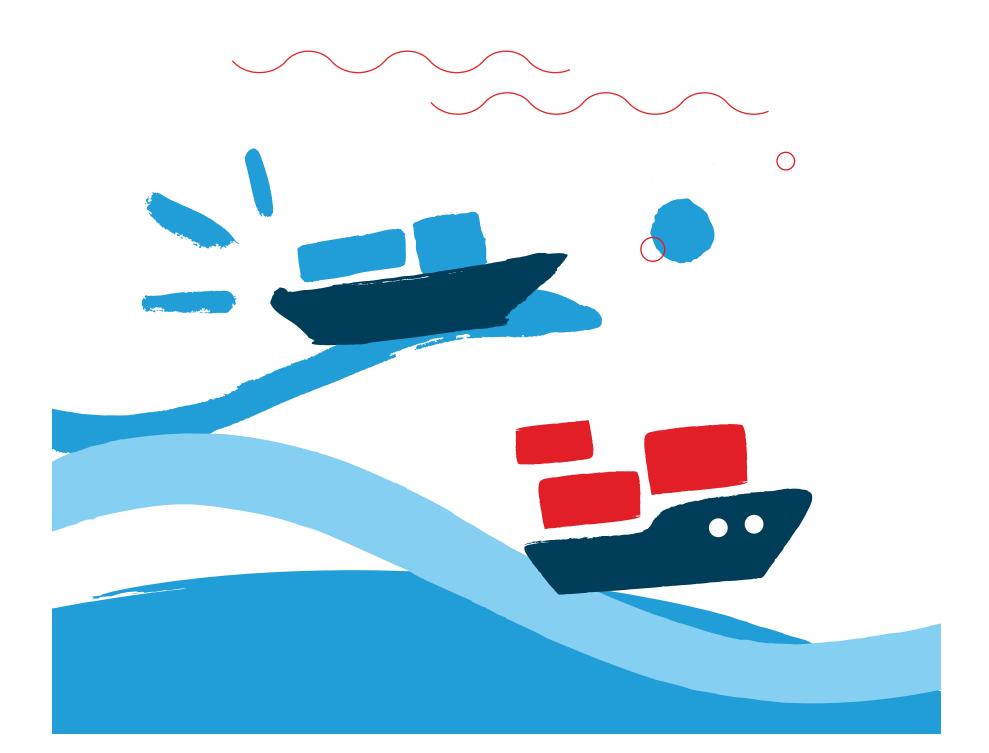
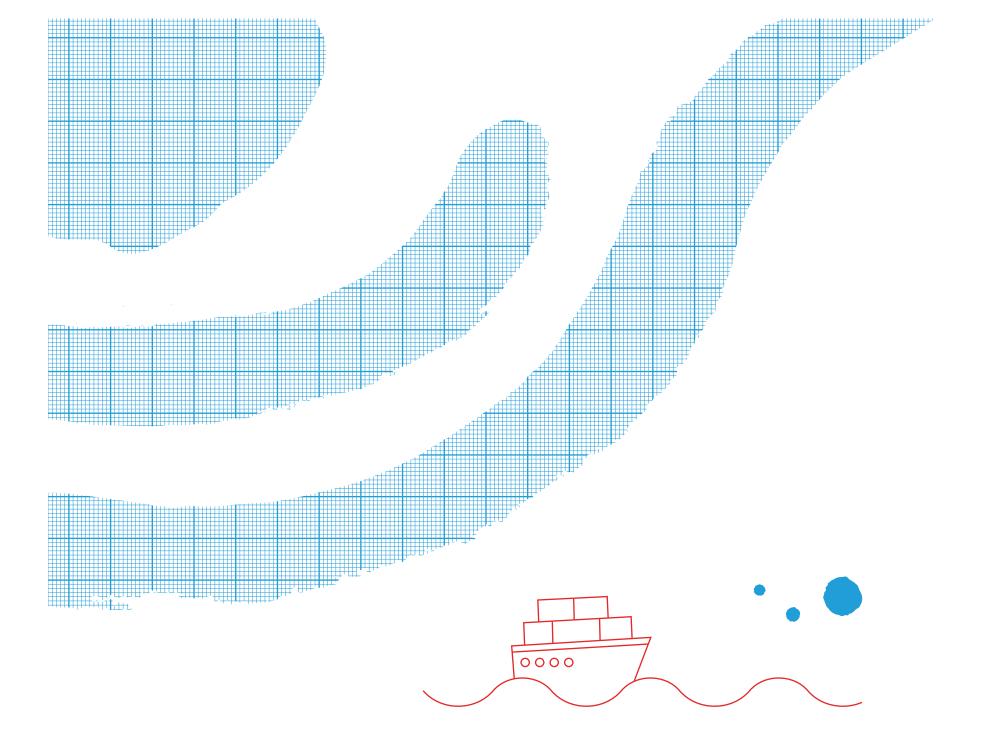


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Foreword

Welcome to the fifth annual *Global Maritime Issues Monitor*. Based on a survey of maritime industry decision makers from six continents and commentary from more than a dozen leaders and experts, the report looks at some of the critical issues facing the maritime industry.

As in past editions, the 2022 report looks at the top global issues identified by survey respondents in terms of likelihood, impact, and preparedness. Once again, the survey asked: Which events are seen as the most likely to occur? Which could have the most impact on the maritime sector? And how prepared is the industry should these events unfold?

In 2022, several issues that have been top of the news feature prominently in our discussion, including the war in Ukraine, fuel price increases, and issues related to the environment and digitalization. Workforce and skill shortages are also once again prominent concerns.

The global pandemic, of course, continues to affect the maritime sector, including its impact on seafarers unable to get off-board for shore leave or after the completion of their contracts. However, as in other industries, the focus on pandemic issues has declined in the maritime industry as other issues take precedence and the worst of COVID-19 appears to be behind us.

This year we also take a deeper look at human sustainability, which encompasses dignity and respect for every human being within our organizations and across our supply chains. Human sustainability is achieved by adopting policies and practices that ensure human well-being and ethical practices.

We hope you enjoy the *Global Maritime Issues Monitor 2022*, and that it provides food for thought regarding the vast challenges and opportunities currently facing the industry now and in the future.

The Global Maritime Forum, Marsh, and IUMI extend our thanks to those who participated in our survey. As well, we give special thanks to the individuals who kindly provided perspective on the findings and whose comments complement our analysis throughout the report.

Johannah Christensen

Chief Executive Officer

Global Maritime Forum

Marcus Baker

Global Head of Marine & Cargo

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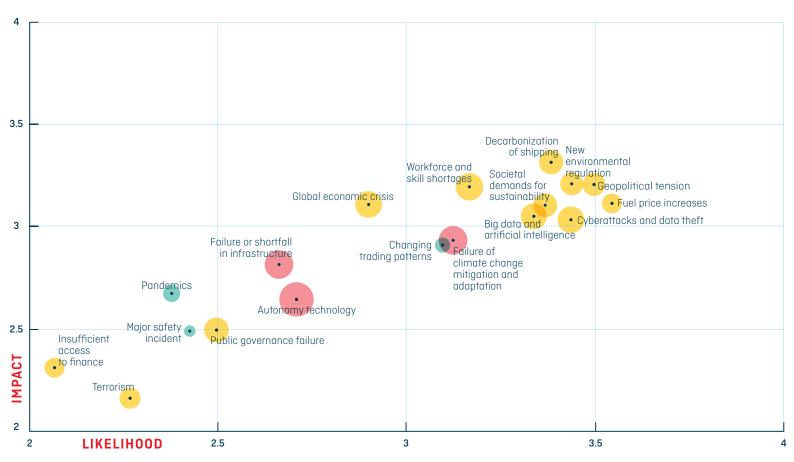
<u>Marine Insurance</u>



Global maritime issues map

PREPAREDNESS Most prepared Least prepared

IMPACT vs **LIKELIHOOD** vs **PREPAREDNESS**



What has changed since 2021?

<u>Geopolitical tension</u>: Respondents estimate geopolitical tension as **more impactful**. <u>Fuel price increases</u>: Respondents estimate that fuel price increases are **more likely**. <u>Workforce and skill shortages</u>: Respondents feel <u>less prepared</u> for workforce and skill shortages. IMPACT in: 2021 (3.12) \longrightarrow 2022 (3.35) LIKELIHOOD in: 2021 (3.20) \longrightarrow 2022 (3.54) PREPAREDNESS in: 2021 (2.17) \longrightarrow 2022 (2.10)

Global maritime issues

The top issues in terms of impact for the global maritime industry over the coming decade remained unchanged in 2022, with decarbonization of shipping and new environmental regulations at numbers one and two, the same as in last year's survey.

Fuel price increases and geopolitical tensions rose to the top positions in terms of likelihood, reflecting the realities of early 2022 and the outbreak of war in Ukraine. Respondents also placed geopolitical tension at the number three spot in terms of impact, a sharp rise from number nine last year. At the same time, they saw the industry as relatively well-prepared to handle those tensions.

Environmental concerns and geopolitics were joined by infrastructure failures, digitization and cyber risks, and workforce and skill shortages as areas of particular concern.

The survey and analysis in this report come from a wide range of sources across the maritime industry. Survey respondents weighed in on the issues they believe are most likely to arise over the next ten years, which will have a high impact, and how well prepared the industry is to meet the challenges. We shared the results with selected maritime leaders and experts, and incorporate their views into the final report.



Environmental issues remain the highest potential impact

The maritime industry in 2022 continued to look ahead to environmental issues, viewed as having high impact in the decade to come. As in 2021, decarbonization of shipping was seen as the most impactful issue in 2022, followed by new environmental regulations. For both issues, the industry's preparedness scored slightly higher this year.

Geopolitical tension, fueled by the war in Ukraine, experienced one of the larger shifts in rated impact, rising from the ninth most impactful issue to third. Interestingly, it maintained the same relatively high preparedness ranking as last year, perhaps reflecting the industry's long history of continuing to function even in times of conflict.

Workforce and skill shortages likewise experienced a significant rise in expected impact, placing as the fourth most impactful in 2022, compared to eleventh last year.

Unsurprisingly, fuel price increases placed fifth on the issues list, up from the tenth spot in 2021.

Pandemics, in the survey for the third year, dropped from the number four spot in impact in 2021 to the number 13 spot in 2022. Pandemic was also seen as less likely, and the industry better prepared to manage one.



What **impact** do you think the following issues will have on the maritime industry over the next 10 years?

1 Minimal impact / 2 Minor impact / 3 Moderate impact / 4 Major impact

2022 RANK	2021	ISSUE	SCORE
1	1	Decarbonization of shipping	3.47
2	2	New environmental regulation	3.35
3	9	Geopolitical tension	3.35
4	11	Workforce and skill shortages	3.34
5	10	Fuel price increases	3.24
6	3	Global economic crisis	3.24
7	5	Societal demands for sustainability	3.23
8	8	Big data and artificial intelligence	3.18
9	7	Cyberattacks and data theft	3.16
10	6	Failure of climate change mitigation and adaptation	3.04
11	13	Changing trading patterns	3.02
12	12	Failure or shortfall in infrastructure	2.91
13	4	Pandemics	2.75
14	16	Autonomy technology	2.72
15	17	Public governance failure	2.55
16	15	Major safety incident	2.55
17	14	Insufficient access to finance	2.35
18	18	Terrorism	2.18

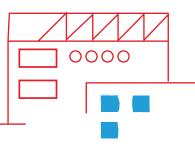


Increase in fuel price is ranked as the most likely issue for the first time

Respondents in 2022 saw the two most likely issues facing the maritime industry as fuel price increases and geopolitical tension, which had been in the number seven and six spots in 2021. This is the first time fuel price increase has taken the top spot. Although the question was framed to ask about the most likely issues to face the industry over the next ten years, respondents were no doubt swayed by the current status of these two issues.

New environmental regulations and decarbonization of shipping dropped from the number one and two spots in 2021 to third and fifth, respectively. Many observers have expressed concern that the war between Russia and Ukraine, with its high impact on energy use, is drawing attention away from climate issues, and not only in the maritime industry.

The ever-increasing pace of digitization and connectivity kept cyberattacks high on the list, ranking number four for likelihood in 2022, just a peg lower than in 2021. At the same time, the likelihood of big data and artificial intelligence generating challenges ranked lower, placing at number seven this year compared to four in 2021.



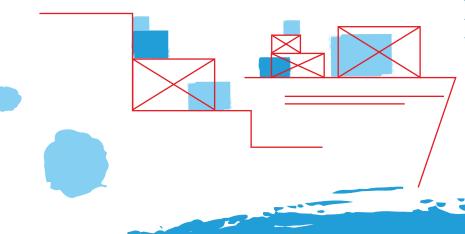
What is the **likelihood** of the following issues occurring within the next 10 years?

1 Very unlikely / 2 Unlikely / 3 Likely / 4 Very likely

Workforce and skill shortages moved slightly higher in terms of likelihood, from tenth in 2021 to eighth in 2022. At the same time, the industry feels less prepared to manage the issue, which dropped from tenth in 2021 to fourth place this year. As we noted in last year's report, issues ranging from the crew change crisis to diversity to an increasing need for digital skills are among the root concerns.

Respondents continued to view a future pandemic as less likely, ranking it sixteenth in terms of likelihood this year compared to thirteenth in 2021 and tenth in 2020, the first year it was listed as an issue in the survey. This raises a concern that if companies see a pandemic as less likely, then they will lower their guard against the possibility of future pandemics.

2022 RANK	2021	Issue	SCORE
1	7	Fuel price increases	3.54
2	6	Geopolitical tension	3.49
3	1	New environmental regulation	3.44
4	3	Cyberattacks and data theft	3.43
5	2	Decarbonization of shipping	3.38
6	5	Societal demands for sustainability	3.37
7	4	Big data and artificial intelligence	3.34
8	10	Workforce and skill shortages	3.16
9	9	Failure of climate change mitigation and adaptation	3.12
10	8	Changing trading patterns	3.10
11	11	Global economic crisis	2.90
12	12	Autonomy technology	2.71
13	15	Failure or shortfall in infrastructure	2.66
14	17	Public governance failure	2.49
15	14	Major safety incident	2.42
16	13	Pandemics	2.38
17	18	Terrorism	2.27
18	19	Insufficient access to finance	2.07



Low preparedness for infrastructure and workforce issues

The way the maritime industry looks at the potential impact and likelihood of issues gains more meaning when viewed against the third measure in our survey: Preparedness.

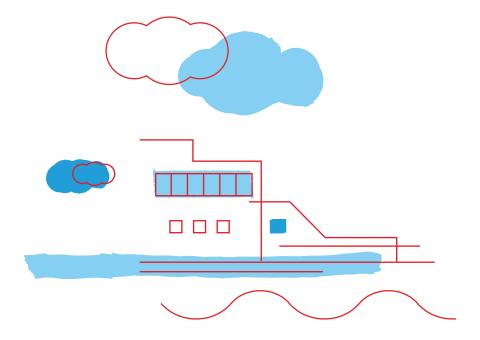
For example, fuel price increases jumped significantly in terms of impact and likelihood this year, but barely moved when it came to preparedness, where it again ranked as an issue for which the industry is well prepared. The increases in likelihood and impact for this issue stem from current events; over the maritime industry's long history, it has learned how to prepare for shifting energy costs.

Autonomy technology, on the other hand, tells a different story. For the second consecutive year, autonomy technology was seen as the issue for which the industry is least prepared; yet its rankings for impact and likelihood show it is not high on the industry agenda. The glass-half-full view here is that the industry understands that these technology issues will be impactful, knows that preparation is needed, but has some time to get ready.

Workforce and skill shortages had the biggest decline in preparedness, dropping to the industry's fourth least prepared area from tenth last year. Combined with its even larger movement in the impact category—from 11 to 4—workforce and skills issues require attention, as noted in our 2021 report.

A shortfall in infrastructure moved into the number two slot in 2022 for being least prepared, after being ranked at number six in 2021.

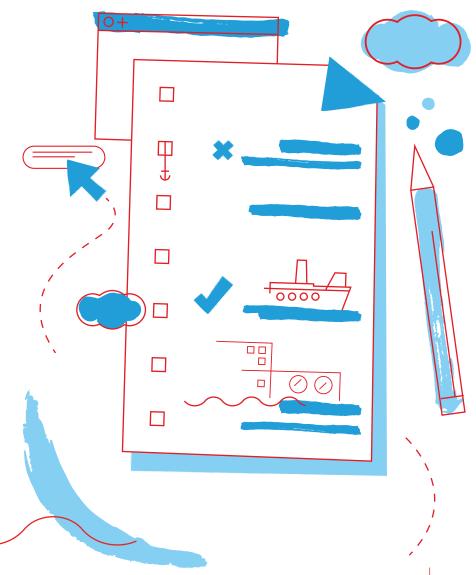
Finally, although perceptions of the industry's preparedness for environmental issues improved overall, climate change mitigation and adaptation continued to be ranked as issues for which the industry is not well prepared (third least overall).



How **prepared** is the maritime industry to deal with the following issues?

1 Very unprepared / 2 Unprepared / 3 Prepared / 4 Very Prepared

2022 RANK	2021	ISSUE	SCORE
1	1	Autonomy technology	1.95
2	6	Failure or shortfall in infrastructure	2.07
3	3	Failure of climate change mitigation and adaptation	2.08
4	10	Workforce and skill shortages	2.10
5	2	Cyberattacks and data theft	2.12
6	5	Global economic crisis	2.13
7	8	Big data and artificial intelligence	2.15
8	11	Public governance failure	2.19
9	9	Societal demands for sustainability	2.21
10	4	Decarbonization of shipping	2.22
11	7	New environmental regulation	2.28
12	12	Geopolitical tension	2.29
13	13	Terrorism	2.34
14	14	Insufficient access to finance	2.37
15	16	Fuel price increases	2.39
16	15	Pandemics	2.52
17	17	Changing trading patterns	2.57
18	18	Major safety incident	2.77



Top issues

Environmental issues remained high on the industry agenda in 2022 when considering the survey respondents' views on likelihood, impact, and preparedness. At the same time, workforce and skill shortages rose in prominence as a major issue for the coming decade. Also of note in 2022, fuel price increases and geopolitical tension became top considerations.

Decarbonization and other environmental issues stay on the top

For the second consecutive year, decarbonization of shipping and new environmental regulations topped the list of issues that will have the most impact in the coming decade. While they remained among the top five for likelihood, the slight drop in that area had more to do with other issues exhibiting immediate impact—fuel prices and geopolitical tensions—while the survey was in the field.

In terms of preparedness, views improved on the industry's readiness for decarbonization and environmental regulatory issues. The results show that the respondents believe the industry is more prepared to reduce or eliminate the use of fossil fuels in shipping, and that it is increasingly prepared for environmental requirements through regulations.

Interestingly, the failure of climate change mitigation and adaptation stayed at number three on the list of issues for which the industry is least prepared. As this refers to impacts of climate change beyond the maritime industry, respondents may feel less in control than for decarbonization. Instead, failures in this area would potentially bring

consequences to the industry from the inability of governments and businesses to effectively enforce or enact effective measures to adapt to climate change.

"The maritime industry is not alone in its worries about preparedness for climate change adaptation," said **Amy Barnes**, Head of Climate and Sustainability Strategy at Marsh. "As with other environmental, sustainability, and governance (ESG) issues, developing a climate mitigation strategy is often not a matter of awareness, but of action. Many businesses are genuinely committed to engaging with environmental and other ESG issues, but are not sure where to focus their next steps."

"The maritime sector as a whole has become increasingly aware of the urgent need to transform and decarbonize," said **Professor Lynn Loo**, CEO of Global Centre for Maritime Decarbonisation.

She pointed to upcoming mandatory measures aimed at cutting the carbon intensity of international shipping, such as the Energy Efficiency Existing Ship Index (EEXI) and carbon intensity indicator (CII) adopted in June 2021 by the International Maritime Organization (IMO). Carbon intensity links GHG emissions to the amount of cargo carried over the distance it travelled.

"To start bending the curve on GHG emissions," Professor Loo said, "we cannot afford to wait for individual pieces of puzzles to be in place before moving the others. We need to move simultaneously on advancing shipboard technology development and demonstration; financing the scale up of zero-carbon fuel production; and developing policies that level the playing field for adopting low-carbon solutions."

The urgency in the maritime industry around environmental issues, particularly climate, calls for increased collaboration to accelerate the use of new technologies.

"Key stakeholders have realized the need to work together with regulatory bodies to lay down a concrete and accelerated path toward decarbonization," said **Eric Aboussouan**, Director of Strategy, Investments & Partnerships, and Digitalization, Cargill Ocean Transportation at Cargill. "The simple fact that more and more shipping actors are willing to look at data, analyze those, and publish the findings and results on their progress toward decarbonization is already a big step forward."

Aboussouan added that there is better understanding of the new technologies and zero carbon fuels—and their costs—that will be available to the shipping industry, though "the scalability of those solutions remains challenging, but that will ease overtime."

Geopolitical tensions and economic issues

This year's survey went into the field in April 2022, at which point Russia's invasion of Ukraine was in its third month and the rise in fuel prices globally was well underway. It was of little surprise that geopolitical tensions and fuel price increases jumped higher on the list of the most likely issues for the maritime industry.

Fuel price increases topped the most likely list for the first time in the five years of our survey, with 94% of 2022 respondents ranking it likely or very likely. In terms of impact, geopolitical tension rose to third on the list from ninth in 2021, while fuel prices climbed to fifth from tenth.

It is perhaps a testament to the longevity of the maritime industry that it was viewed as relatively well prepared to manage both geopolitics and fuel price increases.

Ukraine-Russia: With more than 60% of the survey respondents based in Europe, responses to qualitative questions indicated some nuances behind the geopolitical tension issue. About 35% of survey respondents said the Russia-Ukraine war had impacted their business or made them reassess supply chain resiliency, trade routes, and/or vendor credit positions. As the war has continued, it is likely that number will have increased.

Respondents reported both direct and indirect impacts from the conflict. Direct impacts included:

- Redirecting trade routes and changes in trade flows for routes that were disrupted.
- Ceasing trade or ending other business relationships with Russian stakeholders.
- Stopping calls on both Russian and Ukrainian ports.
- Challenges experienced by crew, crew movement, and other operational aspects.

Indirect impacts included:

- Sanctions affecting their business.
- Exposure of vulnerabilities in the value chain.
- Price increases and uncertainty.
- Reassessment of how and with whom business is conducted.

Many respondents stated that they have not yet been impacted directly or indirectly, but that they are following the situation closely. The war in Ukraine also may have played a role in the low rankings the issue of terrorism received in likelihood and impact.

"Shipping players are less concerned by a terrorist attack today than a prolonged Ukraine conflict, a risk of its expansion, or an unlikely, but possible, deterioration of the situation in Asia-Pacific," said Aboussouan. "As the world becomes more polarized, and shipping remains global, headwinds for the shipping industry are real and, in most people's mind, more alarming than terrorism."

Financing, trading patterns, and infrastructure

The potential for a global economic crisis remained fairly prominent on the radar, placing at number 6 in terms of impact and in the top third of issues for which the industry is least prepared. The impact of changing trading patterns increased, and preparedness for failure and shortfall in infrastructure decreased.

Following the pandemic, the Suez Canal blockage, and the war in Ukraine, the industry is seeing changes in trading patterns and a lack of preparedness for disruptions in infrastructure. Compared to last year, both the expected impact and likelihood of changing trading patterns increased.

"The maritime industry as a whole has confronted monumental logistical challenges throughout the last three years," says **Vandita Pant**, Chief Commercial Officer, BHP. "Demand for tonnage has been elevated and the effective supply of tonnage has been constrained, leading to high levels of volatility in both chartering costs and operational reliability."

To overcome such disruptions, Pant said the maritime industry must be a champion of freight flexibility. "Companies need to have a much greater focus than ever before on contingency planning and enhancing their commercial offering by building a risk-optimized,

capital efficient, and flexible supply chain. Stronger alliances between industry, port authorities, partners, suppliers, and governments is critical to keeping markets open, continued operation of critical infrastructure, and free movement of capital and labor."

Despite concerns with fuel prices, insufficient access to finance was seen as unlikely, placing at number 18 on the list, nearly the same as in 2021 when it was number 19. At the same time, insufficient access to finance was seen as having even less impact than in 2021, dropping from 14 to 17. However, the issue is likely to grow in importance, said **Michael Parker**, Chairman, Global Shipping, Logistics & Offshore, Citi.

"The availability of capital will become increasingly important,"
Parker said. "And that will begin to be dictated by emissions and
other environmental metrics as cargo owners choose which vessels
they charter based on those metrics, and not just freight rates."

Digital issues

As the maritime industry, like others, seeks to increase speed, decrease delays, improve visibility into supply chains, and become more efficient, the reliance on technology grows more important. With that comes increased exposure to cyber risks.

It is therefore no surprise that issues related to digitalization—cyberattacks and data theft, big data and artificial intelligence, autonomy technology—continued to score high on likelihood and low on preparedness.

"Every company in every industry should expect a cyberattack," said **Elisabeth Case**, Managing Director, Cyber Practice, US and Canada, Marsh. She pointed to a <u>recent survey</u> from Marsh and Microsoft in which nearly 75% of respondents said they had faced a cyberattack in the previous 12 months.

"An important mindset companies can adopt is to focus on resilience," Case said. "Rather than trying to block every possible cyberattack, resilient companies—and insurers—are focusing on key controls, such as multifactor authentication, email filtering, and others in order to minimize the impact of a cyberattack when one does occur."

New technologies being adopted in various parts of the industry bring vulnerabilities as increased touchpoints offer an expanded attack surface—the aggregate of all known, unknown, and potential vulnerabilities and weaknesses across all people, hardware, software, and network components that might present cyber criminals an entry point.

The key role the maritime industry plays in the global economy means that disruptions can ripple through supply chains, causing significant delays and other issues. For example, a major cyber incident could potentially bring a port or terminal to a standstill for hours, days, or even weeks.

Such risks underscore how important it is for those in the maritime industry to invest in smart digitization strategies that identify and address vulnerabilities, creating a cyber-resilient organization that is able to withstand and recover from an attack.

The generally conservative nature of the shipping industry is the "single biggest thing" holding it back in terms of managing cyber risks and issues related to digitalization, said **Thomas Bagge**, CEO and Statutory Director, Digital Container Shipping Association (DCSA). "Changing the industry takes time, but things are moving. We need to define the basic digital foundation."

He added that a lack of standards hampers the ability to extract value from things like big data.

"You cannot treat different technologies the same," Bagge said. "The industry is significantly better prepared for cyberattacks than a few years ago—certainly that is the case for container carriers—but the risk is also increasing."

Readiness for autonomy technology remained of particular concern, and was again rated as the issue for which the industry is least prepared. There is not yet a high level of concern over how this technology will affect the industry, though it did move up from number 16 to number 14, while remaining at number 12 for likelihood.

Workforce and skill shortages increasingly urgent

In the last two years, both the expected impact and the likelihood of workforce and skill shortages have increased. At the same time, the level of preparedness has decreased.

Last year, the Issues Monitor highlighted the looming issue of workforce and skill shortages and dug into the negative impact of the crew change crisis, and the industry's need for new skills and talents. While the need for workforce, skills, and talent is widely acknowledged, the issue is a growing concern.

"It has now been well reported that the biggest issue facing the industry is a lack of skilled seafarers and a poorly diversified pool of seafarers in terms of nationalities," said Andrea Olivi, Global Head of Wet Freight, Trafigura.

Olivi and others noted that both the COVID-19 lockdowns in China and the Russia-Ukraine war drastically reduced the supply of competent seafarers.

TOP ISSUES

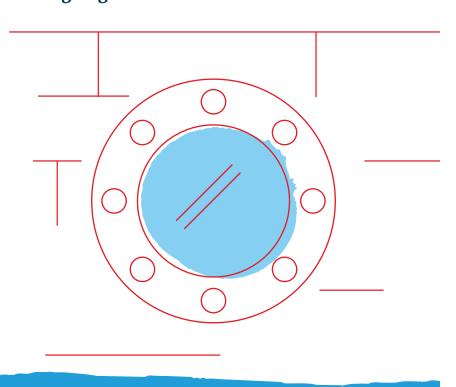
The crew change crisis has been a major driver behind the perception that the industry is not well prepared for overcoming a workforce shortfall. For the maritime industry, one of the many significant impacts of COVID-19 has been that thousands of seafarers have been stuck on ships beyond the expiry of their contracts as many countries declined their entry.

More than 850 organizations have signed the Neptune Declaration on Seafarer Wellbeing and Crew Change, which seeks to find an end to this crisis, in part by encouraging the vaccination of seafarers. Fortunately, the situation is easing. As of July 2022, the Neptune Declaration Crew Change Indicator estimates that 4.2% of seafarers remain on board beyond the expiry of their contracts, with 0.3% on board for more than 11 months post-expiry. The Neptune Indicator also reported that, despite some ongoing insecurities around vaccines, the percentage of vaccinated seafarers continues to increase, from 86.2% in June to 89.3% in July; in January, 59.8% of seafarers had been vaccinated.

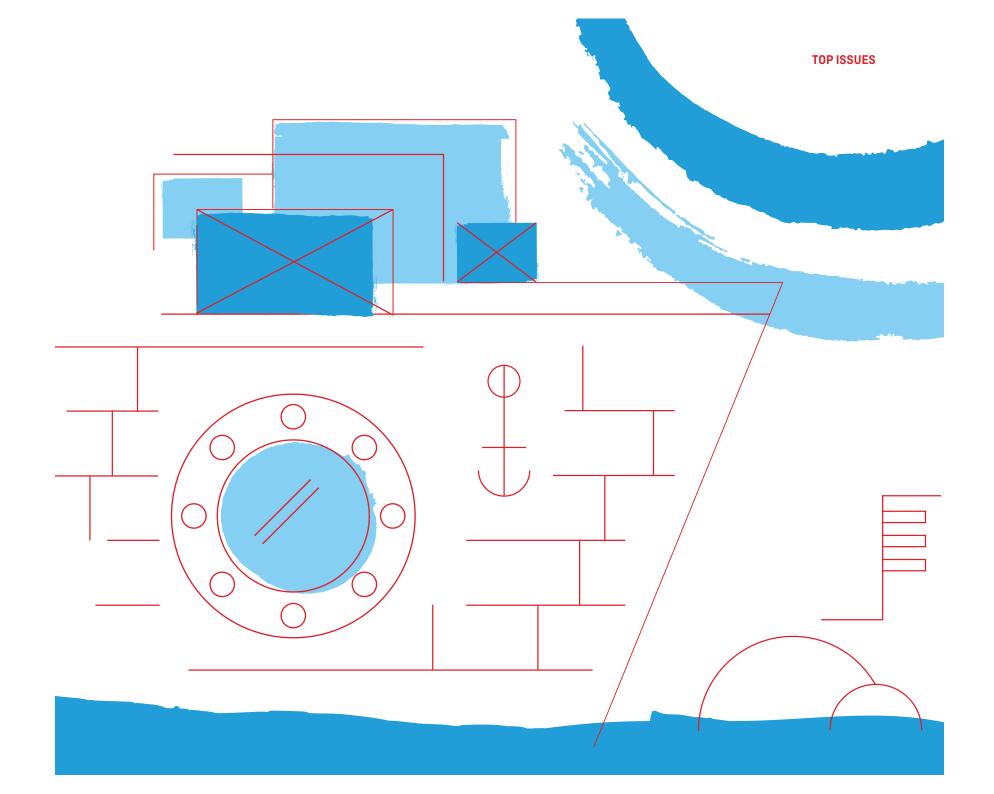
There were few new developments or difficulties reported in carrying out crew changes. Restrictions persist in some countries, although quarantine requirements loosened in China and overall COVID-19-related crew change restrictions have eased.

Ship managers also reported a global shortage of Ukrainian and Russian crew members due to the war, a particular concern as those nationalities represent about 15% of the total 1.9 million seafarers globally.

The maritime industry faces a range of issues in the coming decade, including environmental concerns, workforce and skill shortages, fuel price increases, and geopolitical tension. Though perceptions of the impact, likelihood, and preparedness for these and other risks shifts from year to year, all will remain important issues for industry leaders going forward.

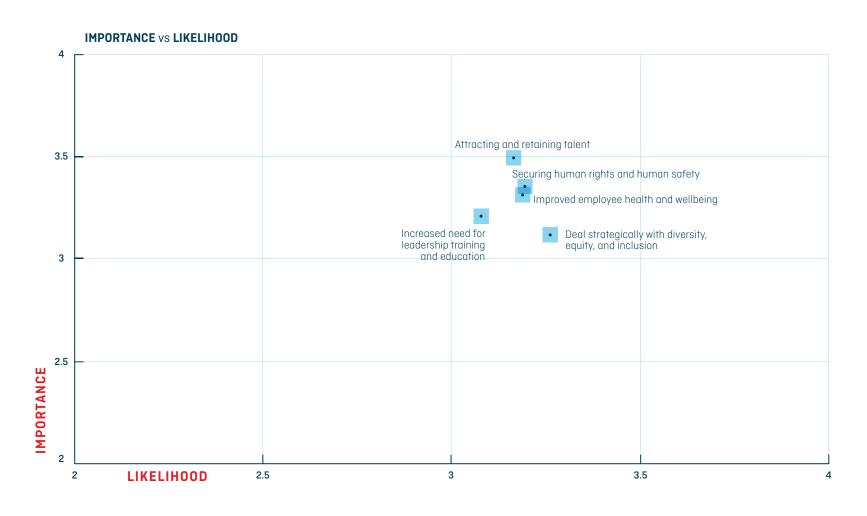






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Deep dive into human sustainability



Deep dive into human sustainability

This year's deep dive looks into human sustainability, defined as dignity and respect for every human being within an organization and across supply chains to ensure human wellbeing and ethical practices. The pandemic has made it increasingly clear in the maritime industry that the general focus on sustainability should be extended to include human sustainability—both onshore and at sea. The importance of the issue among maritime industry leaders is bringing about a shift in leadership focus, away from managing ships toward managing people.

Importance and likelihood of implementation of strategies

Human sustainability encompasses a range of topics, including diversity, equity, and inclusion (DE&I); leadership training and education; attracting and retaining talent; improved employee health and wellbeing; securing human rights; and human safety. When asked about these areas, respondents were asked to rate the importance of implementing strategies to address the issues, and the likelihood of their companies implementing strategies to handle the same issues.

In general, significant challenges exist around implementing strategies to tackle issues related to human sustainability.

Attracting and retaining talent

Attracting and retaining talent topped the list in terms of how important it is for the industry to develop strategies to address the issue. This aligns with results in other survey areas that showed how workforce and skill shortages is perceived to be increasingly important and impactful. However, the talent issue was also seen as one that respondents said their companies were least likely to address through implementing strategies, with only the increased need for leadership training and education ranking lower.

An important first step in attracting talent is to "bridge the knowledge gap that exists between the maritime industry and the younger generation," said **Roberto Spanu**, Head Marine Loss Prevention and Sustainability, Director, Swiss Re Corporate Solutions.

"Young talent must be attracted and, above all, retained, by ensuring a systematic and diversified growth in skills, competencies, and responsibilities," Spanu said. "As well, sustainability and technological/digital developments are other key aspects that the maritime industry needs to bring at the highest level of engagement in order to be among the preferred choices of young talent."

"The majority of seafarers work on a contract basis and the constant dealing with crew turnover is a major source of frustration and stress," said **Captain Rajesh Unni**, Founder and CEO of Synergy Marine.

He said that recent research results indicate that issues such as employee benefits and other factors related to job satisfaction may play a larger role than pay in offshore mariners' decision to quit or stay.

If young people are to be recruited into maritime employment, be it onshore or as seafarers, it's important to have strong, knowledgeable leaders. Members of younger generations—notably

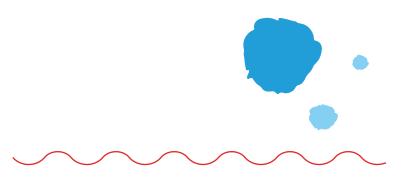
Gen Z and Millennials—typically seek different leadership styles than what is currently the norm across the industry. A strict, hierarchical command structure can make it difficult for younger employees to thrive, as they increasingly expect free, interactive communications.

Not the least of their <u>expectations</u> is greater flexibility and more time with friends and family. As these two generations together are expected to comprise <u>more than 70%</u> of the total global workforce, the fact that leadership training and education ranks low in both importance and likelihood is alarming.

The low ranking of leadership training and education comes while the industry faces the triple disruption of digitalization, decarbonization, and automation. Each of these areas requires new skills across the board, not only from seafarers and other workers who will conduct the hands-on work, but also from those in supervisory and higher leadership positions.

The quality of these leaders will go a long way toward motivating new recruits to make a career in the industry.

The energy transition also requires dedicated leadership. And again, there needs to be an overall focus on leadership training and education as the industry works through this major shift in energy sources.



Employee health and wellbeing

Encouragingly, employee health and wellbeing ranked fairly high in both importance and in the likelihood for concrete action. There are a range of new initiatives focused on improving health and wellbeing—both at sea and onshore. According to the latest <u>Seafarer Happiness Index</u>, overall happiness has improved in recent months; however, challenges persist, with limited access to shore leave a primary concern.

A looming question is whether those initiatives will be enough compared to what other industries are doing both to retain existing employees through "the great resignation" and to attract new employees.

Captain Unni, of Synergy Marine, said it's important to focus on a system that increasingly offers full-term employment to seafarers. "It gives a sense of belonging and a sense of security as well," he said. "We must compete with shore-based industries to retain and attract talent."

As **Peter Hult**, CEO of VIKAND Solutions, <u>told the GMF</u>, "Seafarer health is more than theoretical. It is fundamental, [as clearly set out] in the Neptune Declaration on Seafarer Wellbeing and Crew Change, which has been [adopted] by 850 companies to 'Establish and implement gold standard health protocols based on existing best practice."

Hult also noted that "central to seafarer rights is the adoption of standards of care – which can and should be defined by the industry itself."

Impact of the war in Ukraine on wellbeing: Asked about the conflict in Ukraine, about 27% of respondents reported some impact on their workforce. Much was indirect, through business and operational changes, and increased stress on crew members to deal with the consequences posed by the war.

"The Ukraine conflict has made it challenging to pay our Russian seafarers and to move our Ukrainian seafarers to and from ships and home," a North American ship owner said in responding to the survey. "For all our seafarers, it has increased stress."

Impacts cited by respondents included:

- Russian and Ukrainian crew members feeling direct impacts from increased stress and decreased wellbeing. As the war is taking place on Ukrainian soil, there was increased stress for Ukrainian crew members, with worries for family members who were directly impacted.
- Mental health issues, particularly related to concerns for family members.
- Sanctions led to some crew members experiencing issues with getting paid.
- · Some crews and operations being moved as safety precautions.

Respondents also reported that their companies are supporting impacted employees through individual follow-ups, a focus on wellbeing, and aid and support to impacted family members.

One European ship owner said, "... the Ukrainian seafarers and families are in crisis and we try to assist them and their families with basic needs, housing, and support as much as we can. Our Russian seafarers and their families are affected as well, [and we are] assisting them as far as the EU sanctions allow it."

Diversity, equity, and inclusion

Dealing strategically with diversity, equity, and inclusion (DE&I) issues ranked as the human sustainability area that companies are most likely to develop a strategy for, though it scored the lowest overall in terms of importance.

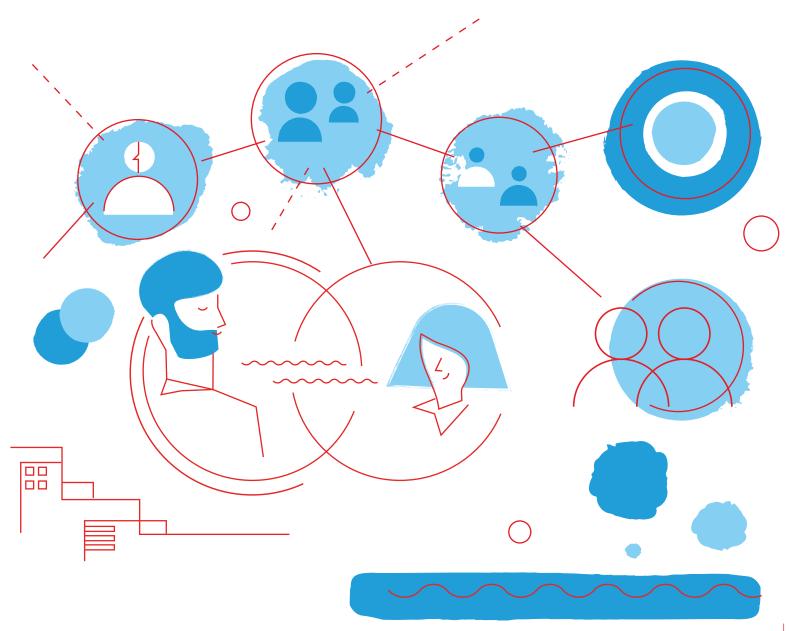
The maritime industry ranks well behind most other industries when it comes to DE81. The male dominance of the industry is stark, with women accounting for just over 1% of seafarers and about 5% of the industry's senior leaders. Such a shift will be especially important in attracting younger workers, who may well bring in new values that interfere with existing maritime work cultures.

Despite the low numbers, the momentum behind DE&I issues is increasing in the maritime industry, according to Heidi Heseltine, Founder, Diversity Study Group, Chief Executive Officer, Halcyon Recruitment.

According to Heseltine, the main drivers include ESG reporting to assess performance with DE&I, making DE&I part of their decision-making criteria when considering new employers, addressing supplier diversity in procurement processes, and attracting and retaining talent at all levels, from all industries.

"Success with respect to DE&I requires executive leadership to drive it throughout organizations with a robust strategy, clear measurable objectives, and defined accountability. It requires the allocation of resources and investment in our people beyond salaries and bonuses. The DE&I journey is not straightforward, nor is it quick, and without the C-suite taking the lead, progress is likely to be slow and the opportunities that DE&I brings may be missed."

DEEP DIVE INTO HUMAN SUSTAINABILITY



Methodology

The Global Maritime Issues Monitor 2022 is based on a survey conducted between April 4 and May 10, 2022, which was completed by senior maritime stakeholders from the Global Maritime Forum, Marsh, and IUMI's multi-stakeholder networks. Respondents included board members, C-suite, and functional decision makers from the private sector, and government and civil society representatives. The sample represents a diverse network of maritime stakeholders from six continents.

Respondents ranked a series of global maritime issues on their potential impact to seaborne trade, the likelihood of different events occurring over the next 10 years, and the maritime industry's preparedness for these events. The survey looked at 18 general maritime issues.

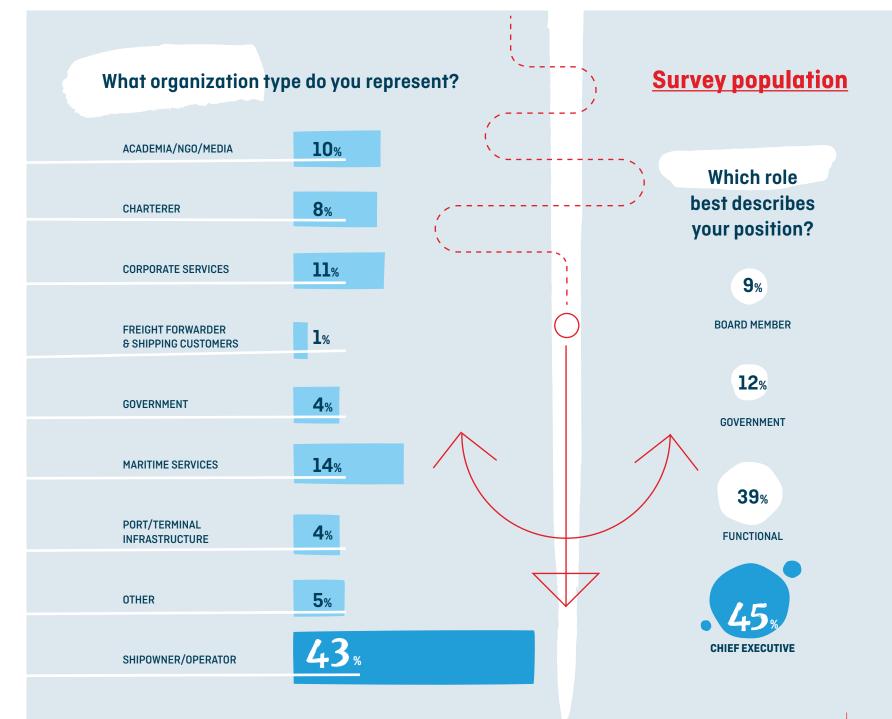
The responses were coded to allow comparisons. Arithmetic mean scores were calculated for each issue and used to rank them in terms of likelihood, impact, and preparedness. Leaders and experts were then asked to comment on and provide context for the findings. The results were used to produce an impact vs. likelihood vs. preparedness chart and to provide the supplementary evidence used throughout the report.

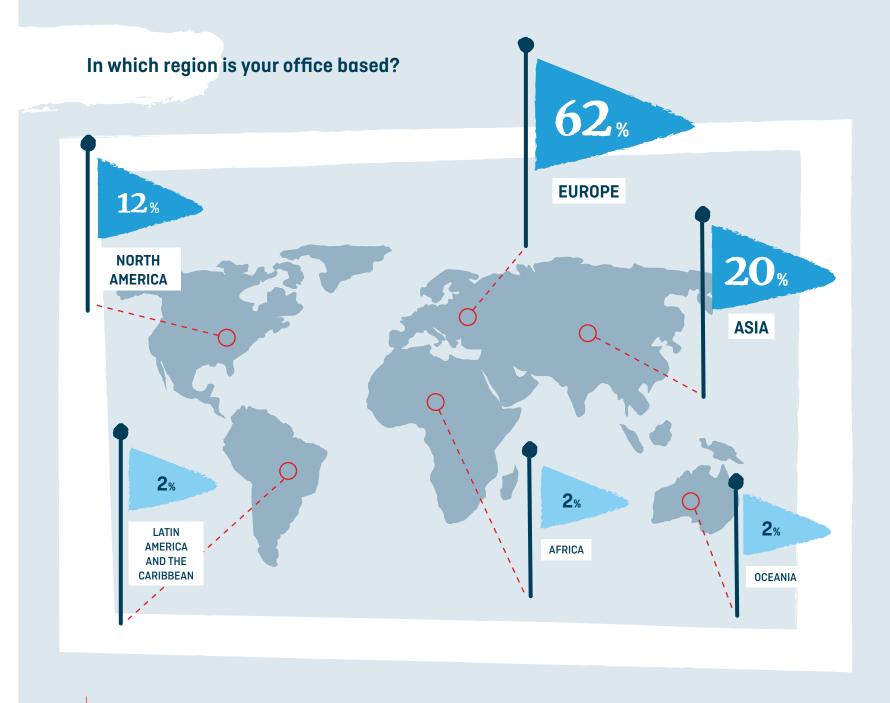
In the deep dive section, importance and likelihood were assessed by asking respondents to rate the importance of implementing strategies to address issues, and the likelihood of their companies implementing strategies to handle the same issues. The results were used to produce an impact vs. likelihood chart.

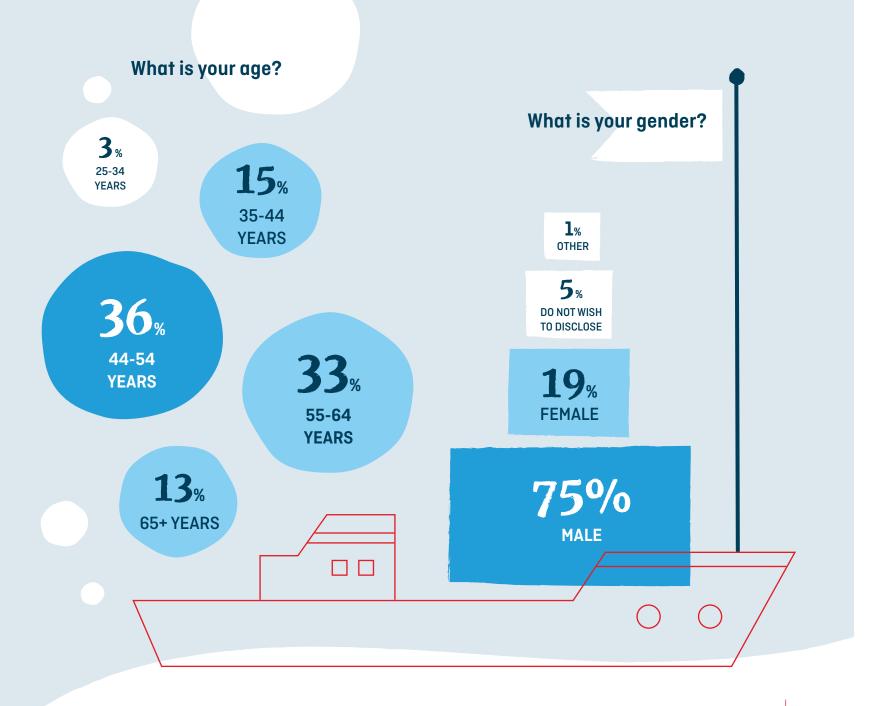
The Issues Monitor Survey was updated in 2022 to simplify the visual presentation of the survey questions. With this visual update the overall survey data appeared skewed with the survey participants rating the questions significantly lower across all issues. To correct for this skew, the data has been normalized in order to be comparable to previous years.

How the normalization was done each year before 2022:

- Calculate average impact of 2018-2021 issues
- Calculate average impact of 2022 issues
- · Calculate difference between 2018-2021 average and 2022 average
- · Subtract this difference from each 2018-2021 issues.









Global maritime issues

Economic issues

Changing trading patterns

Changes to the maritime trading landscape and supply chain that will have an impact on global trade (for example, One Belt One Road, deindustrialization, near-sourcing).

Failure or shortfall in infrastructure

Failure to adequately invest in, upgrade, and/or secure transportation infrastructure, leading to loss of economic activity, pressure, or a breakdown with system-wide implications.

Fuel price increases

Increases in fuel prices leading to economic pressure or uncertainty for the maritime industry.

Global economic crisis

A significant downturn in the global economy resulting in a lack of growth for the maritime industry.

Insufficient access to finance

Inability of the maritime industry to attract sufficient finance for long-term investment.

Geopolitical issues

Geopolitical tension

A bilateral or multilateral dispute between states that escalates into economic, military, cyber, societal, or other conflict.

Governance failure

Inability of regional or global institutions to resolve issues of economic, geopolitical, or environmental importance.

Terrorism

An unlawful use of violence and intimidation by individuals or groups with political or religious goals that inflicts human or material damage.

Human Sustainability

Human sustainability equals dignity and respect for every human being within our organizations and across our supply chain, which is achieved by adopting policies and practices that ensure human wellbeing and ethical practices.

Environmental & human health issues

Decarbonization of shipping

The various consequences to the maritime industry resulting from pressure—regulatory, competitive or societal—to reduce the use of or eliminate fossil fuels within shipping, and replace them with fuels and/or technologies that do not emit greenhouse gasses.

Failure of climate change mitigation and adaptation

Adverse consequences to the maritime industry resulting from the failure of governments and businesses to enforce or enact effective measures to mitigate climate change, protect populations, and help businesses impacted by climate change to adapt.

Major safety incident

An unintended event within the maritime industry that severely disturbs normal operations and has vast irreversible consequences on human life and/or the environment (for example, explosion causing loss of life, oil spill).

New environmental regulation

Efforts to minimize the maritime industry's negative impact on the environment (for example: SOx and NOx emissions, ballast water discharges, ship recycling) through new regulation (excluding regulation pertaining to the decarbonization of shipping).

Pandemics

Outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population.

Societal issues

Societal demands for sustainability

Rise in demands for organizations to act responsibly with regard to the environment, society, and the economy (for example, preservation of biodiversity, diversity and inclusion, circular economy).

Workforce and skill shortages

Shortages in the maritime industry's workforce, either in size, type, skill, or experience, both at sea and on land.

Digital issues

Autonomy technology

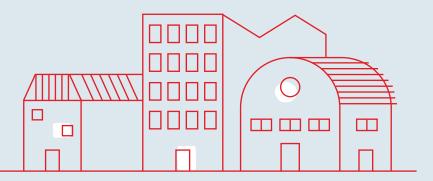
Technology that is able to perform tasks without human interaction (for example, unmanned ships, autonomous ports).

Big data and artificial intelligence

The process of collecting large amounts of data and using artificial intelligence to interpret it, learn from it, and apply these learnings to specific tasks and goals.

Cyberattacks and data theft

Attempts by hackers to damage or destroy a computer network or system causing economic impact and the exploitation of private or official data.



GLOSSARY OF TERMS

Deep dive on human sustainability

Diversity, equity, and inclusion

Having policies and practices in place to ensure increased diversity and inclusion (for example gender, sexual orientation, age, etc.) at all levels within the organization and making sure that recruitments, promotions and evaluations are unbiased.

Increased need for leadership training and education

Both at sea and onshore, where leadership skills and competencies are necessary to deal with both increased diversity amongst employees and also the increased pace of innovation and problemsolving.

Attracting and retaining talent

Intensifying competition for talent and need to attract talent from a broader pool.

Employee health and wellbeing

Improved medical, physical and mental health support to employees—especially at sea where an aging workforce poses new demands for health and medical care—together with higher expectations from younger generations toward being able to take care of their health, also when at sea.

Securing human rights and human safety

Ranging from ensuring no-tolerance toward—including strong policies and practices—any kind of physical and mental abuse, and sexual assaults and sexual harassment to more proactively providing for parental rights for everyone (including leave and guidelines).



ACKNOWLEDGEMENTS

The creation of the *Global Maritime Issues Monitor 2022* is due to a close collaboration between three partners. We would like to thank:

Global Maritime Forum

Johannah Christensen, Chief Executive Officer
Jesse Fahnestock, Project Director, Decarbonization
Ph.D. Susanne Justesen, Project Director, Human Sustainability
Heidi Kilemo, Project Associate
Tina Maver, Communication Manager
Live Gilje, Community Coordinator

Marsh Specialty

Marcus Baker, Global Head of Marine & Cargo Judy Neich, Head of Marketing & Communications, Marsh Specialty Tom Walsh, Senior Editor, Global Marketing & Communications

IUMI

Richard Turner, President of IUMI and International Head of Marine at Victor Insurance Holdings Lars Lange, IUMI Secretary General

Layout by Housatonic.eu

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