

# Benchmarking Bulk Carriers

## 2019–2020

Twelfth Edition



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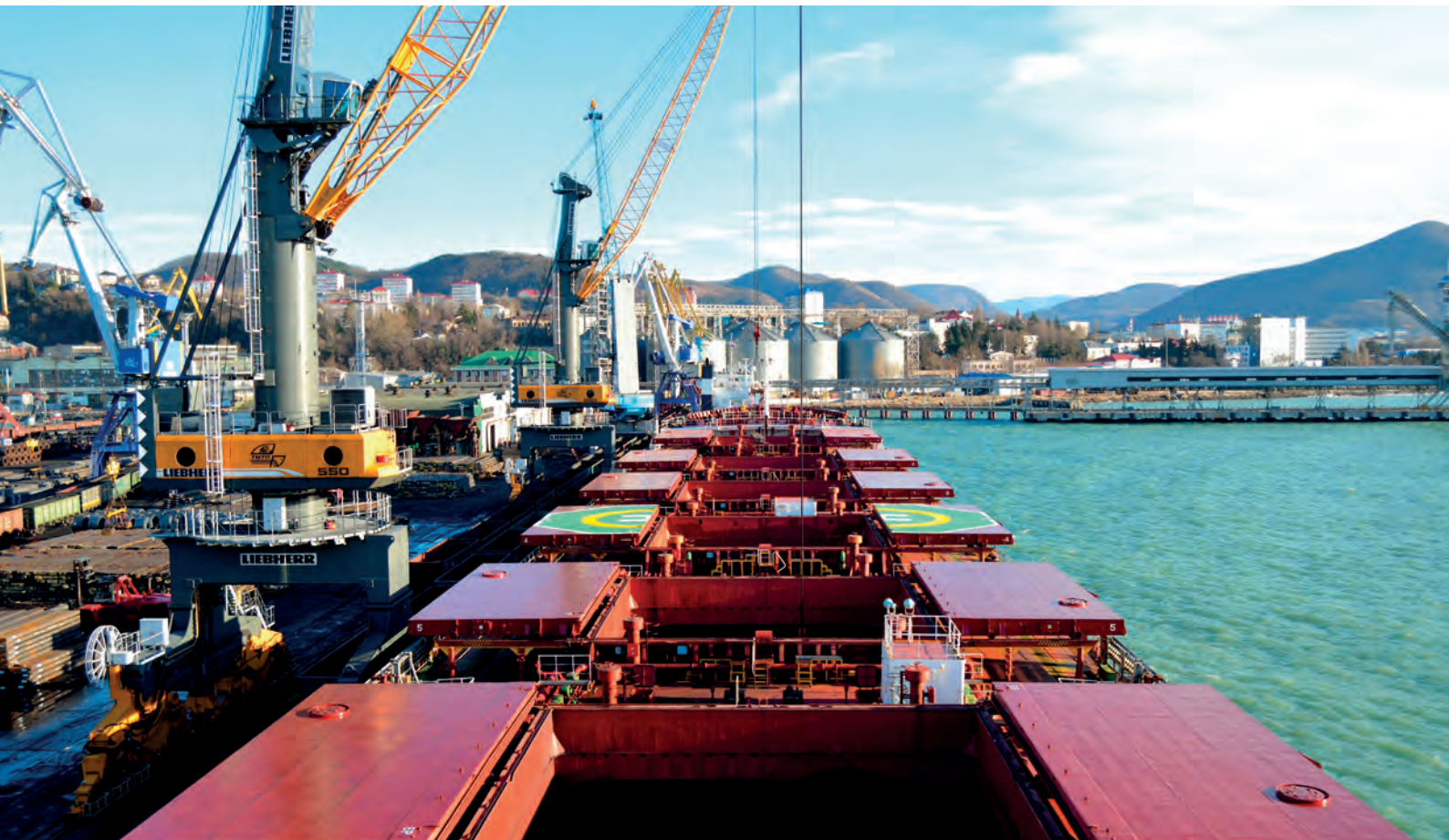
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Photograph courtesy of Anglo Eastern Ship Management





# INTERCARGO – Who we are

## Uniting and promoting quality dry bulk shipping

The International Association of Dry Cargo Shipowners (INTERCARGO) is representing the interests of quality dry cargo shipowners. INTERCARGO convened for the first time in 1980 in London and has been participating with consultative status at the International Maritime Organization (IMO) since 1993.

INTERCARGO provides the forum where dry bulk shipowners, managers and operators are informed about, discuss and share concerns on key topics and regulatory challenges, especially in relation to safety, the environment and operational excellence. The Association takes forward its Members’ positions to the IMO, as well as to other shipping and international industry fora, having free and fair competition as a principle.

INTERCARGO is committed to safety and quality in ship operations, with a focus on operational efficiency and the protection of the marine environment.

## Industry Topics

Although several topics on INTERCARGO’s agenda are of broader concern to international shipping, INTERCARGO always views them from the angle of dry bulk shipping, bringing forward solutions that correspond to the idiosyncrasies of the sector.

Members gain access to cross-industry sources of knowledge and engage in drafting strategy for

both the dry bulk and the wider shipping industry via INTERCARGO’s participation in international fora, industry working and correspondence groups and through INTERCARGO’s consultative status at International Maritime Organization (IMO) deliberations.

INTERCARGO serves as an information and experience-sharing hub for its Members across all of the topics in its work programme. Members also use INTERCARGO’s internal reporting on specific operational aspects to assess problems related to terminals and loading/unloading at anchorage on an ongoing basis.

INTERCARGO’s activities are also directed towards challenges and issues of interest to its membership that go beyond specific items of its work programme, such as the development of **DryBMS**, a quality self-assessment scheme for the dry bulk sector.

INTERCARGO’s working programme is outlined below:

<b>Safety – Security</b>	<b>Environment – Quality</b>	<b>Regulation</b>
<ul style="list-style-type: none"> <li>• Cargoes, “Liquefaction”</li> <li>• Design and Construction, Machinery and Operations                             <ul style="list-style-type: none"> <li>○ Class and Statutory Rules</li> <li>○ Cargo Gear</li> <li>○ Hatch Covers</li> <li>○ Loading Rates</li> </ul> </li> <li>• Incidents and Casualties</li> <li>• Life Saving</li> <li>• Piracy</li> <li>• Cyber Risks</li> </ul>	<ul style="list-style-type: none"> <li>• Ballast Water</li> <li>• Coatings</li> <li>• Emissions                             <ul style="list-style-type: none"> <li>○ Green House Gas – CO<sub>2</sub> Emissions</li> <li>○ Sulphur Cap – SO<sub>x</sub> and Particulate Matter (PM) Emissions</li> <li>○ Other Emissions (NO<sub>x</sub>, Black Carbon)</li> </ul> </li> <li>• Ports and Terminals                             <ul style="list-style-type: none"> <li>○ Reception Facilities</li> <li>○ Port State Control and Transparency</li> <li>○ Corruption, Criminalisation</li> </ul> </li> <li>• Training, Manpower and Human Element</li> </ul>	<ul style="list-style-type: none"> <li>• International Maritime Organization (IMO)</li> <li>• Other Legislation</li> <li>• Miscellaneous Issues</li> </ul>



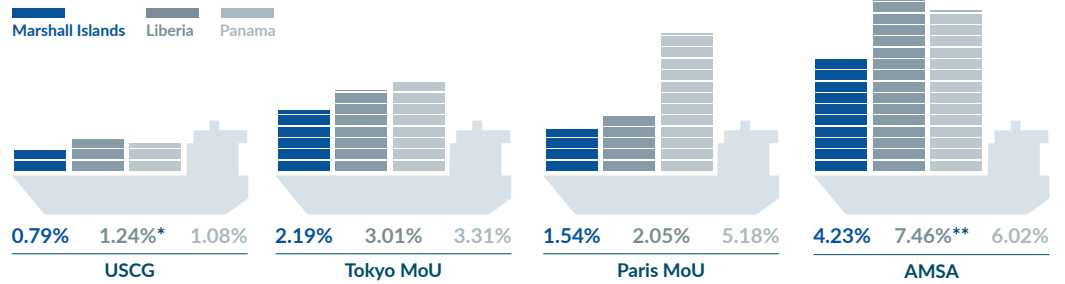
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Port State Control Detention Trends (%)



\* Liberia is targeted for additional PSC examinations by the USCG for having a detention ratio up to two times the overall detention average.

\*\* Liberia has exceeded the overall AMSA average detention rate over the three years from 2017-2019 and is listed among the top five worst detention rates by flag State.

Sources: 2019 Port State Control Annual Reports.



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# INTERCARGO Membership

There are three categories of membership within INTERCARGO, Full, Consociate and Associate.

- **Full Member** – Any company that owns, operates or manages dry bulk carriers of 10,000 dwt and above.
- **Consociate Member** – Any company that owns, operates or manages dry bulk carriers below 10,000 dwt.
- **Associate Member** – Any entity that provides goods or services to the dry cargo shipping industry.

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## Benefits to All Members

- **Being part of an Association dedicated to quality, safety and the environment.**
- Unique access to INTERCARGO **circulars with expert insight** into the dry bulk shipping industry.
- **Opportunities to meet** fellow Members at the Association's meetings in Europe and Asia.
- **Special invitations/discounted access** to industry events. Please visit [intercargoo.org/news/category/member-news](https://www.intercargoo.org/news/category/member-news) for more information.
- A **free hard copy of the latest Bulk Carrier Benchmarking report** is offered to each Member. For information on publications, please visit [intercargoo.org/news/publications](https://www.intercargoo.org/news/publications)
- **Advertising opportunities** in some of the Association's publications and on its website at reduced rates. Please visit [intercargoo.org/advertising-intercargoo-website](https://www.intercargoo.org/advertising-intercargoo-website)
- **Opportunities to present** at the Association's events (subject to invitation).
- **Special access to the Association's website:** [www.intercargoo.org](https://www.intercargoo.org) (some sections are reserved for Full Members).

## Benefits to Full Members

- Companies and Ships registered with INTERCARGO arguably enjoy a **Quality badge** widely recognised by the industry as a marker of excellence. Along with a **Company Certificate** and a **Membership logo**, a **Vessel Certificate** is provided for each registered vessel. Entered ships are tagged on **Equasis** as registered with INTERCARGO. Vessel membership with INTERCARGO is displayed on the vessel dashboard of **RightShip** Safety Score.
- INTERCARGO and RightShip are founding partners of **DryBMS**, a quality standard for the dry bulk sector. Safety, environmental and operational excellence are promoted through company self-assessment. Please visit <https://drybms.org/>
- Members are invited to appoint a representative to INTERCARGO's **Executive Committee** and are eligible to put forward a representative to the Technical Committee (conditions apply). Details can be found in our Constitution under "Management" at [www.intercargoo.org/constitution](https://www.intercargoo.org/constitution)
- The Secretariat represents the Association at IMO, the Round Table of Shipping Associations, IACS, the Tripartite Forum and other **international shipping fora**.
- Members are invited to **INTERCARGO hosted events** (two semi-annual Committee meetings, seminars, etc). Please visit [intercargoo.org/about/meetings](https://www.intercargoo.org/about/meetings) for more information.
- For INTERCARGO's **feedback and reporting schemes**, please see [intercargoo.org/members-reporting-surveys](https://www.intercargoo.org/members-reporting-surveys)
- **Ad-hoc Circulars** via email give information on issues such as cargo updates, as well as alerts on any new developments in the industry.
- **Experience sharing**/(anonymous) consultation within our Membership, when appropriate on reported issues of concern (cargoes, ports, etc) in order to provide informed feedback.
- Full access to the Association's **Website:** [www.intercargoo.org](https://www.intercargoo.org)



## Annual Fees for 2021:

- Full Member – GBP 4,500 for 1 to 5 ships and GBP 350 for each sixth and subsequent ship up to a capped maximum of GBP 21,000
- Consociate Member – Half the fees that would be paid as a Full Member
- Associate Member – GBP 1,250.

Members joining after the start of the membership year (1<sup>st</sup> January) are entitled to an initial pro-rata membership fee.

For the latest updates about joining INTERCARGO, please visit [www.intercargo.org/join/](http://www.intercargo.org/join/)

Enquiries regarding joining should be sent to the Secretariat at [info@intercargo.org](mailto:info@intercargo.org)



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*INTERCARGO is committed to safety and quality in ship operations with a focus on operational efficiency and the protection of the marine environment.*



'ANNA G', Hydroussa Navigation Ltd

# Definitions and Abbreviations

Unless otherwise stated, the analysis in this report refers to the global fleet of dry bulk cargo carrying vessels of 10,000 dwt and above that trade internationally.

A change in methodology in the data gathering process from manual to automated has led to some anomalies between last year's report and the current edition. The INTERCARGO Secretariat is however confident that the tables contained in this report provide a true and accurate reflection of the status of the industry at the time of publishing. Bulk carrier fleet data, as well as detentions, deficiencies and Port State Control records, are sourced from MIS Marine and IHS Markit, unless otherwise stated.

<b>DPI</b>	Deficiencies per Inspection Ratio
<b>DTR</b>	Detentions per Inspection Rate
<b>DWT</b>	Deadweight tonnage
<b>IACS</b>	International Association of Classification Societies Ltd
<b>IMO</b>	International Maritime Organization
<b>ISM</b>	International Safety Management Code
<b>ISPS</b>	International Ship and Port Facility Security Code
<b>MoU</b>	Memorandum of Understanding
<b>NPI</b>	Negative Performance Indicators
<b>PSC</b>	Port State Control
<b>USCG</b>	United States Coast Guard

## Bulk Carrier Vessel Sizes\*:

<b>Handysize</b>	(10,000 to 39,999 dwt)
<b>Handymax</b>	(40,000 to 49,999 dwt)
<b>Supramax</b>	(50,000 to 59,999 dwt)
<b>Ultramax</b>	(60,000 to 64,999 dwt)
<b>Panamax</b>	(65,000 to 79,999 dwt)
<b>Kamsarmax</b>	(80,000 to 83,999 dwt)
<b>Post-Panamax</b>	(84,000 to 99,999 dwt)
<b>Baby Cape</b>	(100,000 to 129,999 dwt)
<b>Cape</b>	(130,000 to 187,999 dwt)
<b>Newcastlemax</b>	(188,000 to 214,999 dwt)
<b>Valemax</b>	(380,000 to 400,000 dwt)
<b>Very Large Ore Carrier</b>	(>220,000 dwt)

*\* The above definitions are used for the purposes of this report (otherwise definitions given in the text apply).*



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# 1. Foreword/Executive Summary

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The world may have left 2020 behind, at the time of publishing INTERCARGO's 2019–2020 Benchmarking Report, but it still faces the unprecedented challenges the previous 12 months have brought not only to shipping but to humanity altogether. Nobody could have anticipated what the last year would bring, as **the COVID-19 pandemic** dominated people's lives. INTERCARGO continues to support the industry's coordinated efforts to bring the **seafarers' humanitarian crisis** to end.

**Dry bulk shipping** is necessary for maintaining and enhancing living standards in both developed and less-developed economies. Coronavirus caused unprecedented disruptions to **global commerce and economic growth**. Against these hardships and during these difficult times, **dry bulk carriers** have remained the **workhorses of international shipping serving essential needs**, such as food, raw materials and energy supply.

**Across shipping**, there was an estimated 3.8% drop in sea trade in 2020 compared to a 4% fall after the 2008 financial crash. **Market-wise, average earnings for the dry bulk sector** in 2020 were the worst for at least five years. The Baltic Dry Index averaged just 1,066 points, down by around 20% from 2020, and the lowest since 2016's average of 673 points.

**Dry bulk shipping demand** contracted by up to -3% in volume and by more than -2% in ton-miles. The second half of the year was much better than the first half, yet China's exception in driving up demand was offset by a generalised slump in most other parts of the world, with India, Europe and the rest of Asia importing less bulk commodities. **On the supply side**, the bulker newbuilding sector had a dismal year in 2020. According to market estimates, contracts in terms of volume dropped to their lowest level since 2016 and the second lowest in the last 20 years, which should ease the tonnage overcapacity in the sector.

**Through to 2021**, increasing demand and a low orderbook are the main reasons for optimism; cautious outlook points to global seaborne trade progressively regaining momentum. Dry bulk trade could rebound by around 4% in volume and even higher in tonne-miles. At the same time, low

deliveries are expected to keep supply growth within 2% to 3% levels.

The outcome depends greatly on the **evolution of the coronavirus pandemic** and its allowing the **world economy to recover**. Some end of 2020 figures indicated economic activity to move towards a +4%, or even +5%, world GDP growth in 2021, after a similar-sized (~4.5%) contraction in 2020. But although China's economy is reviving, most other countries are not there yet. The recovery is likely to be uneven across countries, potentially leading to lasting changes in the world economy.

**Looking at the broader picture**, dry bulk shipping experienced very good times in the 2000–2009 decade, followed by a very weak 2010–2019. In the current decade, the sector will have to prove its resilience and exploit the opportunities offered by the **combined megatrends of sustainability and technological evolutions**.

INTERCARGO's three reference pillars remain those of **safety, efficiency and environmental soundness** with a constant aim for **"quality and operational excellence"**. The INTERCARGO Secretariat is proud that **our Members, dry bulk cargo shipowners, remain committed** to achieving **environmental and operational excellence** and to meeting the **UN Sustainable Development Goals**. While shipping is the most environmentally friendly transport mode, the further reduction of greenhouse gas emissions from ships is the greatest environmental challenge ahead. Following the progress of the last few years, we now see challenges such as quality issues with low sulphur fuel oils, as well as the real-world performance of ballast water treatment systems. The efficiency of international shipping is largely due to the scale and efficiency offered by bulk carriers.

The present benchmarking report, while still referring in some chapters (see below) to past year 2019 bulk carrier inspections, has benefited from **an automated, and thus much improved, process of collecting said data**, compared to past reports. As reported last year, this was an improvement the INTERCARGO Secretariat introduced in order to reduce errors in identifying areas of concern. The assistance of **MIS Marine** in

switching the data gathering process from a manual to an automated process and ensuring the accurate and timely production of this report has been invaluable.

The introductory chapter looks at the capacity of the global dry bulk fleet, the newbuilding orderbook and other key aspects of **the global dry bulk fleet and market trends** in the period under consideration.

In terms of **safety**, regrettably the INTERCARGO Secretariat has to report one ship loss with the associated loss of 25 lives. The vessel in question was carrying nickel ore from Weda Island to Morosi when it disappeared on 20<sup>th</sup> August 2019. The wreck has since been located at a depth of 843 metres in the vicinity of the Eastern Spice Islands. Investigations into the loss are ongoing.

**Incidents** that resulted from problems with the main engine, other machinery and of a technical nature highlight the importance of in-depth analysis of design, manufacture and maintenance effort and sufficient provision of adequate spare parts on board. Serious concerns also arise when referring to the high number of reported incidents of collision and allision.

**Classification Societies** provide valuable services for the design, construction and maintenance of ships. Although there are over 50 Classification Societies, the 12 leading Societies are all Members of the International Association of Classification Societies (IACS) and these 12 IACS Members “class” almost 92% of the global fleet. In terms of quality for the year 2019, the data clearly shows that IACS Members, as a whole, outperform the non-IACS Classification Societies in both DPI and the percentage of detentions compared to market share.

In 2019, the number of **Flags** remained constant at 84, i.e. the same as 2018. Out of the 84, 13 have fleets of 100 bulk carriers or more and account for approximately 88% of the global bulker fleet or 9,519 vessels. 36 Flags have improved the DPI between 2018 and 2019 and Egypt has made the most significant progress having managed to reduce its DPI from 6.72 in 2018 to 4.37 in 2019.

INTERCARGO, through its Members, is committed to operational excellence in the areas of safety, security, health and the environment. INTERCARGO maintains a robust and strict policy for entry which, by design, exceeds industry averages. In 2019, INTERCARGO-entered vessels consistently outperformed industry performance indicators in terms of both deficiencies and detentions. This is a statistic the INTERCARGO Secretariat and our Members take pride in.

The **Owners’ benchmarking** tables, in the relevant chapter, apply to the global dry cargo fleet and allow dry bulk companies to compare their fleet performance against their peers, including detention rates and deficiencies per inspection ratio indices.

The **Negative Performance Indicators (NPI)** chapter categorises recorded incidents and shows, year on year, the changes in numbers of significant incidents against the most frequently notified incidents such as collisions, groundings, etc on a global level for dry bulk carriers.

The market share enjoyed by the Members of the International Group of **P&I Clubs** remains steady at around 93% year on year and in performance terms measured in deficiencies per inspection (DPI) continues to record around 50% less than the rest of the industry at DPI 1.40 versus 3.20. Non-IG Group clubs’ market share reduced from 8.4% in 2018 to 7.3% in 2019.

A summary of **PSC** data shows that the most active authority is the Tokyo MoU for which some 14,000 inspections of bulk carriers took place in 2019 resulting in 284 detentions from 4,091 inspections incurring deficiencies. At the other end of the scale, the Caribbean MoU only inspected 68 bulk carriers of which there were 15 with deficiencies and zero detentions.

Members and non-Members of our Association are encouraged to continue participating in **INTERCARGO’s Reporting Schemes**, including ‘Ship–terminal interface experience and problems’ and ‘Safe loading/unloading at anchorage’, as well as ‘Benchmarking crew injury frequency and lost time’.

INTERCARGO provides the forum where dry bulk shipowners, managers and operators are informed about, discuss and share concerns on key topics and regulatory challenges, especially in relation to safety, the environment and operational excellence. The Association takes forward its Members’ positions to the IMO, as well as to other shipping and international industry fora, having free and fair competition as a principle. **INTERCARGO unites and promotes quality dry bulk shipping, bringing together some 220 companies from 30 countries and offering a quality badge widely recognised by the industry.**

**Thank you for supporting our mission.**

**The INTERCARGO Secretariat**

February 2021



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## 2. Global Fleet and Market Trends

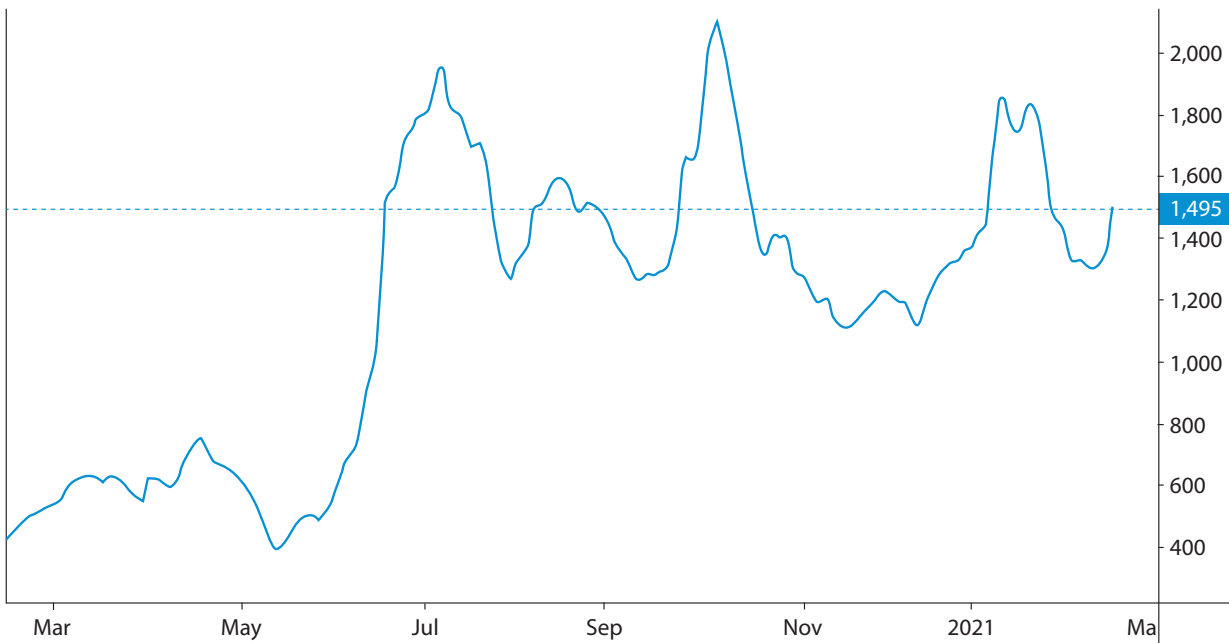
In 2020, the dry bulk market, from reaching a low in May 2020 of around 400 on the Baltic Dry Index (BDI), has steadily improved, reaching a high of 2,115 in October 2020 and ending January 2021 at 1,450.

Key influences on freight rates have been the ongoing COVID-19 pandemic, the trade war between China and Australia and the impact of increased fuel cost due to the preparations for IMO 2020 Sulphur regulations.

The deadweight tonnage growth of the global fleet increased by 3.9% in 2019 (from 2.6% in 2018) bringing the global total of bulk carriers to 10,863, equating to about 788m dwt.

Against trade and political disputes, China’s industrial, but also for grains, import needs remain a major demand driver. US infrastructure spending should support demand for steel and cement. Brazil’s iron ore exports should be another positive driver. Even the latest trade crisis between China and Australia, has certain positive side effects, such as diverting trade

patterns to longer distance voyages. Australian coal heading to Europe and India would boost demand in ton-miles, similar to South American and South African coal heading to Asia rather than Europe, and China diversifying iron ore supplies from Brazil and Africa.



**Figure 2.1:** BDI Trend 2020/2021

The **deadweight tonnage growth of the global dry bulk fleet** increased by 3.9% in 2019 from 2.6% in 2018, bringing the global total of bulk carriers to 10,863 (above 10k dwt; see **Table 2.1**). Demolition in 2019 is at similar levels to 2018 in both numbers and dwt terms.

Growth in international maritime trade stalled in 2019, reaching its lowest level since the global financial crisis of 2008–2009. Lingering trade tensions and high policy uncertainty undermined growth in global economic output and merchandise trade and, by extension, maritime trade. Maritime trade volumes expanded by 0.5%, down from 2.8% in 2018, and reached a total of 11.08 billion tons in 2019.

Against the backdrop of a weaker 2019, the short-term prospects of maritime transport and trade darkened in early 2020. While initial expectations were that 2020 would bring moderate improvements in the economy and trade, the unprecedented global health and economic crisis triggered by the COVID-19 pandemic severely affected the outlook.

The **INTERCARGO-entered bulk carrier fleet** continues to grow year on year and as of December 2020 comprises 141 full Members from 30 countries and 81 associate Members from 27 countries. The total capacity represented by INTERCARGO's membership stands at 227m dwt, an increase of 5.6% over 2019. The 2,397 bulk carriers registered with INTERCARGO represent around 25% of the global dry bulk carrier fleet (see <https://www.intercargoo.org/statistics/>). Compared to the number of bulk carriers registered by Flag, the INTERCARGO-registered fleet on 'Flag equivalent' terms has overtaken Panama, which represents 21.8%.

As of 2020, the average age of bulk carriers in the world merchant fleet was 10.14 years. General cargo ships were the oldest type of vessels, with an average age of 26.9 years; nearly half of the world's cargo ships were older than 14 years, in contrast with 17% of bulk carriers.

In the first seven months of 2020, orders for dry bulk vessels were down by 65% versus the prior year. At just over 63 million dwt, the dry bulk order-book is at its lowest level in sixteen years.

**Deliveries** in 2020 equated to 39.6m dwt versus 34.3m dwt in 2019 and 28.5m dwt in 2018.

The following general observations are made in terms of the global dry bulk carrier fleet:

- The average scrapping age of dry bulk carriers was 26.8 years in 2020 versus 29.7 years in 2019 and 32.7 years in 2018.
- In terms of **Class**, IACS Members' total market share has once again decreased slightly from 93.3% to 91.6%. Bureau Veritas (BV) showed a modest increase of 0.6% whereas Det Norske Veritas (DNV) showed a decrease of around 2%. The complete table is shown in Chapter 4.
- In terms of **P&I Clubs**, Gard continues to top the table with 12.7% of the total dry bulk fleet (an increase of 2% from 2018) followed by the North of England with 10%. In terms of DPI, the International Group (IG) Clubs have a significantly better performance than non-IG Clubs at 1.44 versus 3.19.

**Table 2.2** shows the **composition of the global dry bulk fleet** by size and age to end 2019. Vessels aged up to 5 years represented 21% of the total, which is a minor reduction of 1% from 22% in 2018 (down from 28% in 2017), and up to 10 years represented 43.3% of the total (down from 44.5% in 2018). It is noticeable that the DPI ratio (Deficiencies per Inspection – last column of Table 2.2) continues to show an increase with age. Although age is one parameter, the following sections demonstrate the importance of quality in operations and maintenance.

End of Year	No. Bulk Carriers	Tonnage ('000 dwt)
2019	10,863	787,568
2018	10,458	763,538
2017	10,197	744,381

**Table 2.1:** Total number and tonnage of bulk carriers as at the end of each year (above 10k dwt)

Built	Age	<10,000 dwt	10,000–59,999 dwt	60,000–94,999 dwt	>200,000 dwt	Unknown dwt	Total	% of fleet	2019 DPI
2019	1	6	93	249	31	31	410		0.67
2018	2	12	79	146	15	13	265		0.64
2017	3	8	113	249	37	28	435		0.76
2016	4	4	157	284	32	68	545		0.73
2015	5		218	313	25	60	616		1.01
<b>5 Year Subtotal</b>							<b>2,271</b>	<b>20.9%</b>	
2014	6	3	244	236	34	62	579		1.29
2013	7	4	354	268	40	65	731		1.06
2012	8	12	628	345	42	168	1,195		1.28
2011	9	24	677	264	23	233	1,221		1.64
2010	10	38	561	176	14	193	982		1.66
<b>5 Year Subtotal</b>							<b>4,708</b>	<b>43.3%</b>	
2009	11	42	344	79	12	92	569		1.61
2008	12	14	204	75	9	30	332		1.73
2007	13	9	152	82	18	37	298		2.00
2006	14	11	128	105	9	49	302		1.89
2005	15	13	149	92	10	38	302		1.69
<b>5 Year Subtotal</b>							<b>1,803</b>	<b>16.6%</b>	
2004	16	5	127	78	6	35	251		1.99
2003	17	5	101	24	2	27	159		2.12
2002	18	3	117	52		19	191		2.21
2001	19	3	141	104		24	272		2.06
2000	20	2	77	53		21	153		2.62
<b>5 Year Subtotal</b>							<b>1,026</b>	<b>9.4%</b>	
1999	21	1	67	57		11	136		2.49
1998	22	3	63	38		4	108		2.91
1997	23	5	118	40	1	5	169		2.75
1996	24		90	19		4	113		3.27
1995	25	1	101	30		3	135		3.86
<b>5 Year Subtotal</b>							<b>661</b>	<b>6.1%</b>	
1994	26		47	18		6	71		3.35
1993	27		11	5		2	18		3.65
1992	28	2	16	2	1		21		4.80
1991	29	3	13	2		4	22		3.18
1990	30		22	5			27		3.36
<b>5 Year Subtotal</b>							<b>159</b>	<b>1.5%</b>	
1989	31	1	11	10			22		2.50
1988	32		2	2			4		10.25
1987	33		10	1			11		4.00
1986	34	1	18	1			20		4.17
1985	35	4	14				18		7.12
<b>5 Year Subtotal</b>							<b>75</b>	<b>4.0%</b>	
1984	36		19	1			20		5.19
1983	37	1	9	1			11		2.80
1982	38	1	6	3			10		7.33
1981	39	2	9	8			19		1.14
1980	40	1	9	2			12		
<b>5 Year Subtotal</b>							<b>72</b>	<b>0.7%</b>	
Before 1980	>40	16	62	10			88	0.8%	3.84
<b>Grand Total</b>		<b>260</b>	<b>5,381</b>	<b>3,529</b>	<b>361</b>		<b>10,863</b>	<b>100.00%</b>	<b>1.59</b>

**Table 2.2: Age profile – internationally trading dry bulk fleet by size at the end of 2019 – arbitrary size ranges used for easy comparison with previous reports**



### 3. Casualty and Incident Reporting

Thirty-nine (39) bulk carriers over 10,000 dwt have been identified as total losses over the years 2010 to 2019. Cargo shift and liquefaction continue to be a great concern for the life of seafarers and the safe carriage of dry bulk cargoes over this period. As a consequence, 106 crewmembers have lost their lives from 8 bulk carrier casualties.

In 2019, the INTERCARGO database recorded 378 bulk carrier incidents. Preliminary analysis of the incidents indicated that the top five most common incidents were related to problems of:

- Machinery and technical (118 incidents)
- Main engine (60 incidents)
- Collision (47 incidents)
- Grounding (41 incidents)
- Allision (25 incidents)
- Crew fatality/injury (20 incidents).

The incidents that resulted from problems with the main engine, other machinery and of a technical nature highlight the importance of in-depth analysis of design, manufacture and maintenance effort and sufficient provision of adequate spare parts on board. Serious concerns also arise when referring to the high number of reported incidents of collision and allision.

**Tables 3.1** and **3.2** show the losses of bulk carriers and consequential losses of lives of seafarers during the periods of 2010 to 2019 and 2009 to 2018.

Cargo shift/liquefaction remains a major concern in the dry bulk sector. Of the 9 such casualties reported from 2010 to 2019, as shown in **Table 3.3**, there were

8 casualties of suspected cargo failure among the 39, consisting of 6 bulk carriers carrying nickel ore from Indonesia, 1 vessel with laterite (clay) iron ore from India and 1 with bauxite from Malaysia, and there were 106 lives lost associated with those 8 casualties against a total of 173 lives lost for all 39 casualties.

Losses	In 2019	In the period 2010 to 2019
Lives	25	173
Ships	1	39

**Table 3.1:** Analysis of total losses 2019

Losses	In 2018	In the period 2009 to 2018
Lives	0	188
Ships	0	48

**Table 3.2:** Analysis of total losses 2018





*d'Amico*



Across  
the World

[www.damicoship.com](http://www.damicoship.com)



Reported cause	Losses of life	Losses of ships	Likely root cause	Losses of ships
Cargo shift/liquefaction	106	8	Cargo failure	8
Collision	0	3	Machinery failure	1
			Unknown	1
			Human element	1
Fire/explosion	0	1	Unknown	1
Flooding	22	5	Unknown	4
			Structural	1
Grounding	10	17	Machinery failure	1
			Navigation	3
			Unknown	1
			Weather	1
			Human element	11
Structural	0	1	Unknown	1
Unknown	35	4	Unknown	4
<b>TOTAL</b>	<b>173</b>	<b>39</b>		<b>39</b>

**Table 3.3:** Breakdown causes, 2010 to 2019

Lessons learnt from past incidents play an important role in determining where additional safety improvement is necessary. As shown in **Table 3.4**, at the end of January 2020, 24 of the 39 bulk carrier losses in this analysis have had investigation reports made available on IMO GISIS (<https://gisis.imo.org/Public/Default.aspx>), representing 61.5% of the total. The average time from incident to a report becoming available has been 32 months for these investigations.

**Table 3.4** analyses flag State reporting on the casualties identified in the 24 investigation reports available on the IMO GISIS database at the end of January 2020.

Flag	No. of cases	GISIS with reports	Average months*	GISIS without report
Bahamas	1	1	7	
Belize	1			1
China	1			1
Cyprus	2	1	42	1
Hong Kong, China	4	3	47	1
Indonesia	1			1
Korea	3	1	72	2
Liberia	2	2	52.5	
Malta	3	3	42	
Marshall Islands	1	1	25	
Mexico	1	1	38	
Panama	18	11	19.3	7
Vietnam	1			1
<b>Total</b>	<b>39</b>	<b>24</b>	<b>32.1</b>	<b>15</b>

\*Average months: from the incident date to the date of the reports shown with GISIS

**Table 3.4:** Flag State investigation reports on bulk carrier casualties



The 10-year trends illustrated below in annual average number of lives and ships lost within the bulk carrier industry show positive signs of safety

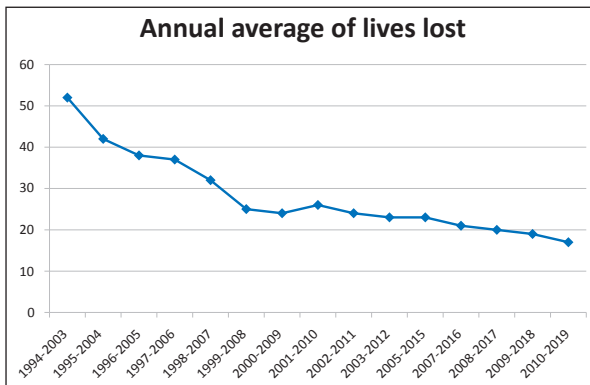
improvement. There is a lot of work to be done to retain the trends to a minimum level.

Rolling 10-year periods	Annual average number of lives lost
1995–2004	42
1996–2005	38
1997–2006	37
1998–2007	32
1999–2008	25
2000–2009	24
2001–2010	26
2002–2011	24
2003–2012	23
2005–2015	23
2007–2016	21
2008–2017	20
2009–2018	19
2010–2019	17

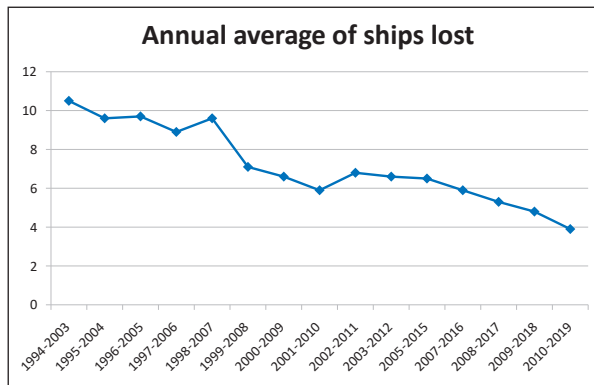
**Table 3.5a:** Trends – Annual average number of lives lost

Rolling 10-year periods	Annual average number of ships lost
1995–2004	9.6
1996–2005	9.7
1997–2006	8.9
1998–2007	9.6
1999–2008	7.1
2000–2009	6.6
2001–2010	5.9
2002–2011	6.8
2003–2012	6.6
2005–2015	6.5
2007–2016	5.9
2008–2017	5.3
2009–2018	4.8
2010–2019	3.9

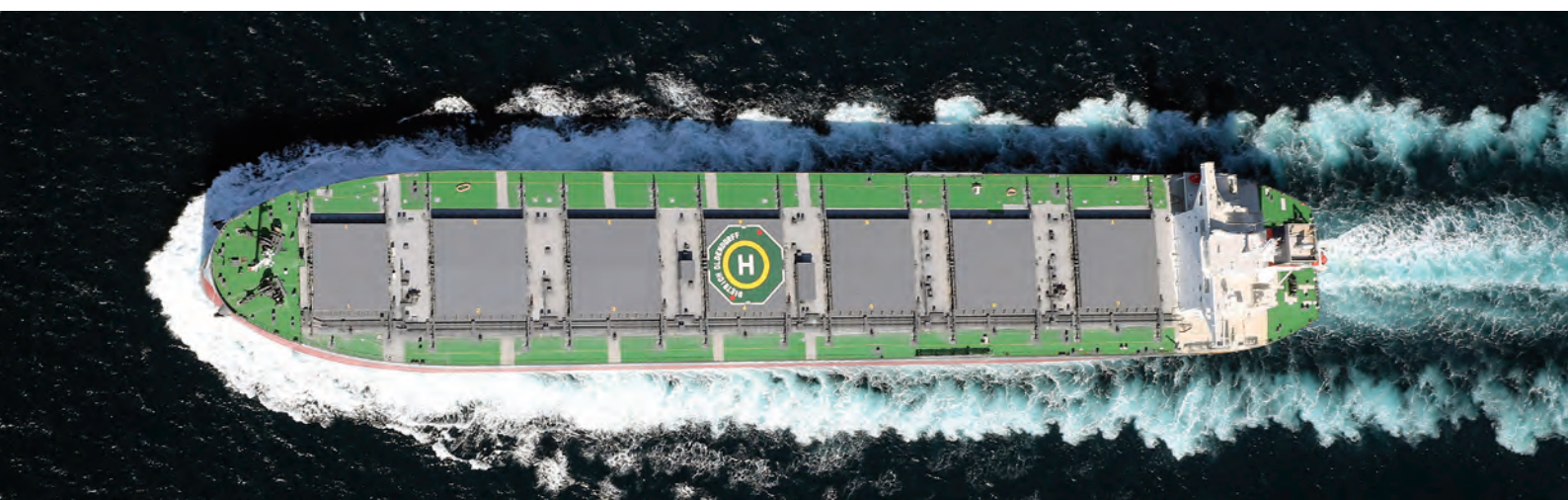
**Table 3.6a:** Trends – Annual average number of ships lost



**Table 3.5b:** Trends – Annual average number of lives lost



**Table 3.6b:** Trends – Annual average number of ships lost



*'Dietrich Oldendorff'*, Oldendorff Carriers SA

## 4. Class

Classification Societies, also known as Class Societies or just Class, are organisations that produce standards for the design, construction, operation and survey or inspection of ships and the equipment fitted on board ships. The standards are known as the Rules and generally each Class Society produces its own set of Rules. However, there are sets of Rules, such as the Common Structural Rules, that are jointly developed by IACS Members (see following paragraph). In addition to verifying that ships and their equipment conform to Class Rules, Classification Societies provide

other technical services, including confirming that vessels comply with the various statutory regulations, which they perform on behalf of flag States.

Although there are over 50 Classification Societies, the 12 leading Class Societies are all Members of the International Association of Classification Societies (IACS) and these 12 IACS Members “Class” almost 92% of the global fleet (see **Table 4.1**).

Recognised Organisation	Market Share	Detentions	% of Detentions	DPI
ABS	9.9%	42	8.1%	1.24
BV	9.6%	71	13.7%	1.55
CCS	12.3%	12	2.3%	1.12
CRS	0.1%	0	0.0%	1.71
DNV GL	7.7%	41	7.9%	1.24
IRS	0.3%	3	0.6%	3.40
KRS	3.9%	12	2.3%	1.79
LR	10.8%	50	9.6%	1.28
NKK	33.4%	192	36.9%	1.42
PRS	0.4%	3	0.6%	3.89
RINA	3.1%	24	4.7%	1.93
RMRS	0.2%	3	0.6%	3.20
<b>IACS (averages or totals)</b>	<b>91.6%</b>	<b>453</b>	<b>87.1%</b>	<b>1.42</b>
<b>Non-IACS/Not recorded (averages or totals)</b>	<b>8.4%</b>	<b>67</b>	<b>12.9%</b>	<b>2.77</b>
<b>Total</b>	<b>100.0%</b>	<b>520</b>	<b>100.0%</b>	<b>1.50</b>

**Table 4.1:** Class Market Share, Detentions and DPI for 2019

In terms of quality for the year 2019, **Table 4.1** clearly shows that the IACS Members as a whole out-perform the non-IACS Class Societies in both DPI and the percentage of detentions compared to market share.

China Classification Society (CCS) is the best performing IACS Member, having a DPI of 1.12 and only having 2.3% of the detentions despite having 12.3% of the market share.

**Table 4.2** provides the DPI for the IACS Members’ fleets from 2016 to 2019. It is pleasing to note that over the 4-year period over half of the individual IACS Members have managed to improve and reduce the DPI. Even more encouraging is 10 of the 12 leading Class Societies have improved their DPI in the years 2018 to 2019.

Recognised Organisation	2016 DPI	2017 DPI	2018 DPI	2019 DPI
BV	1.96	1.90	1.88	1.55
CCS	1.55	1.48	1.30	1.12
PRS	3.38	3.92	3.83	3.89
RINA	2.13	2.28	2.27	1.93
RMRS	1.75	3.29	2.91	3.20
IRS	2.49	2.37	5.56	3.40
ABS	1.38	1.37	1.42	1.24
CRS	1.62	3.27	2.30	1.71
DNV GL	1.18	1.26	1.35	1.24
KRS	1.93	1.80	1.97	1.79
LR	1.46	1.40	1.48	1.28
NKK	1.69	1.69	1.57	1.42
<b>IACS average</b>	<b>1.65</b>	<b>1.64</b>	<b>1.61</b>	<b>1.42</b>
<b>Non-IACS average</b>	<b>3.77</b>	<b>4.18</b>	<b>3.90</b>	<b>3.75</b>

**Table 4.2:** DPI 2016 to 2019



'AQUAGEMINI', Carras (Hellas) S.A.



## 5. Flag

It is a requirement that all vessels are registered in a country which then becomes the Flag State or the Flag of the vessel. Flags are managed by organisations known as Ship Registries, which provide certification, documentation and other services with the purpose of ensuring compliance with national and international regulations and conventions.

**Table 5.1** shows that in 2019 the **global bulk carrier fleet was registered with 84 Flags**, which is the same as 2018. Out of the 84, **thirteen (13)** have fleets of **100 bulk carriers or more** and account for **approximately 88% of the global bulk carrier fleet or 9,519 vessels**.

Flag State	2019 Fleet	% of Total Fleet	2019 Detentions	% of Detentions	2019 DPI	2018 DPI
Algeria	1	0.0%	1	0.2%	1.25	0.50
Antigua & Barbuda	23	0.2%	1	0.2%	1.89	1.81
Australia	2	0.0%	0	0.0%	2.00	0.00
<b>Bahamas</b>	<b>273</b>	2.5%	9	1.7%	0.91	1.26
Bangladesh	53	0.5%	5	1.0%	3.17	2.74
Barbados	29	0.3%	3	0.6%	2.02	1.87
Belgium	20	0.2%	0	0.0%	0.66	1.06
Belize	75	0.7%	9	1.7%	2.93	4.33
Brazil	9	0.1%	0	0.0%	no data	0.00
Bulgaria	1	0.0%	0	0.0%	5.00	1.50
Cameroon	4	0.0%	1	0.2%	7.25	3.56
Canada	51	0.5%	0	0.0%	0.53	0.29
Cayman Islands	39	0.4%	1	0.2%	0.63	1.16
Chile	6	0.1%	0	0.0%	2.88	1.33
<b>China, People's Republic of</b>	<b>1,049</b>	9.7%	3	0.6%	1.05	1.51
Chinese Taipei	26	0.2%	2	0.4%	2.20	0.93
Comoros	14	0.1%	0	0.0%	4.64	6.70
Cook Islands	16	0.1%	0	0.0%	2.69	2.69
Croatia	14	0.1%	4	0.8%	3.11	3.23
<b>Cyprus</b>	<b>250</b>	2.3%	17	3.3%	1.31	1.83
Denmark (Dis)	3	0.0%	0	0.0%	0.50	1.77
Djibouti	1	0.0%	0	0.0%	3.00	2.67
Egypt	12	0.1%	0	0.0%	4.37	6.72
Equatorial Guinea	1	0.0%	0	0.0%	no data	0.43
Finland	3	0.0%	0	0.0%	no data	2.33
Gabon	1	0.0%	0	0.0%	no data	0.00
Georgia	2	0.0%	0	0.0%	5.00	2.83
Gibraltar	9	0.1%	0	0.0%	1.04	1.58
<b>Greece</b>	<b>150</b>	1.4%	8	1.5%	1.31	1.22
Honduras	2	0.0%	1	0.2%	4.00	3.75
<b>Hong Kong, China</b>	<b>1,037</b>	9.5%	21	4.0%	1.13	1.11

Flag State	2019 Fleet	% of Total Fleet	2019 Detentions	% of Detentions	2019 DPI	2018 DPI
India	68	0.6%	4	0.8%	2.13	2.29
<b>Indonesia</b>	<b>126</b>	1.2%	4	0.8%	2.89	1.98
Iran	33	0.3%	0	0.0%	2.84	2.85
Irish Republic	2	0.0%	0	0.0%	0.40	1.67
Isle of Man	77	0.7%	2	0.4%	0.99	1.23
Italy	37	0.3%	2	0.4%	2.47	1.79
<b>Japan</b>	<b>103</b>	1.0%	2	0.4%	1.75	1.10
Kiribati	1	0.0%	0	0.0%	1.75	2.00
Korea, North	13	0.1%	0	0.0%	1.71	3.20
Korea, South	65	0.6%	0	0.0%	1.95	2.78
Lebanon	4	0.0%	0	0.0%	3.33	2.88
<b>Liberia</b>	<b>1,323</b>	12.2%	74	14.2%	1.52	1.65
Luxembourg	4	0.0%	0	0.0%	0.27	1.23
Malaysia	11	0.1%	0	0.0%	0.50	1.81
<b>Malta</b>	<b>580</b>	5.3%	43	8.3%	1.37	1.69
<b>Marshall Islands</b>	<b>1,585</b>	14.6%	59	11.4%	1.19	1.48
Mexico	4	0.0%	0	0.0%	no data	no data
Moldova	5	0.1%	2	0.4%	6.29	8.20
Mongolia	1	0.0%	0	0.0%	no data	no data
Montenegro	4	0.0%	2	0.4%	3.47	1.53
Myanmar	3	0.0%	1	0.2%	8.83	2.00
Netherlands	4	0.0%	0	0.0%	1.67	2.20
Niue	1	0.0%	0	0.0%	0.00	0.33
Norway	1	0.0%	0	0.0%	2.50	0.00
Norway (Nis)	69	0.6%	1	0.2%	0.85	1.40
Pakistan	5	0.1%	1	0.2%	4.77	1.88
Palau	20	0.2%	6	1.2%	5.36	3.41
<b>Panama</b>	<b>2,373</b>	21.8%	157	30.2%	1.64	1.81
Philippines	61	0.6%	4	0.8%	1.14	1.88
Portugal (Mar)	78	0.7%	2	0.4%	1.13	1.20
Qatar	8	0.1%	1	0.2%	2.27	3.35
Russia	18	0.2%	3	0.6%	1.88	2.79
Saudi Arabia	5	0.1%	0	0.0%	0.29	0.36
Sierra Leone	31	0.3%	4	0.8%	3.56	4.81
<b>Singapore</b>	<b>507</b>	4.7%	15	2.9%	1.09	1.24
South Africa	3	0.0%	1	0.2%	1.33	3.00
Sri Lanka	4	0.0%	1	0.2%	4.80	1.00
St Kitts & Nevis	8	0.1%	3	0.6%	3.23	3.21
St Vincent & The Grenadines	23	0.2%	4	0.8%	2.32	2.54
Switzerland	16	0.2%	0	0.0%	0.64	0.95
Syria	1	0.0%	0	0.0%	4.75	5.00
Tanzania	1	0.0%	0	0.0%	9.33	6.00
Tanzania (Zanzibar)	2	0.0%	0	0.0%	6.00	5.25

Flag State	2019 Fleet	% of Total Fleet	2019 Detentions	% of Detentions	2019 DPI	2018 DPI
Thailand	25	0.2%	1	0.2%	1.30	2.05
Togo	11	0.1%	3	0.6%	10.18	8.81
Turkey	45	0.4%	2	0.4%	2.43	1.99
Tuvalu	19	0.2%	1	0.2%	2.24	2.90
Ukraine	2	0.0%	0	0.0%	no data	no data
United Kingdom	27	0.3%	2	0.4%	2.02	1.45
United States of America	43	0.4%	0	0.0%	1.33	0.00
Unknown	47	0.4%	7	1.4%	3.50	2.50
Vanuatu	14	0.1%	1	0.2%	1.64	1.28
Venezuela	3	0.0%	0	0.0%	no data	no data
<b>Vietnam</b>	<b>163</b>	<b>1.5%</b>	<b>19</b>	<b>3.7%</b>	<b>2.81</b>	<b>2.53</b>
<b>Grand Total</b>	<b>10,863</b>	<b>100.0%</b>	<b>520</b>	<b>100.0%</b>	<b>1.50</b>	<b>1.69</b>

**Table 5.1: Flag market share, detentions and DPI**

From the quality aspects and in particular in terms of deficiencies per inspections (DPI), there has been a modest improvement for the whole fleet, with the DPI reducing from 1.69 in 2018 to 1.50 in 2019. However, only 31 Flags managed to have an average DPI less than the global average and of the leading Flags (i.e. those with 100 or more vessels) 8 had a DPI less than 1.50, with Bahamas taking the top spot with the lowest DPI of 0.91

Although having a DPI of less than the global average could indicate better than average performance, it may also be useful to look at those Flags that have made improvements and have managed to reduce their DPI. Thirty-six Flags have improved their DPI

between 2018 and 2019 and Egypt has made the most significant progress having managed to reduce their DPI from 6.72 in 2018 to 4.37 in 2019.

The detention rate also provides a valuable insight into the quality of vessels within a Flag's fleet. Table 5.2 shows, for the 13 leading flags, the difference between the percentage of total detentions and the percentage of market share. The figures in the 2019 column are calculated by subtracting the 2019 share of detentions from the 2019 share of the market, as shown in Table 5.1, e.g. Bahamas, 2.5% minus 1.7% gives 0.80. The figures in the 2018 and 2017 columns are calculated in the same way. A positive number in Table 5.2 shows a positive performance by the Flag.

Flag State	2019	2018	2017
Bahamas	0.78	1.46	0.10
China (People's Republic of)	9.08	11.85	7.17
Cyprus	-0.97	-2.01	-0.75
Greece	-0.16	-0.61	1.04
Hong Kong	5.51	4.59	7.28
Indonesia	0.39	0.16	0.53
Japan	0.57	0.43	1.09
Liberia	-2.05	-1.36	-2.69
Malta	-2.93	-0.40	-3.23
Marshall Islands	3.24	0.94	1.85
Panama	-8.35	-7.51	-10.43
Singapore	1.79	2.95	3.25
Vietnam	-2.15	-0.32	0.03

**Table 5.2: Leading Flags; market share vs detention metric (see text for explanation)**  
basis data from MIS Marine and IHS Markit



## 6. INTERCARGO – Entered Ships’ Performance

INTERCARGO, through its Members, are committed to operational excellence in the areas of Safety, Security, Health and the Environment. INTERCARGO maintains a robust and strict policy for entry which, by design, exceeds industry averages. In 2019, INTERCARGO-entered vessels consistently outperformed industry performance indicators in terms of both deficiencies and detentions. This is a statistic the INTERCARGO Secretariat and our Members take pride in.

As shown in **Table 6.1**, 642 bulk carrier detentions occurred in 2019 due to deficiencies found during PSC inspections. Of these, 95 were associated with INTERCARGO-entered ships, accounting for 14.8% of the total detentions – a decrease of 1.7% from 2018 and a little under the five-year average of 15.3%.

While it would be good to see this number coming down further, it must be viewed in context of the significant growth in the INTERCARGO-registered fleet over the last few years.

The 2019 registered fleet represents approximately 25% basis dwt of the global dry bulk carrier fleet.

In terms of detention rates (i.e. detentions per inspection % rates), as set out in **Table 6.2**, it can be noted that the performance of the INTERCARGO-entered ships continues to significantly outperform the non-registered fleet year on year and in fact has made a significant contribution to keeping the global number under 2% (see last column of the table).

In 2019, the respective detention rates for the INTERCARGO-entered and the non-INTERCARGO-entered fleet stood at 1.2% vs 2.0% respectively, i.e. the INTERCARGO-entered fleet outperformed the non-INTERCARGO-entered fleet by a 60% lower detention rate (it was 58% less in 2018).

Year	INTERCARGO-entered fleet detentions (Column A)	Total dry bulk fleet detentions (Column B)	% Ratio of Column A to B (Column C)	INTERCARGO-entered fleet as % of total fleet Number-based (dwt-based)
2015	71	527	13.5%	11.7% (12.9%)
2016	94	559	16.8%	10.5% (11.5%)
2017	83	556	14.9%	16.6% (18.8%)
2018	97	588	16.5%	21.5% (25.0%)
2019	95	642	14.8%	20.8% (25.0%)

**Table 6.1:** Detentions of INTERCARGO-entered ships, global fleet detentions and comparisons

Year	INTERCARGO-entered fleet detention rate as %	Non-INTERCARGO fleet detention rate as %	Global bulk carrier fleet detention rate %
2015	1.2	2.0	1.8
2016	1.5	2.1	2.0
2017	1.2	2.0	1.8
2018	1.4	2.0	1.9
2019	1.2	2.0	1.8
<b>Average</b>	<b>1.3</b>	<b>2.0</b>	<b>1.9</b>

**Table 6.2:** Detention rates of the INTERCARGO-entered fleet, the non-INTERCARGO fleet and the global bulk carrier fleet

**Table 6.3** shows the deficiencies per inspection (DPI) ratio associated with the INTERCARGO-entered fleet, the non-INTERCARGO-entered fleet and the global bulk carrier fleet in the last 5 years. As in previous years, the INTERCARGO-entered fleet markedly outperformed the non-INTERCARGO fleet with a DPI of 1.17 vs 1.71 respectively and the 5-year average reflects a considerably superior performance to the rest of the industry.

The figures in 2018 were 1.23 and 1.82 respectively, i.e. marginally worse than in 2019, so an improvement is witnessed across the board which is nonetheless more significant for the INTERCARGO-entered fleet.

Year	INTERCARGO-entered fleet deficiencies per inspection ratio (DPI)	Non-INTERCARGO fleet deficiencies per inspection ratio (DPI)	Global bulk carrier fleet deficiencies per inspection ratio (DPI)
2015	1.31	1.95	1.82
2016	1.27	1.85	1.73
2017	1.30	1.86	1.73
2018	1.23	1.82	1.69
2019	1.17	1.71	1.59
<b>Average</b>	<b>1.26</b>	<b>1.84</b>	<b>1.71</b>

**Table 6.3:** Deficiencies per inspection ratio (DPI) rates of the INTERCARGO-entered fleet, the non-INTERCARGO fleet and the global bulk carrier fleet

As in previous years, it is of the utmost importance to continue to show year on year improvement in the Port State Control performance of the INTERCARGO-registered fleet and Table 6.3 reflects that this is an achievable ambition.

INTERCARGO's strict acceptance criteria for membership is always consistent with improving the industry standards.

## 7. Owners' Benchmarking

As shown in Chapter 6, INTERCARGO-registered vessels continue to outperform the industry both in terms of Detention Rates (DTR) and Deficiencies per Inspection ratios (DPI). By using the tables below, owners have the ability to, and are encouraged to, compare the performance of their own fleets with their industry peer group.

The Deficiencies per Inspection ratio (DPI) scoring shown in **Table 7.1** provides a useful metric with which owners can compare their fleets' performance against the industry. For the purpose of this evaluation, an individual company needs to first calculate its fleet DPI utilising its own records or those publicly available from the Equasis database. IHS Markit data has been used in this publication. The statistic for DPI is calculated by taking the total number of deficiencies for the period in question and dividing by the total number of inspections.

Once this DPI ratio has been obtained, it can be benchmarked against the scores listed in **Table 7.1** broken down into 10 percentile ranges from best (top percentile) to worst (bottom percentile) of DPI ratios. For example, a company with a DPI between 0.00 and 0.33 would position itself in the top 10% of the global dry cargo fleet performance (Company DPI Category 1). Out of about 1,100 ship owning/managing companies subjected to this scoring, around 15% were positioned in this top DPI Category 1, which is an improvement from 2018 which stood at 18%.

DPI ratios of up to 1.56 correspond to the top 50% of the best DPI ratios among the global dry cargo fleet and 49% of companies were positioned in DPI Categories 1 to 5) – (slightly worse when compared with 51% in 2018 and 54% in 2017). At the lower end, 11% of companies posted the worst 10% of scores in the DPI range 4.61 to 25.

When making comparisons using Port State Control data, it must be remembered that not all Port State authorities conduct inspections in the same manner, with some being more stringent than others. It should also be noted that certain regions have stricter requirements than others and some may be more subjective than objective. As a result, fleets with vessels calling in and subjected to more stringent Port State Control regimes could be expected to experience higher DPI ratios.

DPI ratio (%)	Percentage of DPI ratio	Company DPI Category
0–0.33	1–9 (top 10% of DPI ratios)	1 (top)
0.34–0.72	10–19	2
0.73–1.0	20–29	3
1.01–1.28	30–39	4
1.29–1.56	40–49	5
1.57–1.92	50–59	6
1.93–2.45	60–69	7
2.46–3.16	70–79	8
3.17–4.6	80–89	9
4.61–25.0	90–100 (bottom 10% of DPI ratios)	10 (bottom)

**Table 7.1:** Benchmarking companies based on their Deficiencies per Inspection (DPI)

The Detentions per Inspection Rates (DTR) shown in **Table 7.2** can be used as a second metric to assess a company's fleet performance. In a similar manner to the DPI calculation, companies need to calculate their detentions per inspection rate by adding the total number of detentions recorded across their fleet during 2019 and then dividing the sum by the total number of inspections; the resulting ratio is then expressed as a percentage.

Once this figure has been obtained, it can be benchmarked against the rates listed in **Table 7.2** broken down again into 10 percentile ranges from best (top percentile) to worst (bottom percentile) of DTR rates. For example, a company with a detentions rate between 0.0 and 0.5% would position itself in the top 10% of the global fleet performance. In terms of the total global picture, some 1,266 companies equating to 67% were positioned in this top category, which is a reduction of some 11% from 2018.

Detention rates of up to 2.8% correspond to the top 50% of best rates among the global fleet with



as many as 76% of companies positioned in DTR Categories 1 to 5, down from 84% in 2018. At the lower end are companies with the worst 10% of rates in the whole range (i.e. DTR above 19.8% or

Company Category 10); only 3.6% of companies were so positioned, which is slightly better than 2018 when the number was 4%.

DTR ratio (%)	Percentile of DTR	Company DTR Category
0–0.5	1–9 (top 10% of Detention rates)	1 (top)
0.5–0.9	10–19	2
0.9–1.5	20–29	3
1.5–1.7	30–39	4
1.7–2.8	40–49	5
2.8–5.5	50–59	6
5.5–7.3	60–69	7
7.3–11.5	70–79	8
11.5–19.8	80–89	9
19.8–100	90–100 (bottom 10% of Detention rates)	10 (bottom)

**Table 7.2:** Benchmarking companies based on their Detentions per Inspection Rate (DTR)



'Navios Mars', Navios Group of Companies

## 8. Negative Performance Indicators

This chapter categorises recorded incidents as Negative Performance Indicators (NPI) and shows, year on year, the changes in numbers of significant incidents against the most frequently notified incidents such as collisions, groundings, etc on a global level for dry bulk carriers.

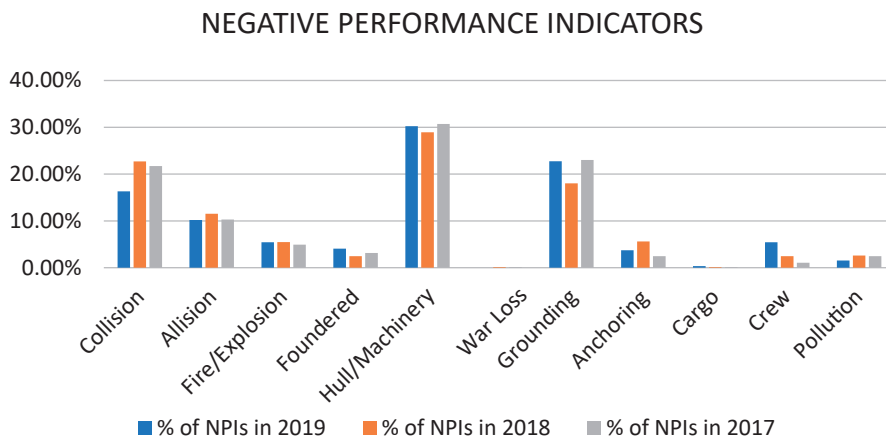
Comparing 2019's figures against the two previous Benchmarking Reports shown in **Table 8.1** and **Figure 8.1**, it can be seen that hull/machinery damage remains the top NPI at around 30% of all recorded incidents and groundings remain in second place at

22.75%. Most indicators show similar levels or an increase on previous years, but on a positive note recorded collisions have reduced from around 22% in previous years to a little over 16% in 2019.

Incident Type	No. of NPIs in 2019	% of NPIs in 2019	% of NPIs in 2018	% of NPIs in 2017
Collision	96	16.3%	22.7%	21.7%
Allision	60	10.2%	11.5%	10.3%
Fire/Explosion	32	5.4%	5.5%	4.9%
Foundered	24	4.1%	2.5%	3.1%
Hull/Machinery Damage (structural, propulsion and main engine problems)	178	30.2%	28.9%	30.7%
War Loss/Hostilities	0	0.0%	0.1%	0.2%
Grounding	134	22.8%	18.0%	23.0%
Anchoring and Mooring	22	3.7%	5.6%	2.5%
Cargo	2	0.3%	0.1%	0.1%
Crew	32	5.4%	2.5%	1.1%
Pollution	9	1.5%	2.6%	2.5%
Total	589	100.0%	100.0%	100.0%

**Table 8.1:** Negative performance indicators

Owners are encouraged to compare their own recorded NPIs in the various categories to determine where they fit in terms of the industry percentiles.



**Figure 8.1:** Negative performance indicators

## 9. Protection and Indemnity

The market share enjoyed by the Members of the International Group of P&I Clubs remains steady at around 93% year on year and in performance terms measured in deficiencies per inspection (DPI) continues to record around 50% less than the rest of the industry at DPI 1.4 versus 3.2.

### The Role of P&I Clubs

P&I Clubs are organizations that offer a full range of insurance coverage including legal counselling and expertise in major incident settlements. The shipowner is backed and assisted by his club when facing any suffered losses and is provided with technical services along with high-quality counselling services.

### International Group of P&I Clubs

The International Group comprises 13 individual P&I Clubs and, through its offices, is responsible for:

- Organizing insurance and reinsurance of Member clubs
- Standing for the interests of Member shipowners
- Providing interactive information forums.

The Group is entrusted with and manages costly reinsurance contracts that would potentially be outside the financial capabilities of individual Clubs.

The total market share of the 13 IG Member Clubs has remained steady at nearly 93% while the non-IG Clubs have seen their share of the market reduced from 8.35% to 7.31%. Gard maintains its top spot in 2019 with an increase in cover to 12.7% of the global fleet.

In terms of quality, as in 2018, the IG P&I Clubs outperformed the non-IG P&I Clubs by some 50% in percentage DPI rates. In 2019, the IG P&I Clubs had an average DPI of 1.44% compared with non-Members with a DPI of 3.19%. It is significant to note that both the IG P&I Clubs and the non-IG Clubs saw a reduction in DPI year on year, which is a positive sign showing improved quality operations globally.

P&I Club	No. of ships in 2019	% of total fleet in 2019	DPI in 2019	No. of ships in 2018	% of total fleet in 2018	DPI in 2018
American Steamship	254	2.3%	3.14	201	1.9%	2.62
Britannia	799	7.4%	1.17	806	7.0%	1.08
Gard	1,382	12.7%	1.31	1,225	11.7%	1.27
Japan Shipowners' P&I Association	1,052	9.7%	1.43	1,072	10.3%	1.01
London P&I Club	689	6.3%	1.82	610	5.8%	1.89
North of England	1,088	10.0%	1.22	1,058	10.1%	1.14
Shipowners' Mutual	42	0.4%	3.63	32	0.3%	2.87
Skuld	805	7.4%	1.40	790	7.6%	1.26
Standard P&I	770	7.1%	1.32	762	7.3%	1.33
Steamship Mutual	579	5.3%	1.45	584	5.6%	1.48
Swedish Club	458	4.2%	1.10	424	4.1%	1.29
UK P&I Club	1,168	10.8%	1.20	1,130	10.8%	1.11
West of England	983	9.0%	1.72	969	9.3%	1.62
IG P&I Totals and Averages	10,069	92.7%	1.44	9,663	92.4%	1.49
Non-IG P&I Totals and Averages	794	7.3%	3.19	873	8.4%	3.46
<b>Total</b>	<b>10,863</b>	<b>100.0%</b>	<b>2.03</b>	<b>10,453</b>	<b>100.0%</b>	<b>2.49</b>

**Table 9.1:** P&I 2019 and 2018 market share and DPI

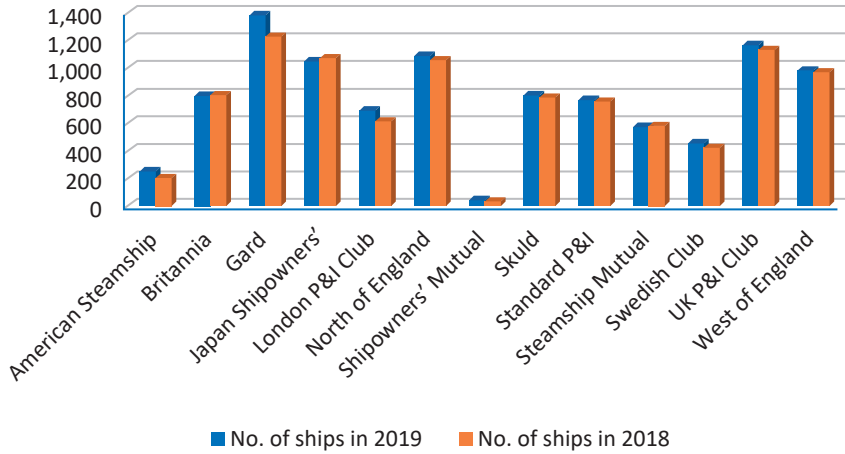


### Club by Club Statistics

As can be seen in the graphs below, year on year the individual Club's performance remains fairly steady

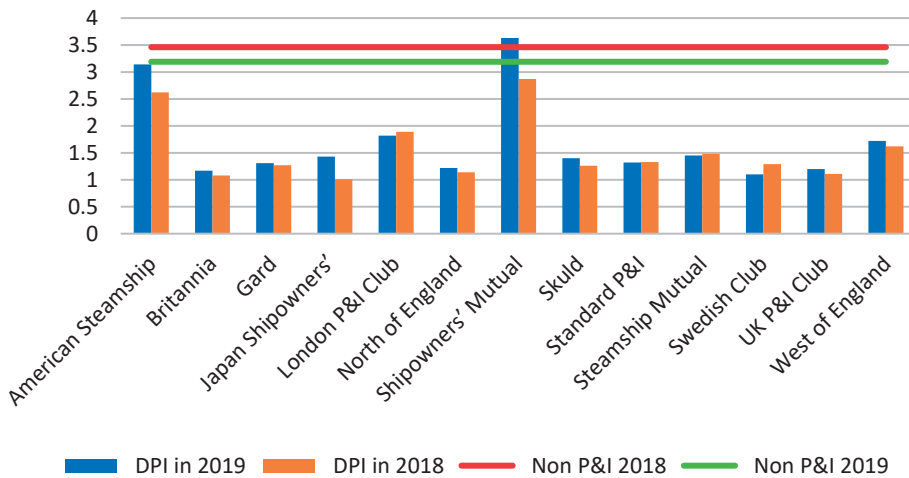
both in terms of number of ships entered and also in terms of DPI.

**No. of ships per Club year on year**



**Figure 9.1: P&I Club No. of ships 2019 and 2018**

**DPI comparison**



**Figure 9.2: P&I Club DPI 2019 and 2018**

## 10. Port State Control

Port State Control (PSC) is the inspection of foreign ships in national ports to verify that the condition of the ship and its equipment comply with the requirements of international regulations and that the ship is manned and operated in compliance with these rules.

### Introduction to PSC

In January 1982, a new Memorandum of Understanding on Port State Control was signed by 14 European countries at a Ministerial Conference held in Paris, France. The 'Paris MoU' came into operation on 1<sup>st</sup> July 1982 and has formed the model for the regional MoU regimes we have today.

Nine regional agreements on port State control – Memoranda of Understanding or MoUs – have been signed: Europe and the north Atlantic (Paris MoU); Asia and the Pacific (Tokyo MoU); Latin America (Acuerdo de Viña del Mar); Caribbean (Caribbean MoU); West and Central Africa (Abuja MoU); the Black Sea region (Black Sea MoU); the

Mediterranean (Mediterranean MoU); the Indian Ocean (Indian Ocean MoU) which includes the Australian Maritime Safety Authority (AMSA); and the Riyadh MoU. The United States Coast Guard maintain the tenth PSC regime.

A summary of PSC data is shown in Table 10.1. It can be seen that the most active authority is the Tokyo MoU for which some 14,000 inspections of bulk carriers took place in 2019 resulting in 284 detentions from 4,091 inspections incurring deficiencies. At the other end of the scale, the Caribbean MoU only inspected 68 bulk carriers of which there were 15 with deficiencies and zero detentions.

PSC Scheme	Bulk carrier inspections/total inspections of all ship types	Bulk carriers with deficiencies/detained	Total deficiencies of bulk carrier inspections/deficiencies per inspection (DPI)	Rate of bulk carrier detentions/overall rate of detentions for all ship types (%)
AMSA	2,474/3,678	986/98	6,326/2.56	3.96/3.64
Indian Ocean MoU	1,452/2,919	522/15	3,383/2.33	1.03/2.16
Mediterranean MoU	1,735/4,268	461/9	1,721/0.99	0.58/1.97
Viña del Mar	3,823/6,382	550/18	1,691/0.44	0.50/0.60
Tokyo MoU	14,067/28,764	4,091/284	23,963/1.70	2.15/2.45
US Coast Guard	2,777/6,898	553/21	1,217/0.44	0.76/0.99
Black Sea MoU	2,210/5,563	628/45	4,993/2.26	2.22/3.22
Paris MoU	3,597/17,913	1,863/106	8,456/2.35	3.11/2.96
Riyadh MoU	1,025/3,027	296/12	502/0.49	1.17/1.43
Caribbean MoU	68/782	15/0	42/0/62	0/0.41
Abuja MoU	1,014/2,695	55/2	122/0.12	0.2/0.78

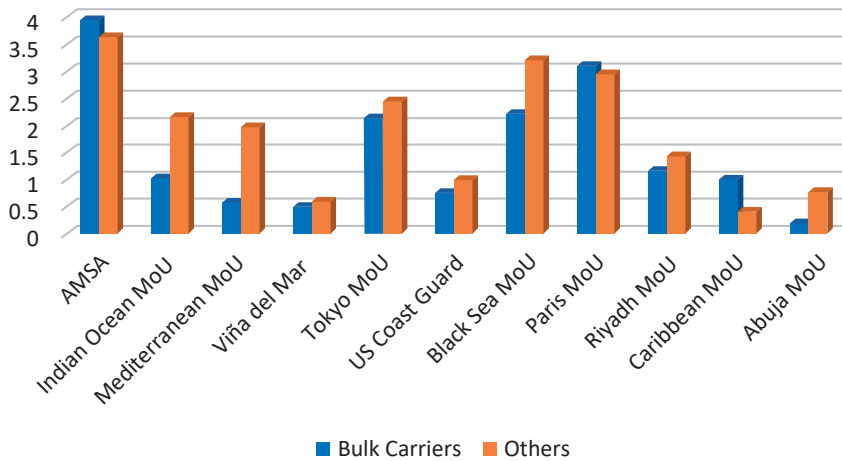
**Table 10.1:** Inspections and Detentions of Bulk Carriers in 2019

## Detention Rates for Bulk Carriers and All Other Ship Types

Figure 10.1 shows that AMSA leads the MoUs in terms of detention rates for both bulk carriers and other ship

types where bulk carriers had a detention rate of a little under 4%. Only in the AMSA, Paris and Caribbean MoU areas did bulk carriers receive more detentions than other ship types.

**Detention rates of bulk carriers versus all ship types**



**Figure 10.1:** Detention rates of bulk carriers versus all ship types

## Ship Risk Profiles

The different MoUs use their own methodology for determining the risk profile of a vessel and hence its targeting priority. Of note is the Paris MoU which attributes a ship risk profile (SRP) to each ship. This SRP is used to determine the ship’s priority for inspection, being the interval between its inspections and the type of the inspection. Ships can be “high risk”, “standard risk” or “low risk”. The profile is calculated using generic and historic parameters. The SRP is recalculated on a daily basis overnight, taking into account changes in the parameters, such as the 36-month inspection history and company performance.

The latter means that inspection results of other ships within the same ISM company may have an immediate effect on a ship’s SRP. Once determined, new performance tables for Flags and ROs are also taken into account. Readers can find the calculator here <https://www.parismou.org/inspections-risk/ship-risk-calculator> and, through this link, you have the ability to assess your company and your ships against the same criteria utilised by the Paris MoU.

## US Coast Guard QUALSHIP 21 Program and E-Zero Designation

QUALSHIP 21 rewards companies, operators and vessels that demonstrate the highest commitment to quality and safety through the highest level of compliance with international standards and United States law and regulation.

The E-Zero (Zero Environmental Deficiencies or Violations) program introduced in July 2017 is a new addition to the existing QUALSHIP 21 program. The intent of E-Zero is to recognize exemplary vessels that have consistently adhered to environmental compliance, while also demonstrating an immense commitment to environmental stewardship. The links below can be used to apply for QUALSHIP 21 and/or E-Zero Designation:

Application For QS21 Initial/Renewal and E-Zero Designation (Excel) (<https://www.dco.uscg.mil/>)

Application For Adding E-Zero Designation To An Existing QS21 Certificate (Excel) (<https://www.dco.uscg.mil/>)



## Equasis

Equasis is an online database that helps promotion of exchange of information and transparency in the shipping industry. As a massive information system, it provides details about the performance of ships, maritime organizations and maritime transport companies from both public and private sources. Equasis forms part of the European Maritime Safety Agency's toolkit for eliminating sub-standard ships and can be accessed free of charge by individuals and companies via the Equasis website [www.equasis.org](http://www.equasis.org).

INTERCARGO, as one of the data providers to Equasis, updates the database each month. If a ship belongs to an INTERCARGO Member, the Equasis record of this ship, i.e. "Equasis – Ship folder", shows "INTERCARGO" under the section "• Association membership" of her record.

The annual reports of all the MoUs along with consolidated statistics generated by Equasis can also be accessed via the Equasis website.

## Self-discipline Measures and Transparency

Complaints have reached INTERCARGO about PSCOs at some ports of certain PSC MoU regimes demanding payment for allowing vessels to sail. This practice does not just cause off-hire, but also other high costs, interruption of normal operation and decreased confidence of crew on board.

More feedback from Members would help us to strengthen our collective effort in pushing relevant MoU regimes and their Members to take stricter control, be more transparent with their internal self-discipline measures and allow industry representatives to be observers with their auditing and review processes. To this end, readers are encouraged to report any attempts at bribery or other corrupt practices that are brought to your attention.



'Maran Guardian', Maran Dry Management Inc

# ERMA FIRST FIT

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**ERMA FIRST**  
THE EXCELLENCE OF SIMPLICITY

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- Guaranteed compliance in all circumstances without shortcuts
- Minimal system design limitations, allowing the vessel to sail in the most challenging waters
- Simple installation which can be performed quickly and cost-efficiently both during a voyage or when alongside
- Ease of operation, with minimum crew engagement



# 11. INTERCARGO Benchmarking Projects

To help INTERCARGO and its Members benchmark and build an accurate picture of problems experienced in ports globally, masters of bulk carriers are invited to share their experiences by completing the INTERCARGO Reporting Forms of ‘Ship–Terminal Interface Experiences and Problems’ and ‘Safe Loading/Unloading at Anchorage’ (available online at <https://www.intercargoo.org/members-reporting-surveys/>), along with benchmarking crew injury frequency rates and lost time incidents. Members and non-Members are also encouraged to share other experiences or concerns such as bulk carrier incidents, e.g. grounding, collision, allision, etc, and any incidents involving stowaways, abandonment, piracy or cyber security. Please email to [info@intercargoo.org](mailto:info@intercargoo.org)

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**COMPANY SPECIFIC REQUIREMENTS:** The INTERCARGO Secretariat encourages companies to bring the Forms to the attention of their masters. Companies may add their own requirements for copying, filing or other record keeping here as a method of incorporating the Forms into their company procedures.

Information supplied will be treated in the strictest confidence.

## **Bulk Carrier Terminal Reporting: Ship–Terminal Interface Experiences and Problems**

All reports received from bulk carrier masters are regularly added to the INTERCARGO database. The current database has entries of 629 ports in more than 100 regions/countries recording issues encountered by bulk carriers during ship–terminal interface. Most of the reports came directly from the masters of INTERCARGO Members’ fleets. The database highlights the following aspects from the negative aspects for bulk carriers:

- Inadequate port reception facilities
- Cargo shortage

- Ports and corrupt behaviour of authority officials
- Crew shore leave
- Depth of berth
- Length of berth
- Loading/unloading
- Mooring.

In addition to the port entries, the database also records various national and regional requirements affecting import/export, voyage planning, berthing and loading/unloading operations.

Analysis and summaries will be circulated periodically to Members for reference, as well as given in INTERCARGO meetings and published on the INTERCARGO website.

INTERCARGO Member shipowners, as well as non-Members alike, are encouraged to complete the Form “Terminal Report v.6:24.May.2018” (see next page) so that the INTERCARGO Secretariat has sufficient feedback to help influence regulatory issues, such as Port State Control and Port Reception Facilities.



## INTERCARGO Bulk Carrier Reporting Form (I)

### Ship–Terminal Interface Experiences and Problems

(v.6 : 24.May.2018)

Masters of Bulk Carriers are invited to share their experiences by completing this Form. Information supplied will be treated confidentially.

**COMPANY SPECIFIC REQUIREMENTS:** The INTERCARGO Secretariat encourages companies to bring this Form to the attention of their Masters. Readers are also encouraged to provide feedback to us from your offices ashore.

#### 1. GENERAL INFORMATION (strictly confidential)

Name of Port/Terminal .....

Ship Name/IMO Number .....

Date of Port Call .....

Loading, discharging or both? .....

Cargo (Bulk Cargo Shipping Name) .....

#### 2. TERMINAL OPERATIONS

- |  |          |
|--|----------|
| 1. Damage to ship?   | – No/Yes |
| 2. Excessive loading rate?   | – No/Yes |
| 3. Limitation imposed by the Terminal on deballast/ballast operations? | – No/Yes |

#### 3. CARGO DECLARATION (Especially for Cargoes Hazardous in Bulk)

- |  |          |
|--|----------|
| 1. Does Shipper’s Declaration indicate correct Bulk Cargo Shipping Name? | – No/Yes |
| 2. Is the Cargo declared Harmful to the Marine Environment (HME)?        | – No/Yes |

#### 4. RECEPTION FACILITIES

- |   |          |
|---|----------|
| 1. Reception facilities available for HME cargo residues (dry)?                 | – No/Yes |
| • Reception facilities available for non-HME cargo residues (dry)?              | – No/Yes |
| 2. Reception facilities available for hold washing water with HME substances?   | – No/Yes |
| • Reception facilities available for hold washing water without HME substances? | – No/Yes |
| 3. Inadequate or excessively expensive?   | – No/Yes |

#### 5. PORT STATE CONTROL

- |                                    |          |
|------------------------------------|----------|
| 1. Port State Control problem?     | – No/Yes |
| 2. Other (BWM, MLC, ECA) problems? | – No/Yes |

Details if yes: .....

#### 6. ANY OTHER PROBLEMS?

- |  |          |
|--|----------|
| 1. Does water sediment at the Terminal affect operation of the ballast water treatment system (BWTS)?  | – No/Yes |
| 2. Problems with mooring facilities, bunkering, vetting, pilot facilities, shore access, storing restrictions, shorter length of quay vs length of ship, etc.? | – No/Yes |
| 3. Are there any navigation limitations from the anchorage to the Terminal?  | – No/Yes |
| 4. What are the water depth, current and wave conditions at the anchorage?   | – No/Yes |

Details if yes: .....

**PLEASE RETURN FORM TO :** [info@intercargo.org](mailto:info@intercargo.org)

International Association of Dry Cargo Shipowners (INTERCARGO)

Address: 4<sup>th</sup> Floor, 123 Minories, London, UK EC3N 1NT

## INTERCARGO Safe Loading/Unloading at Anchorage

This INTERCARGO project is introduced through a reporting scheme “INTERCARGO Bulk Carrier Reporting Form (II) – Safe Loading/Unloading at Anchorage” in 2018, responding to the ongoing concerns of some Members on issues related to safe loading/unloading at anchorage. This reporting scheme follows the successful model of the existing reporting scheme of “Ship–Terminal Interface Experiences and Problems”.

This INTERCARGO reporting scheme aims at:

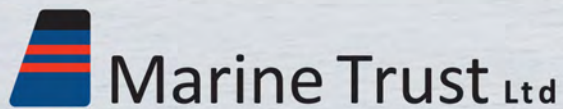
- Collecting feedback directly from masters of bulk carriers of INTERCARGO Members;
- Helping to raise awareness of all Members from experiences and lessons learnt and assisting companies to implement new safety procedures on board those bulk carriers involved in loading/unloading at anchorage;
- Raising common issues, concerns and problems, if relevant, allowing the INTERCARGO Secretariat to raise with national Administration and/or local port safety Authorities to implement remedial safety measures.

Experiences shared among INTERCARGO Members:

- Double banking with barges is common in many global ports. Water pressure keeps the two ships separated – especially when current is present such as in NOLA. NOLA barges frequently do not have fendering nor is it required.
- Not enough equipment for the operation and the amount of “Fendering” to minimize hull damages during landing of approaching vessel. Safety during ship to ship cargo transfer (STS) is critical, masters need experience, and it is useful to have fendering and tug assistance. Companies need to vet operations to be carried out, including weather conditions, etc.
- Pollution and hull damage risk is high.
- Adequate/suitable ladders are typically not carried on board.
- Discussion is made between the Master and the Foreman, not the Masters of two working vessels, and likely short of proper planning of the operation. Adjoining ships come and go.
- Environmental issues – difficult to deal with the rejected cargoes or presence of water in the barge. This is common in Southeast Asia like Indonesia and Southern Philippines where heavy rains are common.
- Standard of cleaning of holds is to be higher than normal stevedoring standards for residue removal; ships are faced with no facilities to take washwater; actual hours spent on cleaning may be higher.
- Since issues that arise from STS in the bulk carrier sector are less commonplace, bulk carriers that perform STS are less familiar/less well scrutinised in the way tanker lightering companies are.

The INTERCARGO “Safe Loading and Unloading at Anchorage” database records the first-hand experience of the masters of Members’ fleets. Version 3.0 of the database contains feedback on 86 anchorage areas in 32 countries/regions.





Over 40 years of experience  
in the maritime industry

Quality Management  
(ISM, ISPS, MLC, ISO9001, ISO14001,  
ISO50001 & OCIMF TMSA3)

Safe Operation with  
4-point focus: Environment,  
Human Resources,  
Cargo and Vessel

In excess of 30 million tons  
of cargo transported annually



## INTERCARGO Bulk Carrier Reporting Form (II)

### Safe Loading/Unloading at Anchorage

(v.1.1, 10 Sept 2018)

**MASTERS OF BULK CARRIERS** are invited to share their experiences by completing this form. Information supplied will be treated confidentially.

#### 1. GENERAL INFORMATION (strictly confidential)

Name of Port/position of anchorage .....

Ship Name/IMO Number .....

Date at anchorage .....

Loading, or unloading or both? .....

Cargo (Bulk Cargo Shipping Name) .....

Least Depth of Water below Keel ..... (meters)

#### 2. CARGO OPERATIONS (at anchorage)

- |  |                            |
|--|----------------------------|
| 1. Is the agreed Loading/Unloading Plan followed (SOLAS reg. VI/7.3)?  | <b>Yes/No and Comments</b> |
| 2. Is there double banking with barge or floating loading/unloading unit?<br>Barges: <b>No/Yes;</b> floating unit:           | <b>No/Yes and Comments</b> |
| 3. Sufficient and adequate "fendering" to minimise hull/paint damages?   | <b>Yes/No and Comments</b> |
| 4. Any hull damages?   | <b>No/Yes and Comments</b> |
| 5. Are there any concerns with loading/unloading equipment?  | <b>No/Yes and Comments</b> |
| 6. Suitable weather condition for loading/unloading as per "WEATHER PRECAUTIONS" of relevant SCHEDULE with IMSBC Code?       | <b>Yes/No and Comments</b> |
| 7. Problems with communication and information exchange with the barge/floating unit?  | <b>No/Yes and Comments</b> |
| 8. Effective spillage prevention of cargo at sea (especially HME cargo)?   | <b>Yes/No and Comments</b> |
| 9. Availability of tug support?  | <b>No/Yes</b>              |
| 10. Close proximity to other vessels and/or shore obstruction?   | <b>No/Yes and Comments</b> |
| 11. Use of <b>(A)</b> one anchor or <b>(B)</b> two anchors or <b>(C)</b> ships mooring lines to floating buoys? <b>A/B/C</b> |                            |

#### 3. SAFETY OF PERSONNEL (at anchorage)

- |   |                            |
|---|----------------------------|
| 1. Adequate/suitable personnel transfer ladders?        | <b>Yes/No and Comments</b> |
| 2. Any security issues including unauthorised boarding? | <b>No/Yes and Comments</b> |

#### 4. ANY OTHER PROBLEMS (at anchorage)

- Problems with anchoring, shore access, mooring with barge or floating unit, etc.? **No/Yes**
- Please send 2-3 photos showing general overview beneficial to understanding issues.
- Detailed comments if any answering 1) as "yes".  
(please use scale 1-10 (10-highest) in relationship to scale for each issue/damage/or general comments)

PLEASE RETURN completed Form to: [info@intercargo.org](mailto:info@intercargo.org),

- Please refer to IMO Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code).
- Please use second page if required to explain issues.

International Association of Dry Cargo Shipowners (INTERCARGO)  
Address: 4<sup>th</sup> Floor, 123 Minories, London, UK EC3N 1NT

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## Benchmarking Crew Injury Frequency and Lost Time

The aim of the INTERCARGO benchmarking crew injury frequency and lost time reporting is to assess the industry average of crew injury and lost time frequency in order to assist Members in benchmarking themselves against others in an anonymous and non-threatening way.

Crew injury is generally assessed by individual companies in terms of Lost Time Injury Frequency (LTIF) and Total Recordable Case Frequency (TRCF) – see definitions below.

By completing and sending back the table below on an annual basis, Members, through the Secretariat, will have access to the LTIF and TRCF of their fleet together with a comparison with other Members' statistics.

Reporting Year: .....

Million exposure hours .....

Category	Number of cases	Frequency rate	Notes
1. Fatalities <sup>1</sup>			
2. Lost Time Injuries <sup>2</sup>			
3. Medical Treatment Cases <sup>3</sup>			
4. Restricted Work Cases <sup>4</sup>			
5. Total Recordable Case Frequency <sup>5</sup>			

In order that the INTERCARGO Secretariat can gather the data and develop a meaningful analysis for benchmarking purposes, readers are kindly requested to complete the form above for 2020 and send to: [info@intercargo.org](mailto:info@intercargo.org)

Please note that all data received by the Secretariat will be treated with the utmost confidence and will be used for the sole purpose of generating an injury benchmarking report for use by the Members to assist with making improvements in safety on board their vessels.

To provide a consistent method among bulk carrier operators for collecting, classification and reporting of incidents, the following definitions have been adopted by INTERCARGO:

### Definitions

#### <sup>1</sup> Fatality

A death directly resulting from a work injury regardless of the length of time between the injury and death.

*Note: fatalities are included in the Lost Time Injury count – see below.*

#### <sup>2</sup> Lost Time Injury (LTI)

The sum of Fatalities, Permanent Total Disabilities, Permanent Partial Disabilities and Lost Workday Cases. (LTIs = Fatalities + PTD + PPD + LWC)

#### Permanent Total Disability (PTD)

Permanent Total Disability is any work injury that incapacitates an employee permanently and results in termination of employment on medical grounds (e.g. loss of limb(s), permanent brain damage, loss of sight) and precludes the individual from working either at sea or ashore.

#### Permanent Partial Disability (PPD)

Permanent Partial Disability is any work injury that results in the complete loss, or permanent loss of use, of any member or part of the body, or any impairment of functions of parts of the body, regardless of any pre-existing disability of the injured member or impaired body function, that partially restricts or limits an employee's basis to work on a permanent basis at sea. Such an individual could be employed ashore but not at sea in line with industry guidelines.

**Lost Workday Case (LWC)**

This is an injury that results in an individual being unable to carry out any of his duties or to return to work on a scheduled work shift on the day following the injury unless caused by delays in getting medical treatment ashore.

*Note: An injury is classified as an LWC if the individual is discharged from the ship for medical treatment.*

**<sup>3</sup> Medical Treatment Case (MTC)**

This is any work-related loss of consciousness (unless due to ill health), injury or illness requiring more than first aid treatment by a physician, dentist, surgeon or registered medical personnel, e.g. nurse or paramedic under the standing orders of a physician, or under the specific order of a physician, or if at sea with no physician on board could be considered as being in the province of a physician.

**<sup>4</sup> Restricted Work Case (RWC)**

This is an injury that results in an individual being unable to perform all normally assigned work functions during a scheduled work shift or being assigned to another job on a temporary or permanent basis on the day following the injury.

**Total Recordable Cases (TRC)**

This is the sum of all work-related fatalities, lost time injuries, restricted work injuries and medical treatment injuries. TRCs = LTIs + RWCs + MTCs.

**Exposure Hours**

24 hours per day while serving on board.

**Lost Time Injury Frequency (LTIF)**

$$\text{LTIF} = \text{LTIs} \times \frac{1,000,000}{\text{Exposure Hours}}$$

**<sup>5</sup> Total Recordable Case Frequency (TRCF)**

$$\text{TRCF} = (\text{LTIs} + \text{RWCs} + \text{MTCs}) \times \frac{1,000,000}{\text{Exposure Hours}}$$



*Photograph courtesy of Anglo-Eastern Ship Management Ltd*





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- 🏆 Tanker Shipping & Trade Conference Technical Innovation award 2017 **(Winner)**
- 🏆 Lloyd's List Middle East and Africa Innovation award 2017 **(Finalist)**
- 🏆 Lloyd's List Global Safety award 2017 **(Finalist)**

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## Annual Review 2019–2020

**“2020 was one of the most challenging years in decades but INTERCARGO is here, stronger than ever to serve its Members.”**

Dry bulk shipping is necessary for maintaining and enhancing living standards in both developed and less-developed economies. At INTERCARGO we are proud that our sector is achieving environmental and operational excellence and that it contributes substantially towards meeting the UN Sustainable Development Goals. Visit [www.intercargoo.org/video-2020](http://www.intercargoo.org/video-2020)

*You are welcome to view INTERCARGO’s Annual Review for 2019–2020 at this link: [\(https://www.intercargoo.org/annual-review-2019-2020/\)](https://www.intercargoo.org/annual-review-2019-2020/)*

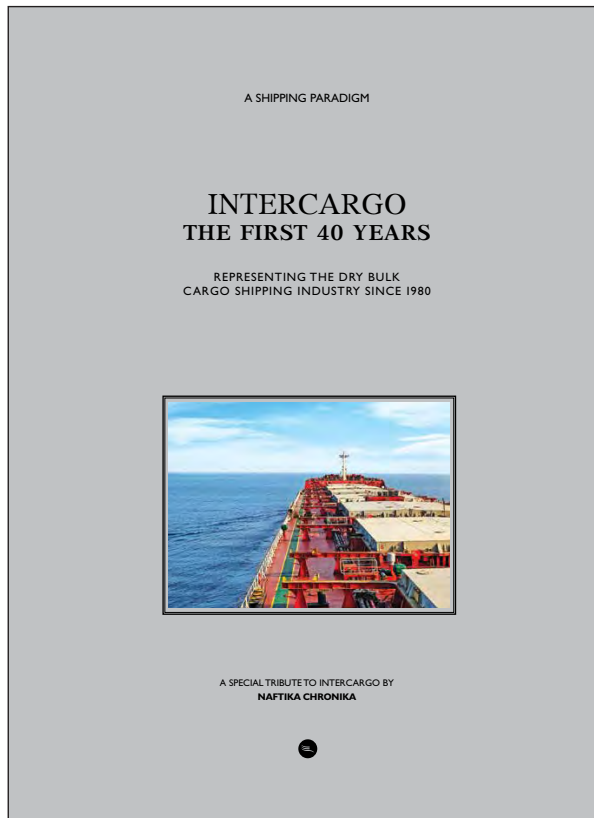


## INTERCARGO The First 40 Years

**INTERCARGO is celebrating its 40<sup>th</sup> anniversary in 2020.**

This informative publication reviews our Association’s 40-year history through interviews with Chairmen and Vice-Chairmen past and present. These testimonies are flanked by the insights of personalities with deep knowledge of our industry, who were close to the development of the Association and with deep knowledge of our industry. The contributions of our publishers’ editorial team and finally of our “oldest” and “youngest” Secretary Generals complete the picture of INTERCARGO’s past and present and offer a glimpse into its future.

*For more information and online orders, please refer to <https://www.intercargoo.org/first-forty-years/>*



## Bulk Carrier Casualty Report

This edition of the Bulk Carrier Casualty Report covers reported bulk carrier casualties from 2010 to 2019 and provides an analysis on statistics and trends over the last 10 years.

39 bulk carriers (of over 10,000 dwt) have been identified as total losses for the years 2010 to 2019 with the breakdown in size brackets as follows:

- 10,000–34,999 dwt: 12 bulk carriers were lost, representing 30.8% of the total 48 casualties reported.
- 35,000–49,999 dwt: 7 vessels were lost, representing 17.9% of the total, without a clear pattern of improvement through the years.
- 50,000–59,999 dwt: 9 vessels were lost, representing 23.1% of the total, with 5 losses related to suspected cargo failure (liquefaction) and consequential loss of 72 lives.
- 80,000+ dwt: 7 vessels were lost, or 17.9% of the total.
- 4 bulk carrier losses in the size bracket 60,000–79,999 dwt equate to the lowest number of casualties, representing 10.3% of the total.
- In terms of annual ship losses, after peaking in 2011, a reduction of ship losses was observed thereafter.

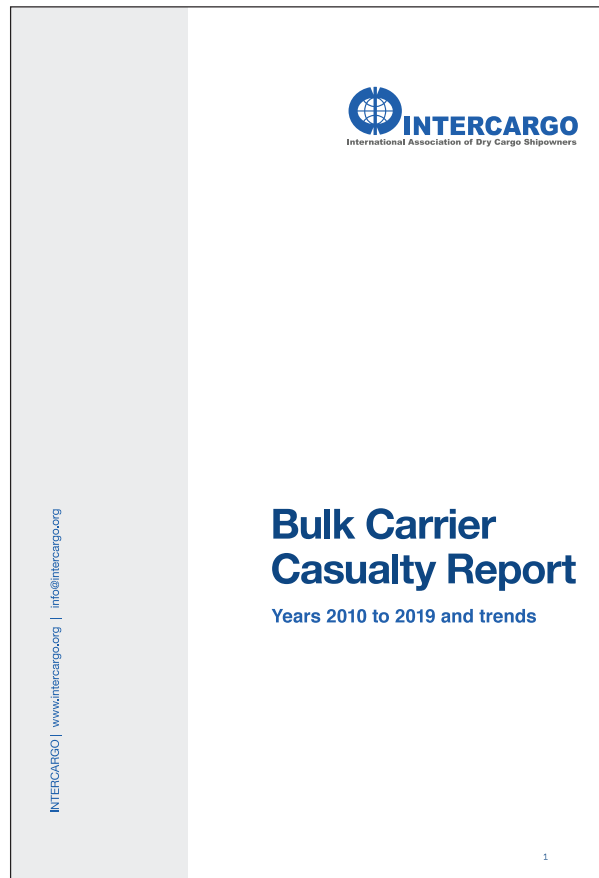
The INTERCARGO Bulk Carrier Report for 2019 can be viewed at the following link: (<https://www.intercargoo.org/bulk-carrier-casualty-report-2019/>)

## Cargo and Cargo Hold Ventilation

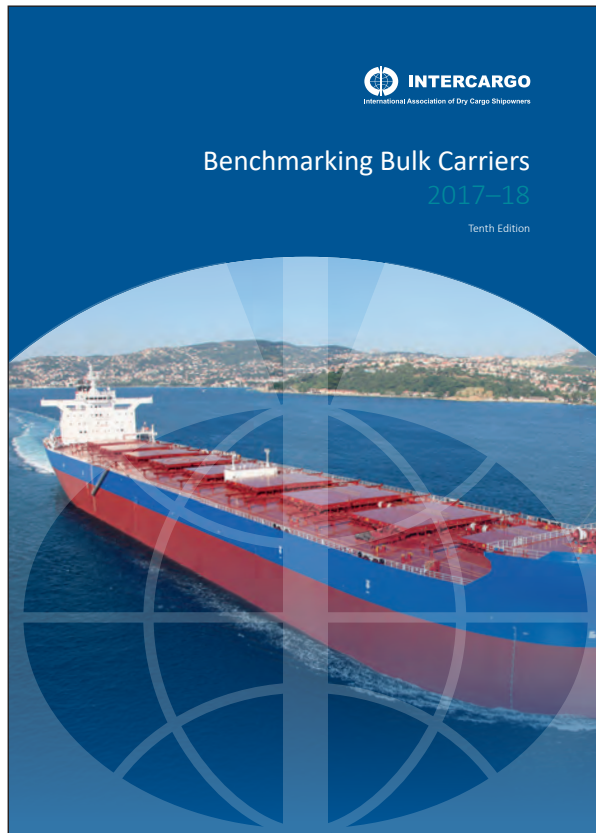
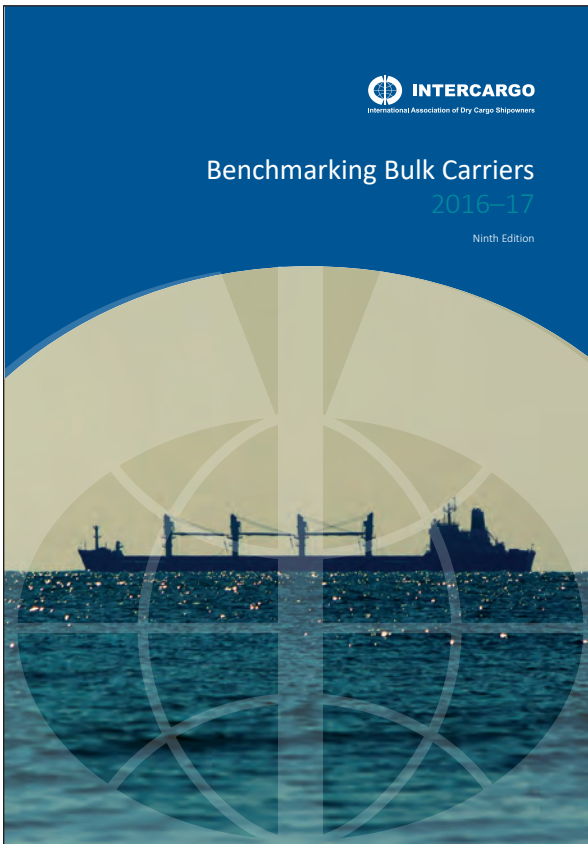
This guide, produced in association with the Standard Club and DNV GL, is intended to provide vessel Masters and crew with a clear and concise understanding of the ventilation requirements for various dry bulk and bagged cargoes. Such awareness will assist in preventing claims for cargo damage, contamination, additional survey costs, delays to ships, avoiding disputes over off-hire and charter party issues, and most importantly averting accidents and injury to crew and other personnel.

Further understanding is gained through the inclusion of the applicable regulatory requirements throughout this guide.

The launch of the guide was accompanied by a webinar with representatives of INTERCARGO, DNV GL and the Standard Club as panellists. A recording of the webinar can be found at <https://youtu.be/ZGwT2NR4AW0>



## Past Benchmarking Reports



Older Benchmarking Reports can be viewed at the following link (<https://www.intercargo.org/bulk-carrier-benchmarking-reports/>)

If you are interested in obtaining a copy of these reports, please contact INTERCARGO at [info@intercargo.org](mailto:info@intercargo.org) or place an order with Witherby Publishing Group at [www.witherbys.com](http://www.witherbys.com)



# Acknowledgements

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