



# IV HEMISPHERIC CONFERENCE ON COMPETITIVENESS, INNOVATION AND LOGISTICS: TECHNOLOGY AT THE SERVICE OF THE VALUE CHAIN

## Latin American Meeting of the International Association of Ports and Harbors

# Partnering for Safety & Sustainability

**RIGHTSHIP**

**Capt. Anuj Chopra**  
RIGHTSHIP

02 APRIL 2019



## ABOUT RIGHTSHIP...

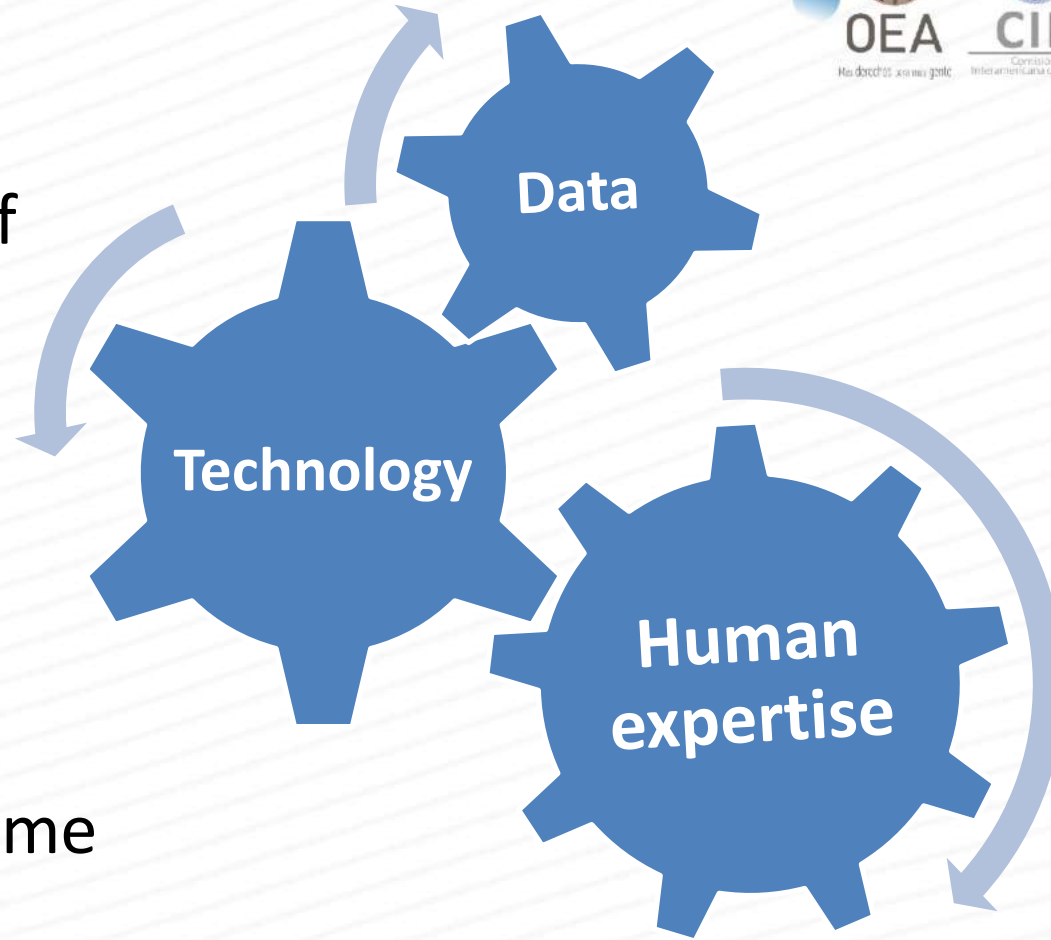
Working to improve the  
safety and environmental  
sustainability of the world's  
maritime fleet.

We bring together the best of

- **data**
- **technology**
- **human expertise**

..... for managing maritime

& environmental risk





# CLIMATE ACTION SUMMIT 2019



A RACE WE CAN WIN



Dear friends of planet Earth,  
Thank you for coming to the UN Headquarters today.  
I have asked you here to sound the **alarm**.  
Climate change is the **defining issue of our time** –  
and we are at a defining moment.  
We face a **direct existential threat**.

<https://www.un.org/en/climatechange/speeches.shtml>

If we do not change course by 2020, we risk missing the point where we can avoid runaway climate change, with disastrous consequences for people and all the natural systems that sustain us.



**United Nations  
Secretary-General**

“ I commit myself, and the entire United Nations, to this effort. We will support all leaders who rise to the challenge I have outlined today. ”

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# NOAA's Experimental Long Range River Flood Risk Assessment

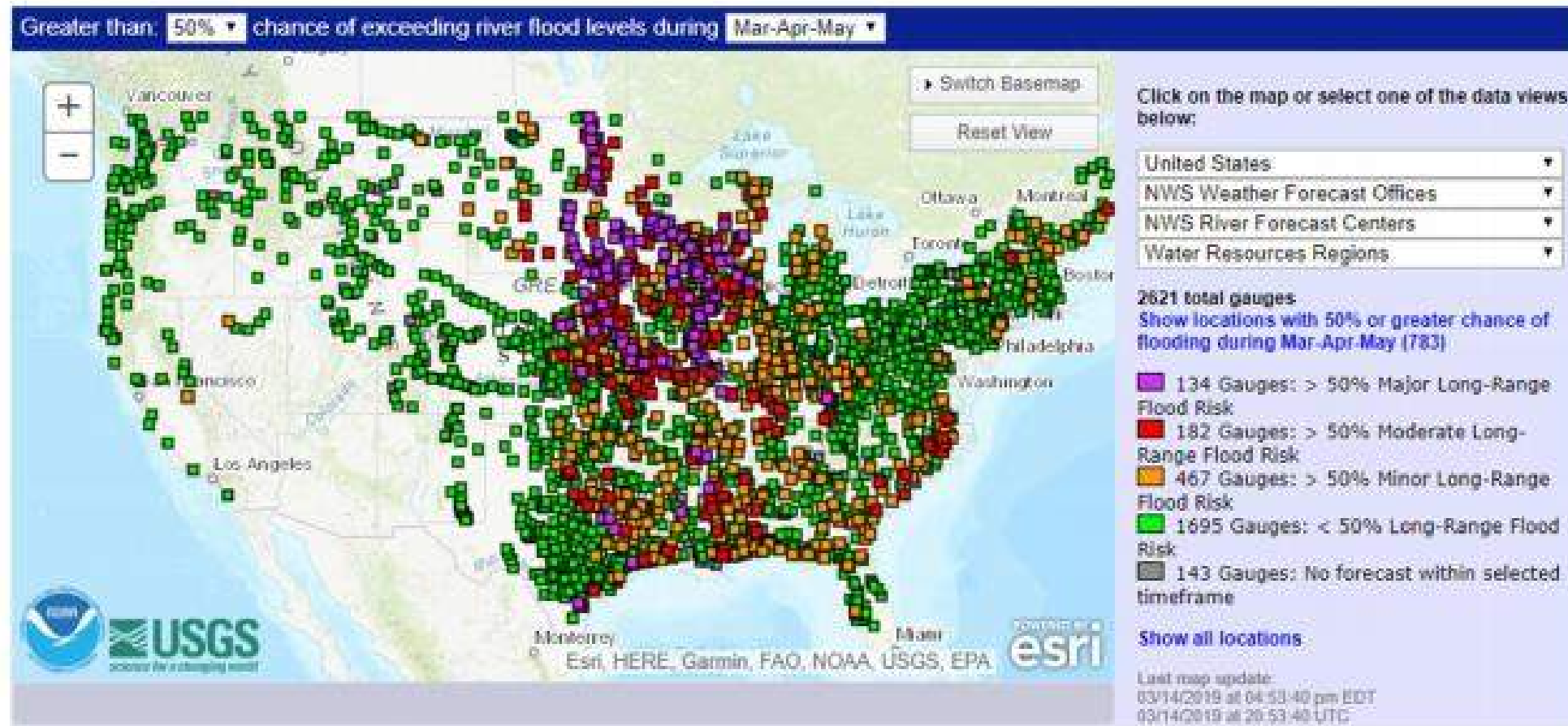


Figure 2: Greater than 50% chance of exceeding minor, moderate, and major river flood levels during March - April - May



e, and

11/26/2018

Rio Tinto warns climate inaction poses 'greatest long-term threat'

## The Sydney Morning Herald

BUSINESS COMPANIES MINING

### Rio Tinto warns climate inaction poses 'greatest long-term threat'

... Rio Tinto Chairman Simon Thompson said society – particularly **millennials** – were demanding higher standards for the companies they **worked** for and **invested their money** in.

He signaled a renewed emphasis from Rio Tinto's board on **environmental, social and governance** issues, and . . . . transition to a **"low carbon economy"**.

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Rio Tinto chairman Simon Thompson. EDDIE JIM

“Perhaps the greatest long-term threat to Rio Tinto is if business, investors, consumers and especially governments, collectively fail to take action on climate change,” he said.

# Seven charts that explain the plastic pollution problem

🕒 10 December 2017

Marine life is facing "irreparable damage" from the millions of tons of plastic waste which ends up in the oceans each year, the United Nations has warned.



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OXFORD  
WORD  
OF THE YEAR

toxic

2018!!!

# Operational Risk - 2018



- ❖ **1,392** vessel casualties
  - ❖ **1,279** incidents (51 pollution based)
  - ❖ **2,442** detentions – resulting in 212,640 detained hrs
  - ❖ **> 2,000** global class withdrawal records
  - ❖ **1744** Vessels removed from Customer Supply chain
- More than 1 billion tonnes of CO<sub>2</sub> emitted
  - Sanctions / Piracy / Human Rights violations

# OPERATING BEYOND COMPLIANCE CORPORATE SOCIAL RESPONSIBILITY



What are you doing about...

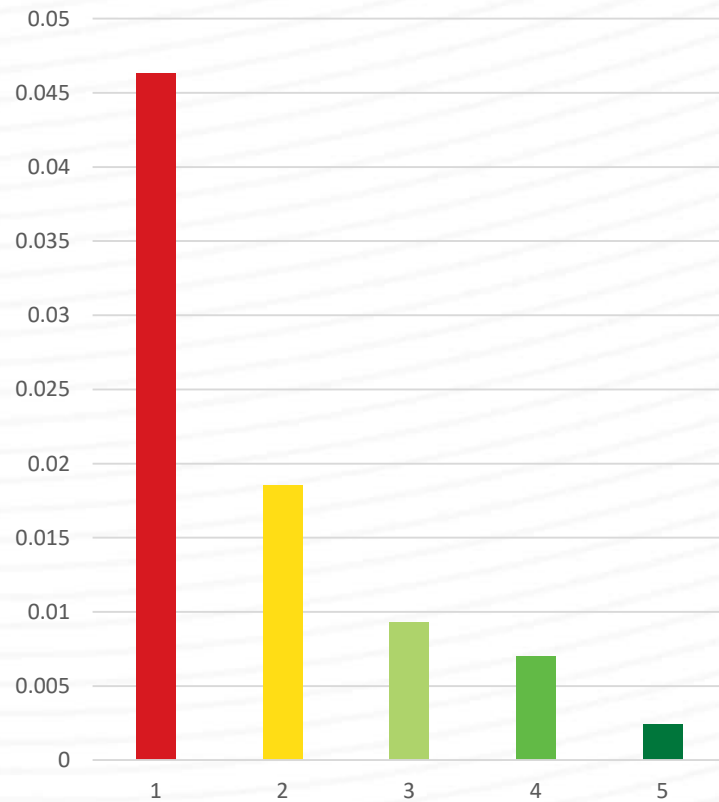
- Safety?
- Environmental Sustainability?
- Stakeholder Welfare?

# How do we know it works?

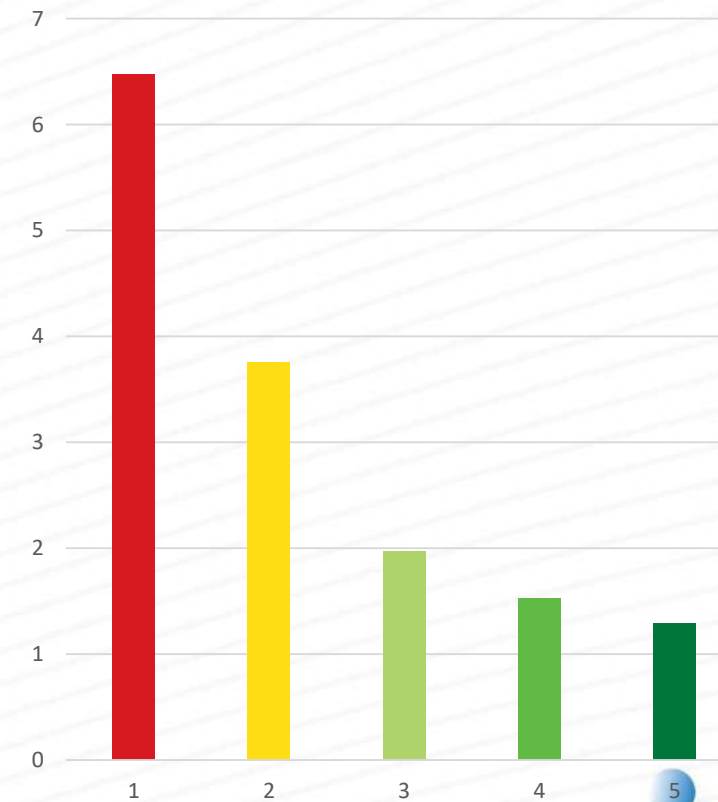
[Rightship.com/insights](https://Rightship.com/insights)



Detention per vessel



Deficiency per inspection



# How do we know it works?

## Rightship.com/insights



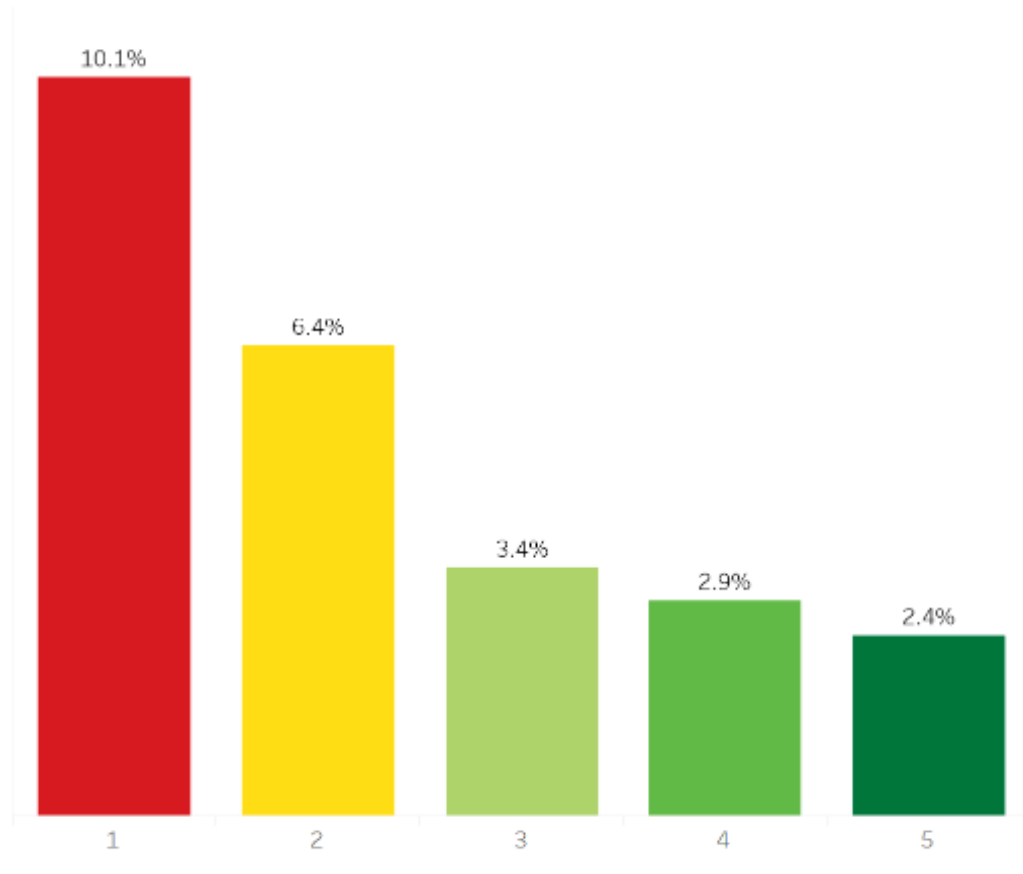
Select Ship Type

All Vessels

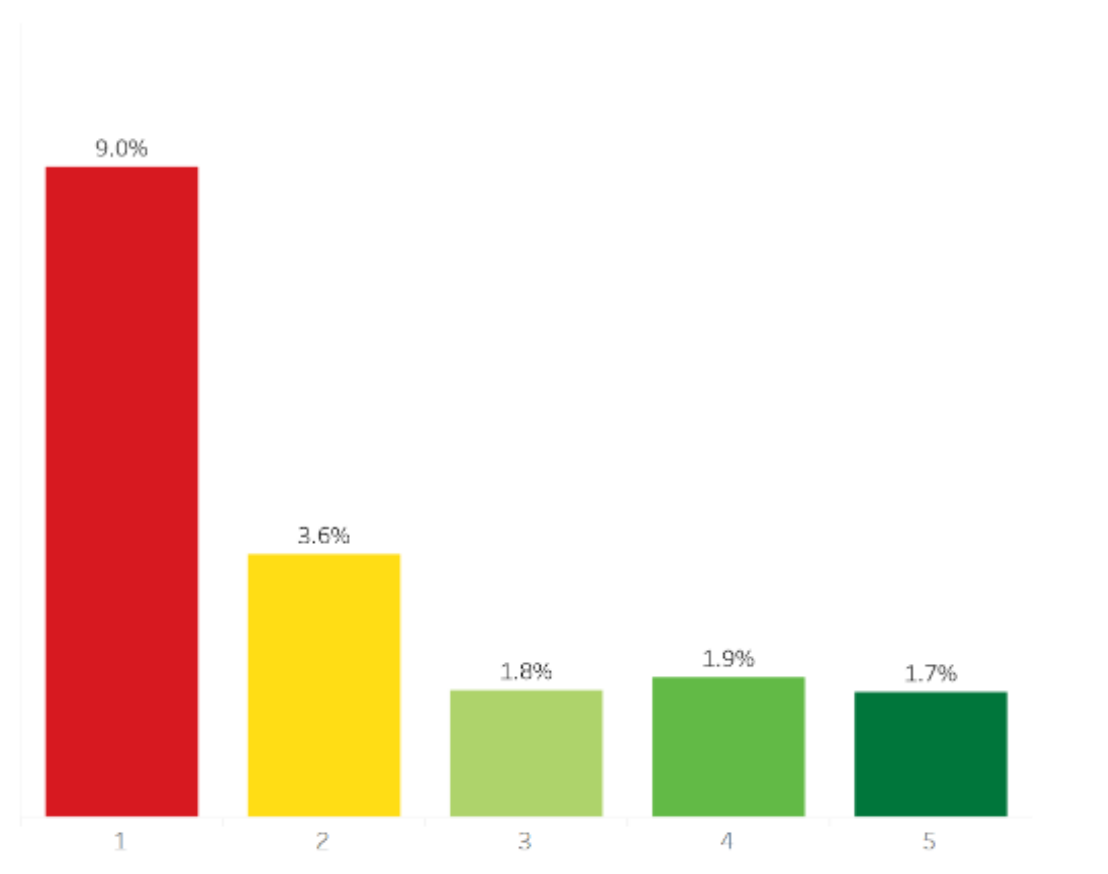
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2018 vessels incident ratio by risk rating

Incidents on All Vessels (global fleet)



Incidents on All Vessels (vetted fleet only)



# How do we know it works?

## Rightship.com/insights



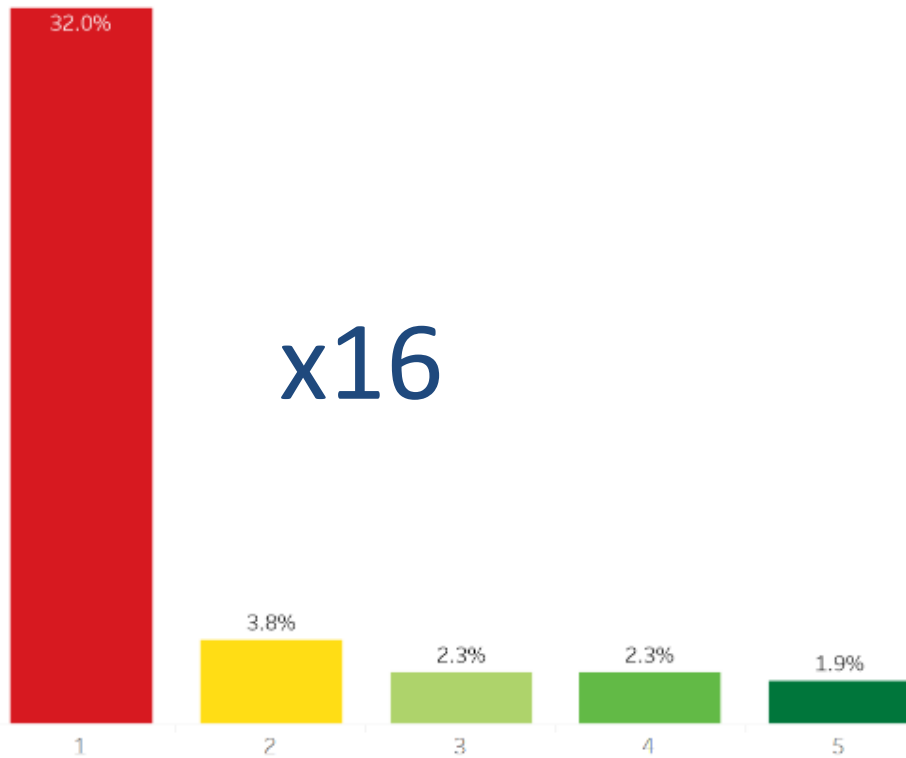
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2018 vessels incident ratio by risk rating

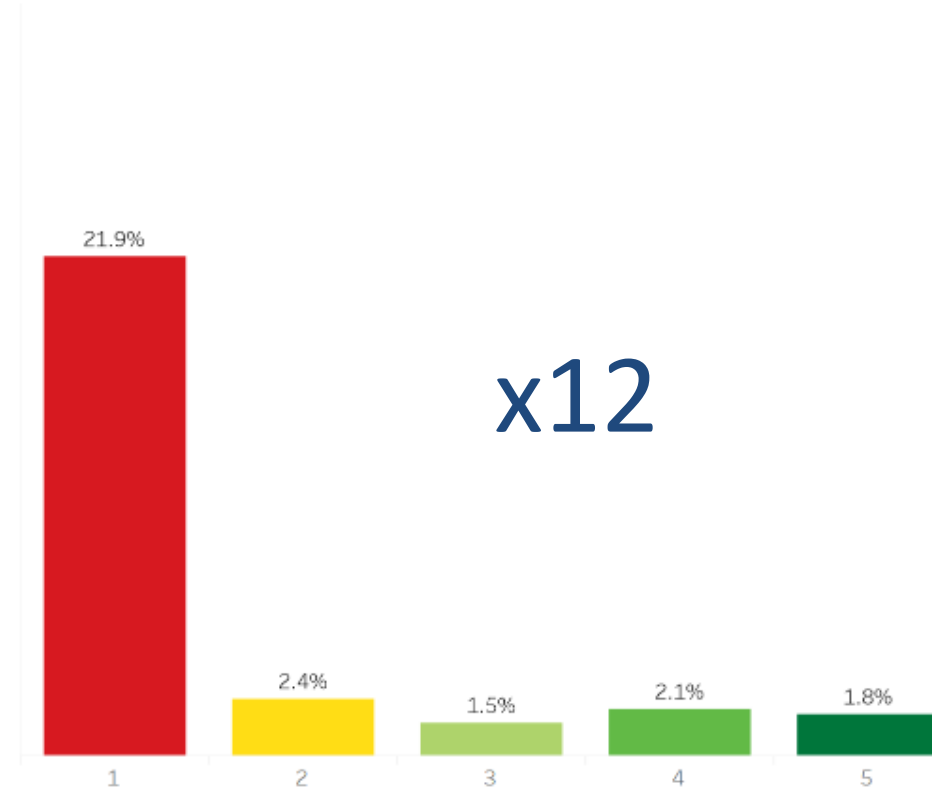
Select Ship Type

Bulk Carriers

Incidents on Bulk Carriers (global fleet)



Incidents on Bulk Carriers (vetted fleet only)



# Reducing Shipping's GHG Emissions Requires a Collaborative Approach



# Industry leading the sustainability charge



## 1 in 5 vessels chartered using the GHG Rating

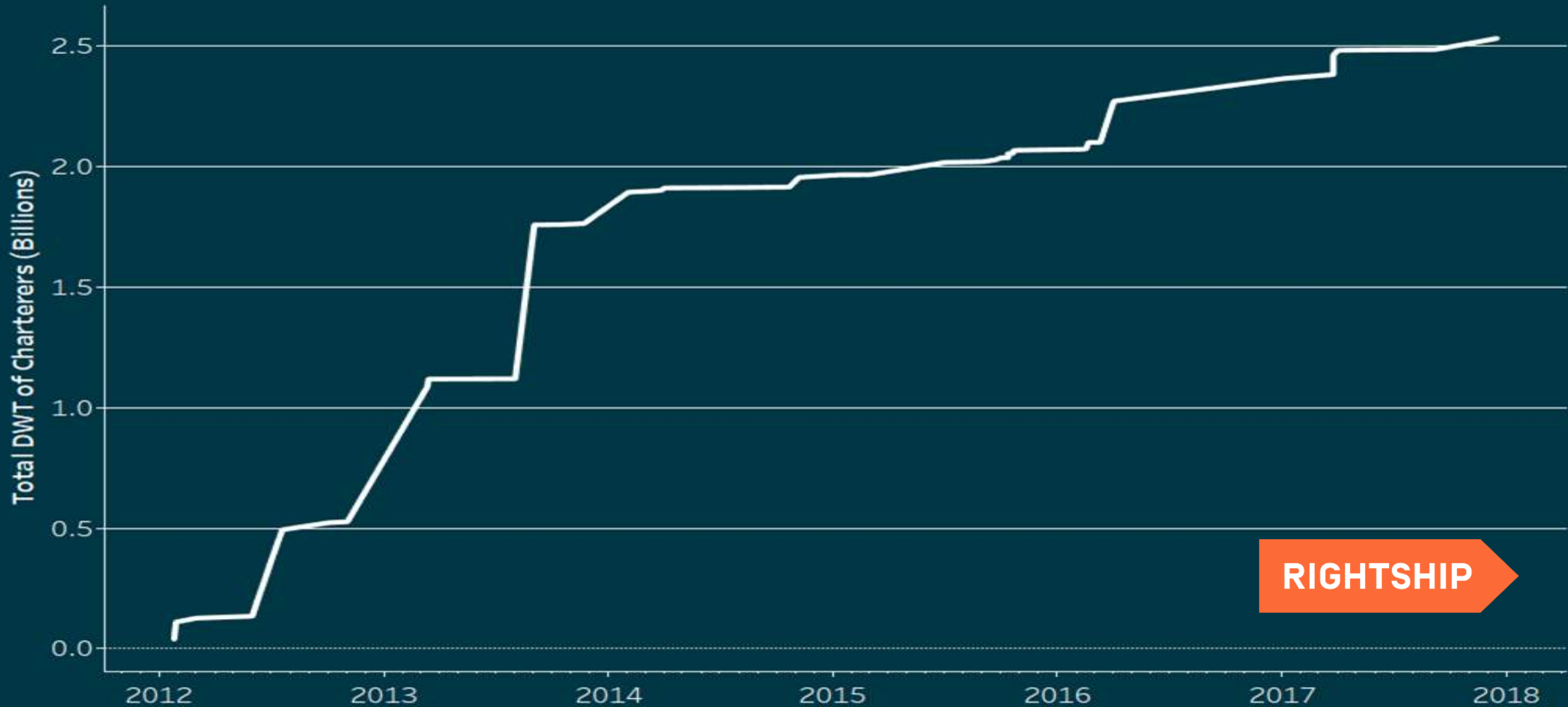
115 Organizations

59 Charterers factor in energy efficiency

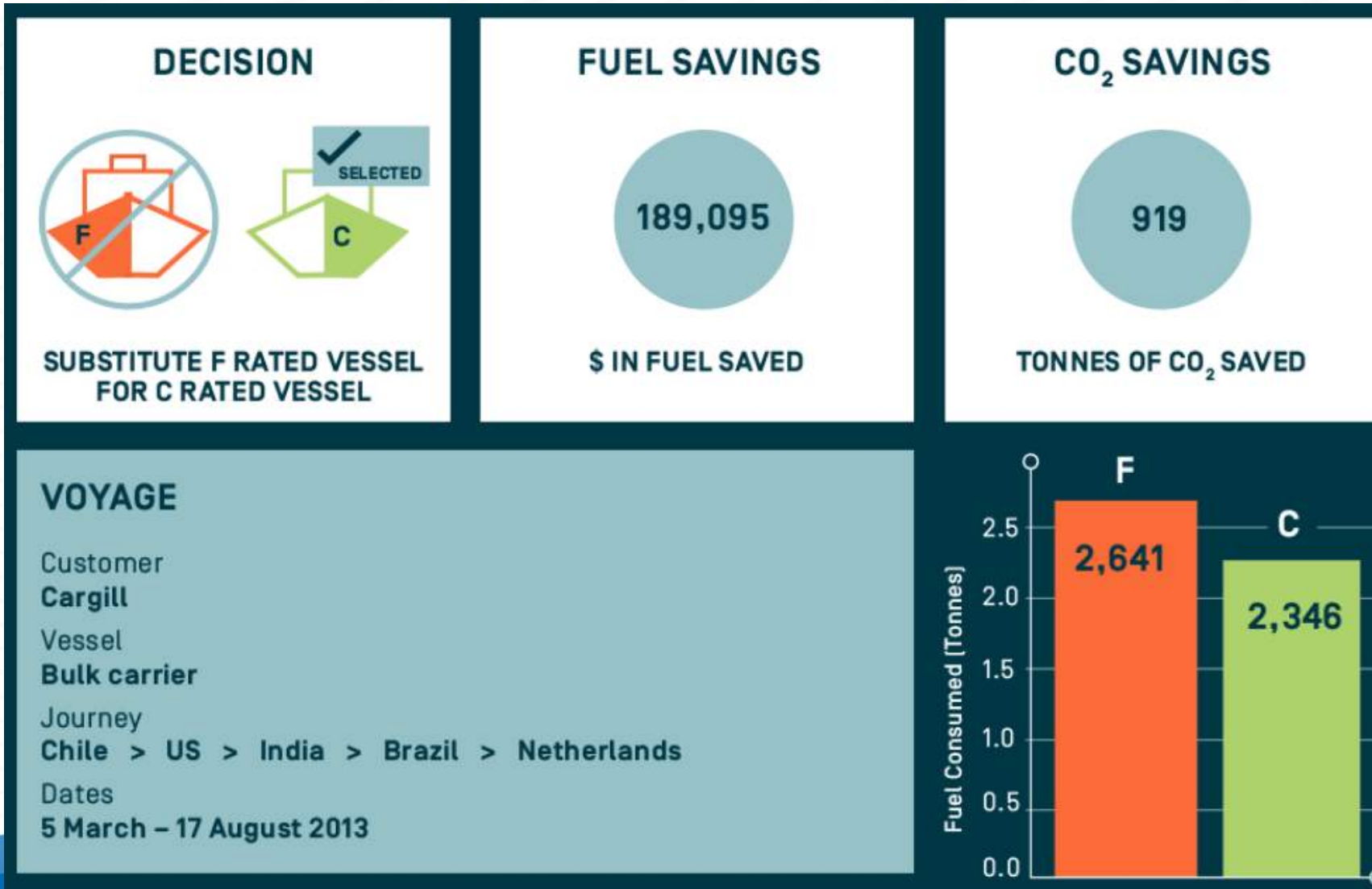
- 2.54 billion tons of cargo
- 32,000 vessel movements per year
- 20% of global shipments
  - 5 financial / insurance
- Banks only financing A, B & C rated vessels
  - 41 shipowners / managers / industry bodies
  - 10 Ports / Terminals

BAERE MARITIME, BHP BILLITON,  
CANPOTEX, CARGILL, DUBAI SUPPLY  
AUTHORITY, GREENERGY,  
HESS, HUDSON SHIPPING LINES,  
HUNTSMAN, INCITEC PIVOT LIMITED,  
IXOM, NIDERA, NOBLE CHARTERING,  
OLAM, OLIN - BLUE CUBE,  
PAR PACIFIC - HIE, PTTEP, REFIDOMSA,  
RIO TINTO, SAUDI ARAMCO PRODUCTS  
TRADING COMPANY, SCORPIO GROUP,  
TARGA RESOURCES, THE MOSAIC  
COMPANY, UNIPEC UK, Z ENERGY

# Charterers using GHG rating



# Case study – Tyndall research



# Supply Chain Analysis

## Carbon Accounting

### Vessel Specifications

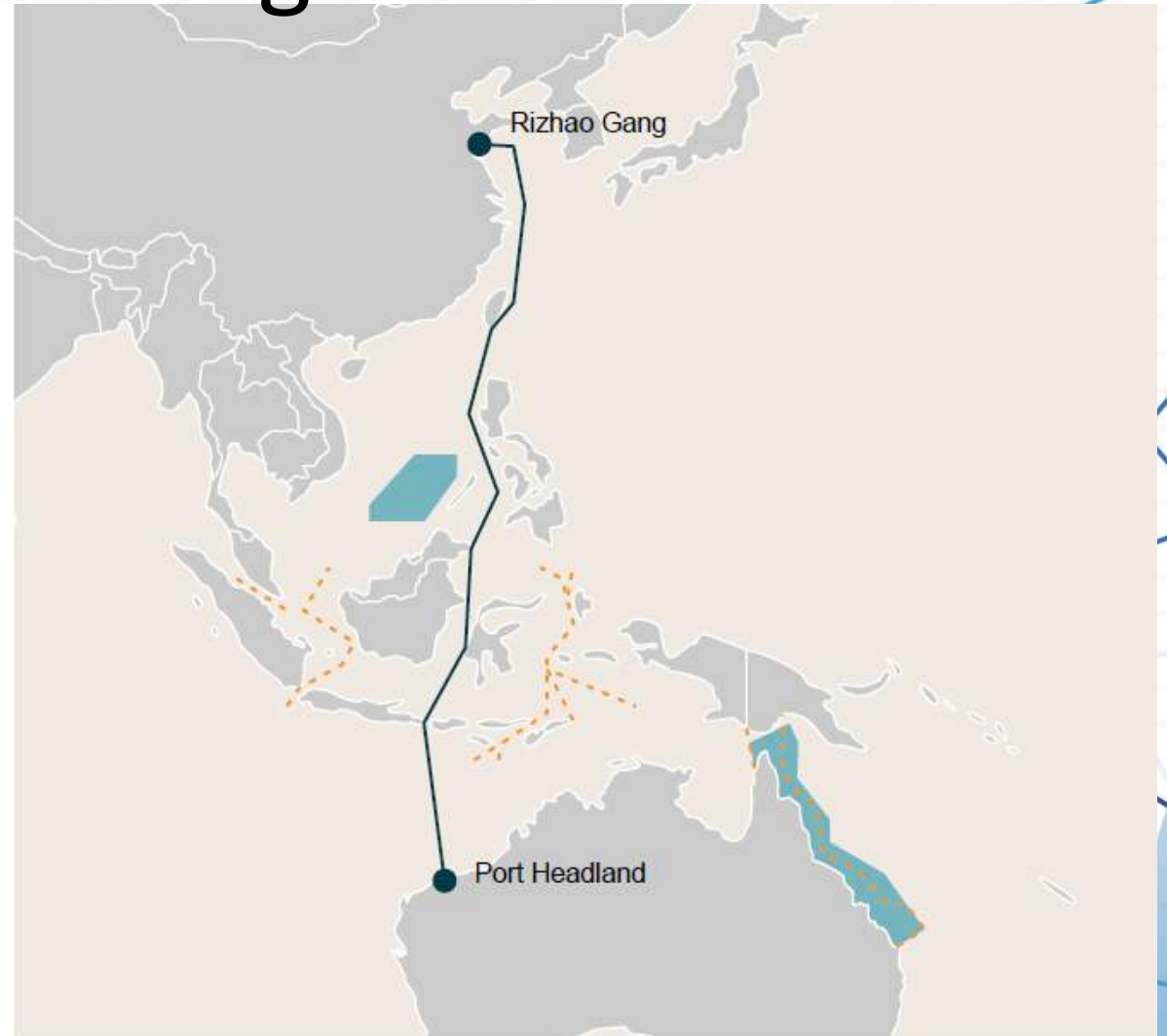
IMO:	9604988
Name:	PACIFIC TREASURE
GHG Emissions Rating:	D
DWT:	181458
Total Cargo Capacity (t):	181458
Cargo Loaded (t):	179,003.00
Voyage Load Factor:	98.65%
Voyage Fuel Type:	HFO
EEDI/EVDI*:	2.3528
Fuel Conversion Factor:	3.1144

### GHG Emissions - Part Cargo

	CO <sub>2</sub> e (kg)	CO <sub>2</sub> e (t)	
Well to Tank (WTT):	159,173.35	159.17	Fuel Production
Tank to Wheels (TTW):	1,928,446.38	1,928.45	Voyage
<b>Well to Wheels (WTW):</b>	<b>2,087,619.73</b>	<b>2,087.62</b>	<b>Full Lifecycle</b>

**SCOPE 3 Emissions**

**2,088**



# Partnering with AUSMEPA



- Transparent approach
- Satellite tracking
- Big data
- Benchmark ship emissions
- GHG emissions
- Criteria air pollutants
- Local monitoring stations (future state)



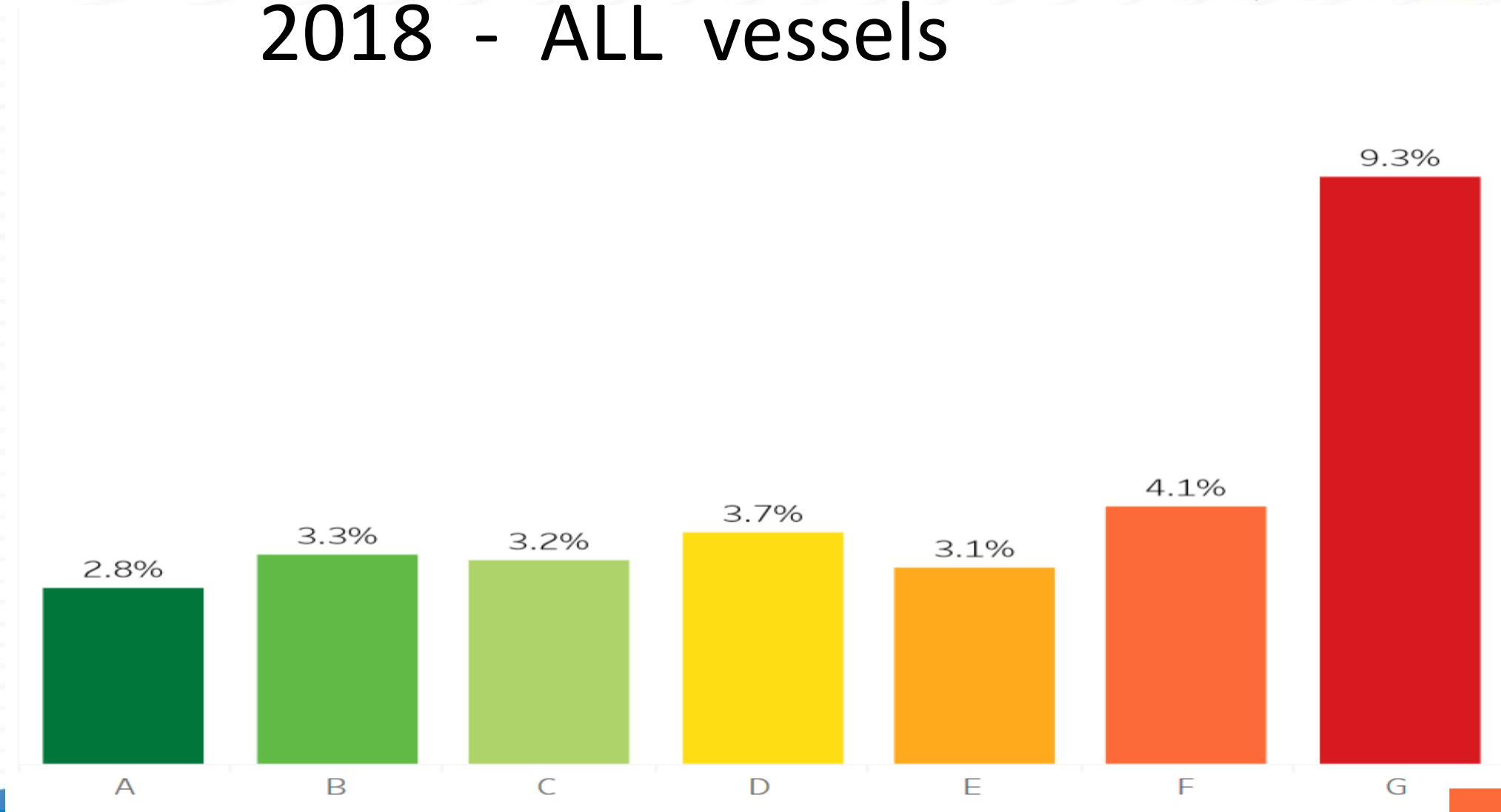
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Table 1: Total Emissions by Ship Type Using AIS Method

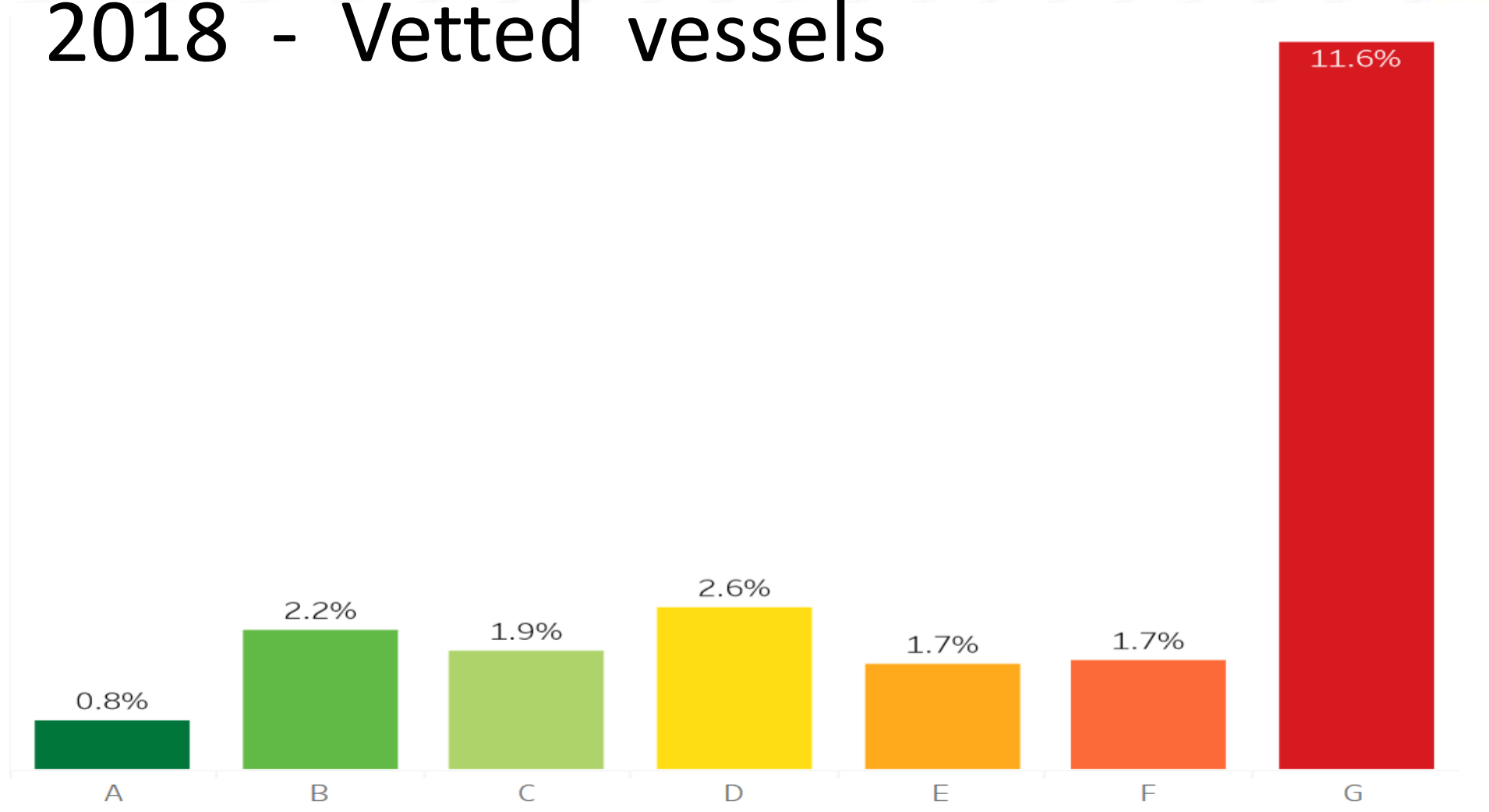
Ship Type	Calls	Metric Tonnes per year					
		NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	SO <sub>2</sub>	CO <sub>2</sub>
Auto Carrier	169	106.98	1.761	1.620	6.10	3.89	6,318
Bulk Carrier	269	202.73	3.567	3.282	9.41	8.79	14,290
Container	1,601	3,086.16	58.571	53.885	212.20	130.92	212,398
General Cargo	87	116.03	1.884	1.733	4.63	4.67	7,587
Reefer	13	13.48	0.204	0.188	0.59	0.48	781
RoRo	11	5.42	0.081	0.074	0.22	0.19	317
Tanker	673	1,231.63	32.132	29.561	58.91	90.85	147,691
<b>Grand Total</b>	<b>2,823</b>	<b>4,762.44</b>	<b>98.200</b>	<b>90.344</b>	<b>292.07</b>	<b>239.80</b>	<b>389,379</b>



# Incident ratio by GHG Rating 2018 - ALL vessels



# Incident ratio by GHG Rating 2018 - Vetted vessels



# Port Incentive Program



## How does the program work?

Port determines incentive program to reward energy efficient vessels

1

Vessel Verifies data & agent applies for discount

2

Port verifies eligibility

3

Port issues incentive

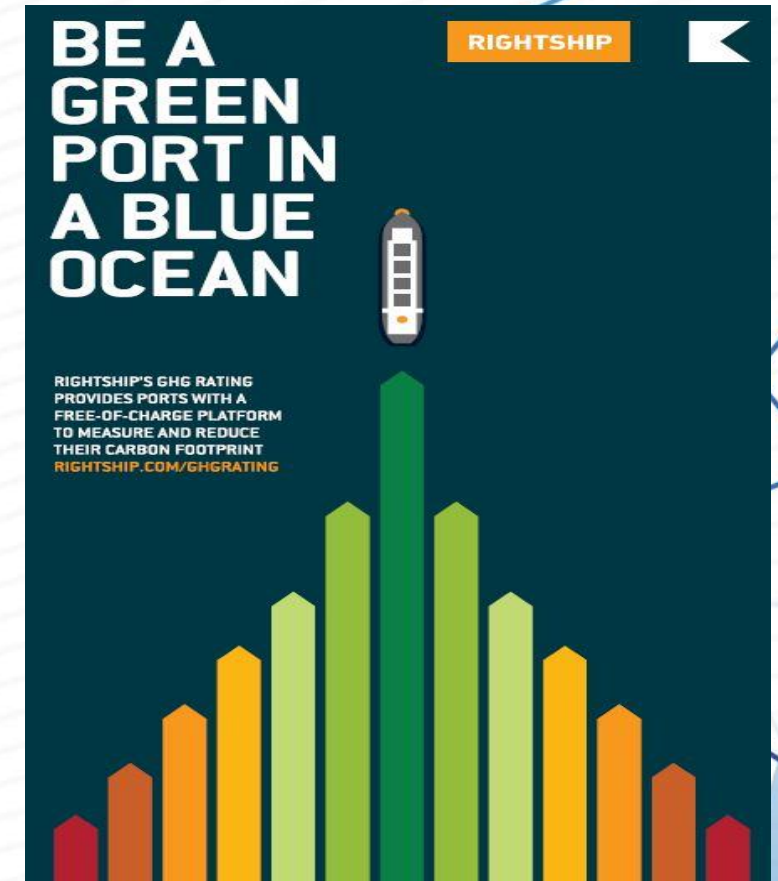
# Act Local – Think Global!



## Key benefits for ports

- ✓ Reduced emissions in port & the voyage
- ✓ Increase cargo volumes – reduce GHG emissions
- ✓ Monitor and track emissions per call
- ✓ Public image & stakeholder relations
- ✓ Health benefits – *all stakeholders*

**Cost \$0!**



# Port Benefits



## Measure to Manage

- Remove uncertainty
- Market leadership & strategic objectives
- Manage climate change risks
- Competitive advantage e.g. carbon offsetting

## Reporting

- ✓ Strategic Objectives
- ✓ Sustainability reporting
- ✓ CDP (Carbon Disclosure Project)



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 [RightShip](https://www.linkedin.com/company/RightShip)



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Thank you

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