OCIMF Day – 22 May 2024

Petrobras Research Centre (CENPES), Rio – Brazil

OCIMF

Safety Briefing

Mr. Antonio Vicente

Head of Petrobras' Research, Development and Innovation

OCIMF

OCIMF Event & meeting principles

1. Always assume positive intent.
2. Engage in dialogue.
3. Be open, transparent and willing to make mistakes.
4. Embrace the power of humble listening.
5. Create a trusting and safe environment.
6. Commit to having conversations that matter by speaking up to bridge divides.
7. Hold yourself and others accountable for demonstrating humility.

OCIMF Anti-trust/competition law guidance rules & anti-trust statement

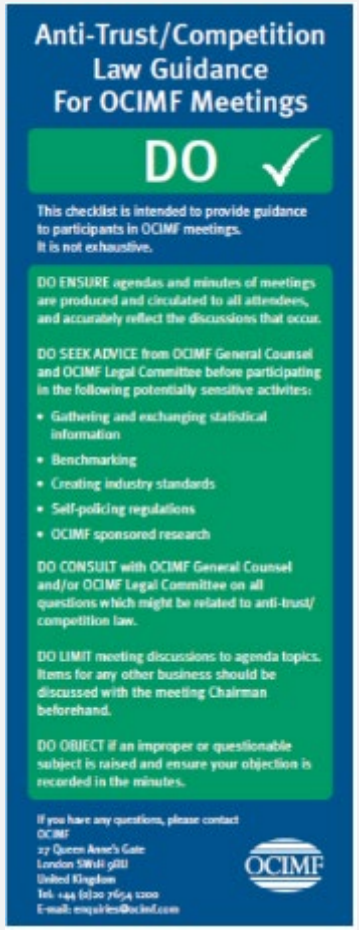
Legal guidance

DO NOT discuss the following topics:

- Prices/freight rates, production, capacity or inventories
- Sales/purchases, costs, future business plans
- Matters relating to individual customers/suppliers
- Employee compensation, benefits, remuneration etc

DO NOT make any agreement on, or take a decision to conduct the following activities:

- Fix sale/purchase prices or terms of sale or purchase
- Restrict capacity or output
- Refrain from supplying a product or service
- Limit quality competition or research
- Divide markets or customers
- Exclude competing companies from a market
- Blacklist or boycott customers or suppliers



Limit meeting discussions to agenda topics.

Items for any other business should be discussed with the meeting Chairman beforehand.

Object if an improper or questionable subject is raised and ensure your objection is recorded in the minutes.

Seek advice from OCIMF General Counsel and OCIMF Legal Committee before participating in the following potentially sensitive activities:

- Gathering and exchanging statistical information
- Benchmarking
- Creating industry standards
- Self-policing regulations
- OCIMF sponsored research
- Consult with OCIMF General Counsel and OCIMF Legal Committee on all questions which might be related to anti-trust/competition law

Capt. Karen Davis, OCIMF Managing Director

Welcome & introductions

Welcome to OCIMF Day – Rio de Janeiro

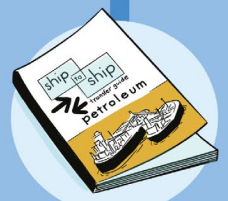
OCIMF milestones 1970 to today

1970

OCIMF was formed on 8 April 1970 by 18 oil companies at a meeting held in London

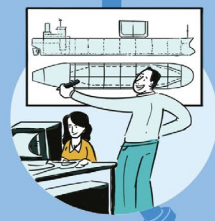
1971

OCIMF was granted consultative status at the IMO



1975

First OCIM guideline published: Ship to Ship Transfer Guide



1990

OPA Double Hulls

1993

Ship Inspection Report Programme (SIRE) launched

2000

SIRE Inspector Training and Accreditation programme released

SIRE QMS receives ISO certification

2004

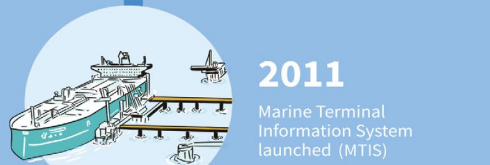
OCIMF wins a Seatrade Award in the 'New IT applications for the shipping industry' category for SIRE

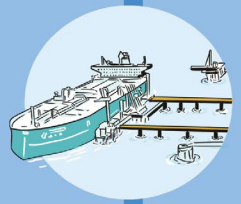
2004

Launch of Tanker Management and Self Assessment (TMSA)

2010

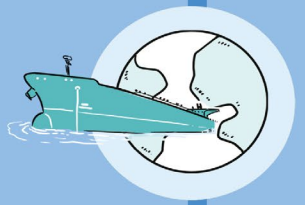
Launch of Offshore Vessel Inspection Database (OVID)





2011

Marine Terminal Information System launched (MTIS)



2016

Global Inland and Coastal Barging Focus Group (GICBFG) formed

2016

Maritime Trade Information Sharing Centre - Gulf of Guinea (MTISC - GoG) pilot project ends and wins a Seatrade Award in the 'Countering Piracy' category

2018

Fourth edition of Mooring Equipment Guidelines (MEG4) published

2020

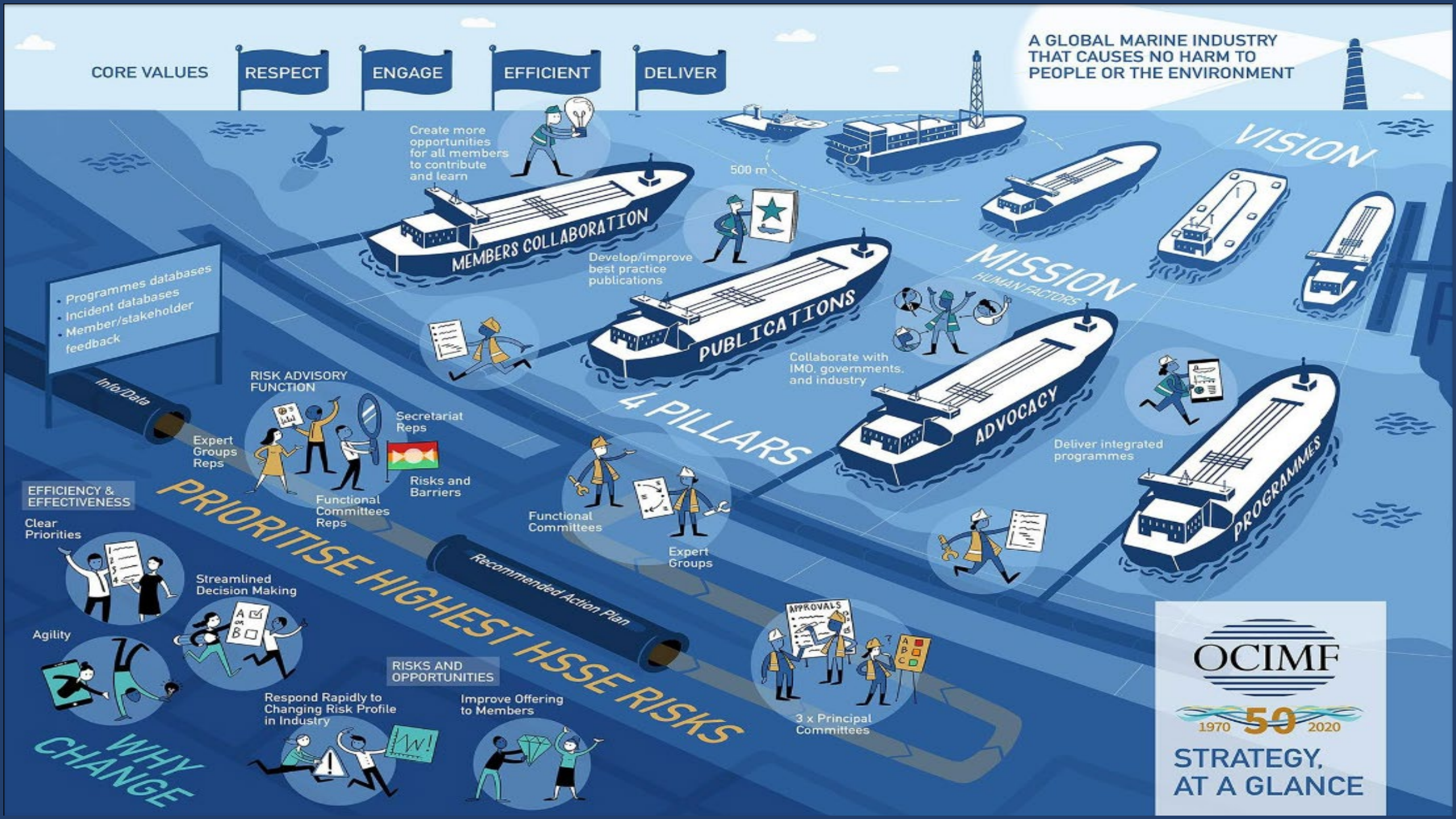
Sixth edition of International Safety Guide for Oil Tankers and Terminals (ISGOTT6) published

2019

Strategy review

Future

- GHG reduction
- New fuels
- Human Factors


CORE VALUES
RESPECT
ENGAGE
EFFICIENT
DELIVER
A GLOBAL MARINE INDUSTRY THAT CAUSES NO HARM TO PEOPLE OR THE ENVIRONMENT
VISION
MISSION
HUMAN FACTORS
4 PILLARS
MEMBERS COLLABORATION
Create more opportunities for all members to contribute and learn
500 m
PUBLICATIONS
Develop/improve best practice publications
ADVOCACY
Collaborate with IMO, governments, and industry
PROGRAMMES
Deliver integrated programmes
Programmes databases
Incident databases
Member/stakeholder feedback
Info/Data
RISK ADVISORY FUNCTION
Secretariat Reps
Expert Groups Reps
Risks and Barriers
Functional Committees Reps
PRIORITISE HIGHEST HSSE RISKS
Functional Committees
Expert Groups
Recommended Action Plan
EFFICIENCY & EFFECTIVENESS
Clear Priorities
Streamlined Decision Making
Agility
WHY CHANGE
RISKS AND OPPORTUNITIES
Respond Rapidly to Changing Risk Profile in Industry
Improve Offering to Members
APPROVALS
3 x Principal Committees
OCIMF
1970 50 2020
STRATEGY, AT A GLANCE

Delivering a consistent theme:

The benefits of Member participation

THEME	Showcasing the Forum's work to invite more participation across the membership and industry, and supporting regional needs

KEY POINTS

The key points to highlight the advantage that members gain through participation:

- The committee structure and the need for active member participation
- The Risk based approach to prioritise work so that member time is used well
- The OCIMF outputs and how they deliver value to members regionally and globally
- Recently delivered work and how it connects to the region
- Ongoing work opportunities with a focus on regional needs
- Future opportunities for member engagement

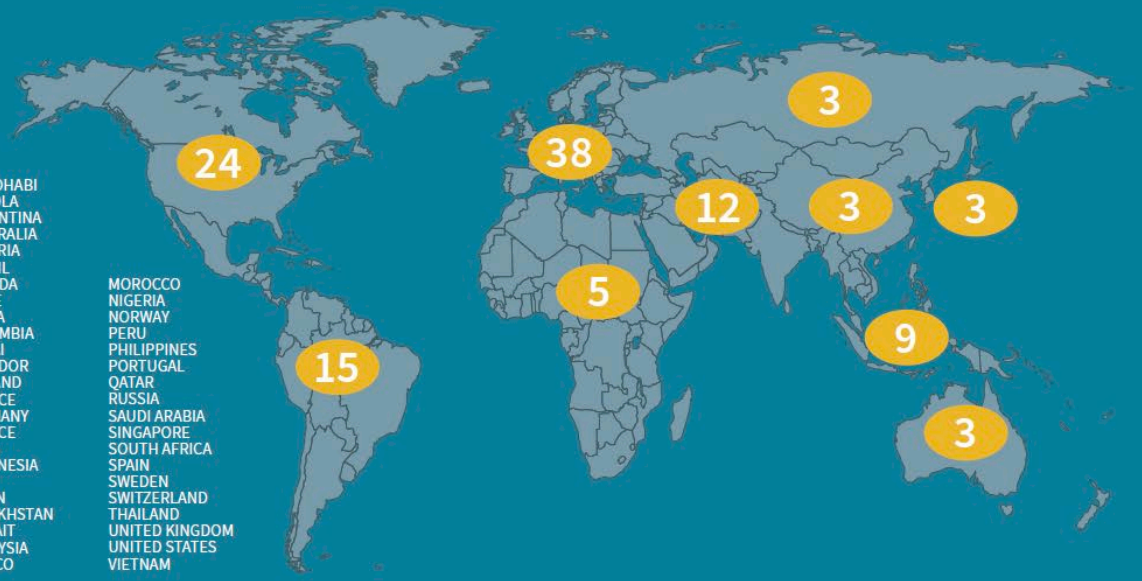
OCIMF IN NUMBERS

54
YEARS OF OCIMF
1970 – 2024

3
PRINCIPAL COMMITTEES

15 X3
FUNCTIONAL COMMITTEES AND EXPERT GROUPS

113 MEMBERS IN 42 COUNTRIES



ABU DHABI
ANGOLA
ARGENTINA
AUSTRALIA
AUSTRIA
BRAZIL
CANADA
CHILE
CHINA
COLUMBIA
DUBAI
ECUADOR
FINLAND
FRANCE
GERMANY
GREECE
INDIA
INDONESIA
ITALY
JAPAN
KAZAKHSTAN
KUWAIT
MALAYSIA
MEXICO
MOROCCO
NIGERIA
NORWAY
PERU
PHILIPPINES
PORTUGAL
QATAR
RUSSIA
SAUDI ARABIA
SINGAPORE
SOUTH AFRICA
SPAIN
SWEDEN
SWITZERLAND
THAILAND
UNITED KINGDOM
UNITED STATES
VIETNAM

3,284
NEWSLETTER SUBSCRIBERS

33,244
FOLLOWERS ON LINKEDIN

9,826 SHIPS INSPECTED	**23,722** REPORTS UPLOADED	**171,349** REPORTS DOWNLOADED
8,024 BARGES INSPECTED	**9,625** REPORTS UPLOADED	**40,196** REPORTS DOWNLOADED
2,911 OFFSHORE VESSELS INSPECTED	**3,042** REPORTS UPLOADED	**2,140** REPORTS DOWNLOADED
489 SIRE SHIP INSPECTORS (CAT 1)	**127** SIRE BARGE INSPECTORS (CAT 3)	**382** OVID INSPECTORS

SIRE AND OVID STATISTICS

	SIRE			OVID
	SHIPS CAT 1	BARGES CAT 3	TOTAL	TOTAL
TOTAL VESSELS REGISTERED AT END 2023			22,633	7,209
VESSELS REGISTERED IN 2023	396	479	875	672
NUMBER OF INSPECTIONS	23,772	9,625	33,347	3,256
NUMBER OF VESSELS INSPECTED	9,826	8,024	17,850	3,086
INSPECTIONS PURCHASED – TOTAL PURCHASE	171,349	40,196	211,545	2,367
TOTAL OPERATORS REGISTERED END OF 2023			2,613	1,468
NUMBER OF OPERATORS REGISTERED IN SIRE / OVID in 2023			322	123
TOTAL TMSAS / OVMSAS PUBLISHED AT END 2023			8,570	1,085
TMSAS / OVMSAS PUBLISHED IN 2023			1,388	452

Agenda: OCIMF Day, Rio

Wednesday 22 May 2024

Petrobras Research Centre (CENPES), Rio, Brazil

Av. Horácio Macedo, 950 - Cidade Universitária, Rio de Janeiro - RJ, 21941-915

Welcome and Registration

08:00 – 09:00 Registration and Refreshments

09:00 – 09:15	Welcome and Safety Briefing from CENPES
09:15 – 09:30	Introduction by OCIMF
09:30 – 09:50	Chairman's Welcome
09:50 – 10:10	Welcome from Petrobras Leadership
10:10 – 10:30	Welcome from the P&A Directorate – An overview of OCIMF's work

10:30 – 11:00 Coffee Break

Environment and Energy Transition

11:00 – 11:20	Environmental Regulatory Updates and Engineering Solutions
11:20 – 11:40	Transpetro's Fleet Decarbonisation
11:40 – 12:00	Alternative Fuels – Considerations on Ship Design (COPPE/UFRJ)
12:00 – 12:30	Q&A

12:30 – 14:00 Lunch Break

Publications and Advocacy Updates

14:00 – 14:20	Barging
14:20 – 14:40	Security & Programmes
14:40 – 15:00	Offshore
15:00 – 15:15	Tankers, Terminals, and Human Factors
15:15 – 15:30	IMO Safety Regulatory Updates
15:30 – 15:45	Q&A
15:45 – 16:00	Closing Remarks

Showcasing the Forum's work to invite more participation across the membership and industry stakeholders

Nick Potter, OCIMF Chair

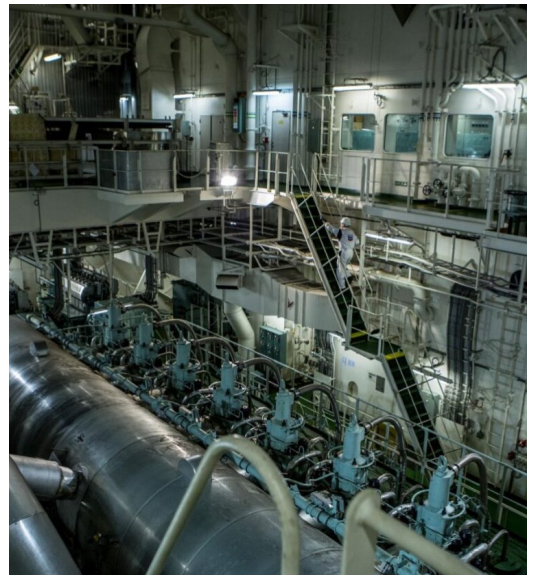
Chair’s welcome

People

Safety

Security

Emissions



Driving positive change within the maritime industry

Mr. Daniel Sales – Head of Petrobras' Downstream Logistics

Leadership Insights

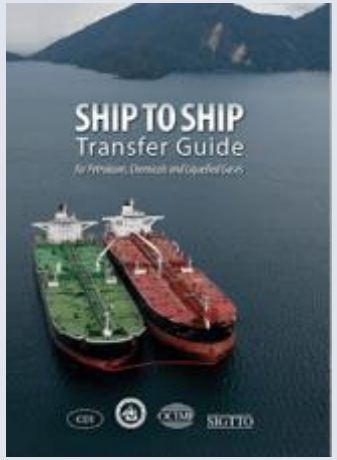
OCIMF

Saurabh Sachdeva, Publications & Advocacy Director

Publications & Advocacy Updates

OCIMF

OCIMF Strategic Objectives



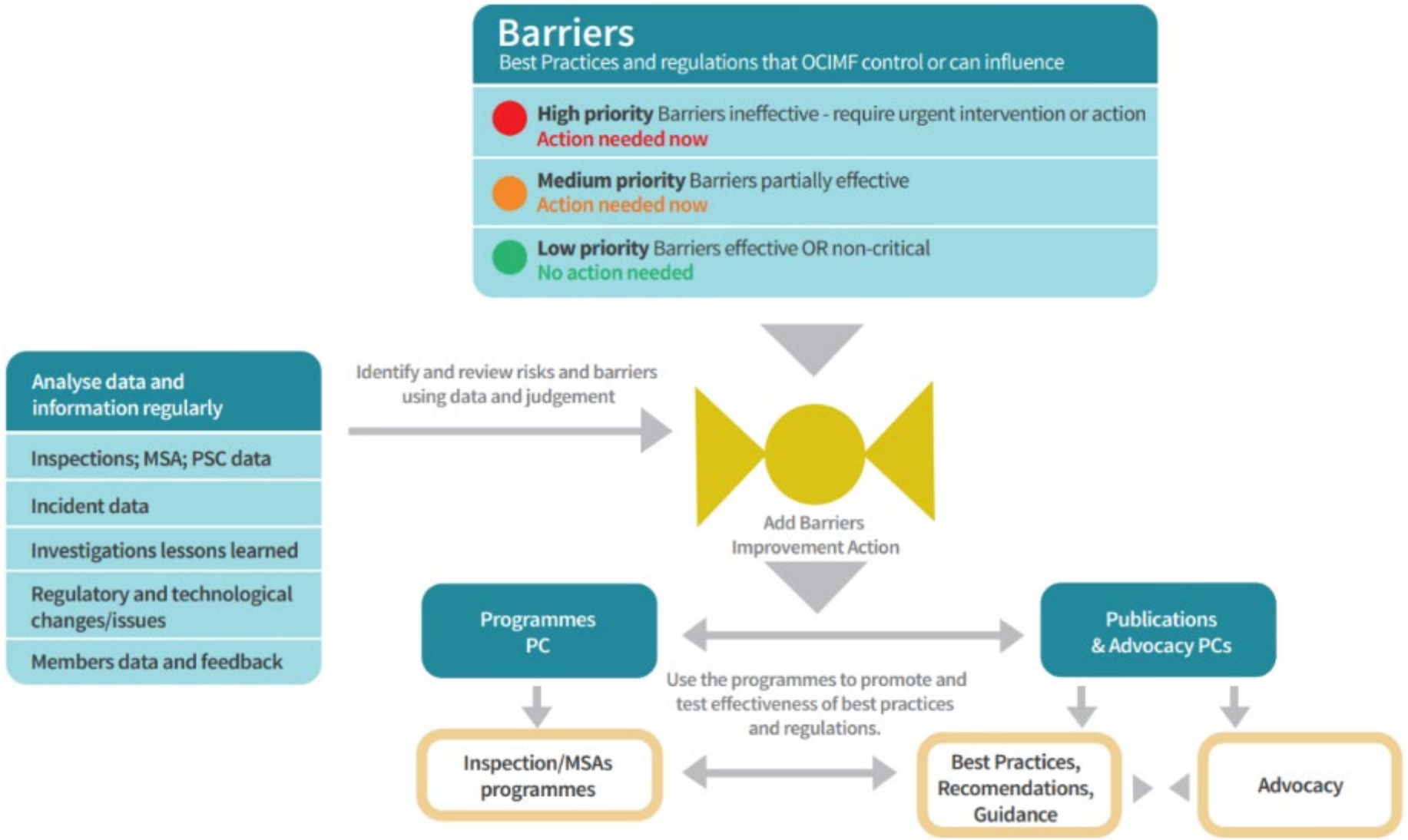
Publications - develop best practices on critical areas of safety, health, security, and environment

Advocacy - promote best practices and regulatory compliance through engagement with governments and industry.

Programmes - develop inspection and self-assessment Programmes for promoting best practices and regulatory compliance

Member Collaboration - provide a forum for members to learn, share expertise and develop best practices

Work prioritisation to focus on high value outputs

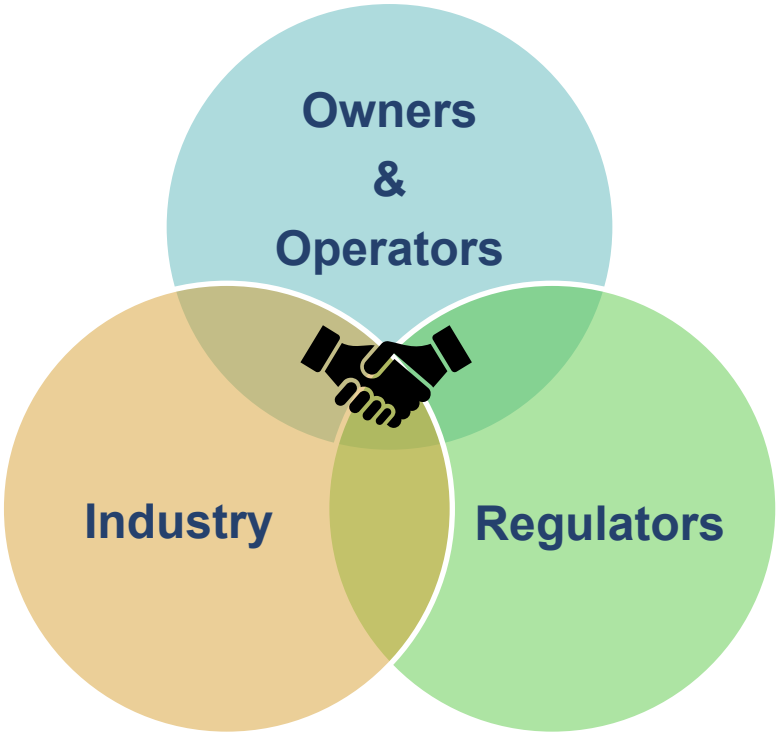


OCIMF uses available data and industry input to prioritise identified gaps or opportunities.

OCIMF Overview

Committee/Expert Group structure

Advocacy & engagement

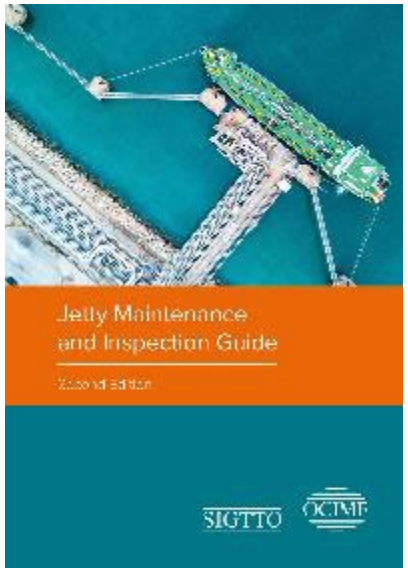


External Collaboration

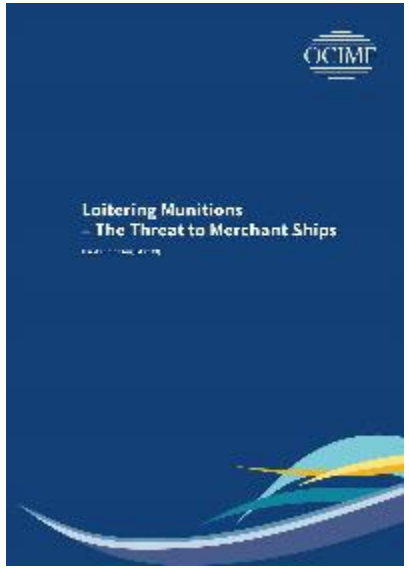

CCNR
CENTRAL COMMISSION FOR THE NAVIGATION OF THE RHINE
Maritime & Coastguard Agency
IOPC FUNDS FIPOL FIDAC
WMU
IGP
MTS
30TH ANNIVERSARY
GREEN AWARD
CLEAN ENERGY MINISTERIAL
Advancing Clean Energy Together
Together in Safety
TRINITY HOUSE
sgmf
CDI
International Chamber of Shipping
Shaping the Future of Shipping
SIGTTO
Maritime UK
MPA SINGAPORE
ReCAAP
Information Sharing Centre
IMCA
WISTA International
IEC
International Electrotechnical Commission
OCIMF
Safer Together
GLOBAL MARITIME FORUM
IADC
GOMO
ebu
european barge union
IVR
MARINE Safety Forum
INTERTANKO
iaph
international association of ports and harbors
SLOM
Sociedad Latinoamericana de Operadores de Terminales Marítimo Petroleros y Monoboyas
The American Waterways Operators
INTERNATIONAL MARITIME PILOTS' ASSOCIATION
PIANC A.D.1885 AIPCN
NAVIGARE NECESSE
European Commission
IACS
International Association of Classification Societies
International Regulators' Forum
GLOBAL OFFSHORE SAFETY
ipieca
50
CORDAGE INSTITUTE
PLATFORM ZERO INCIDENTS
join the journey, break the pyramid
ITOPF
PROMOTING EFFECTIVE SPILL RESPONSE
International Harbour Masters Association
OPITO
Global Offshore Wind Health and Safety Organisation

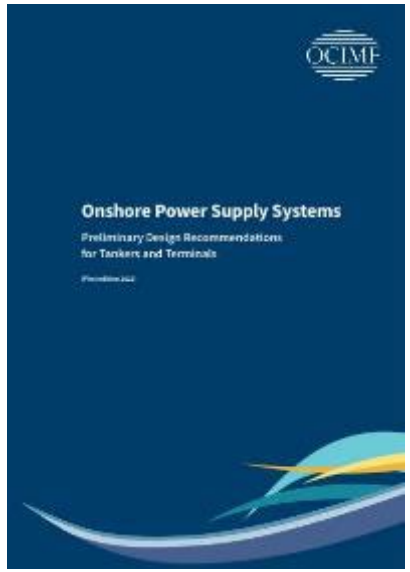
Published in 2023

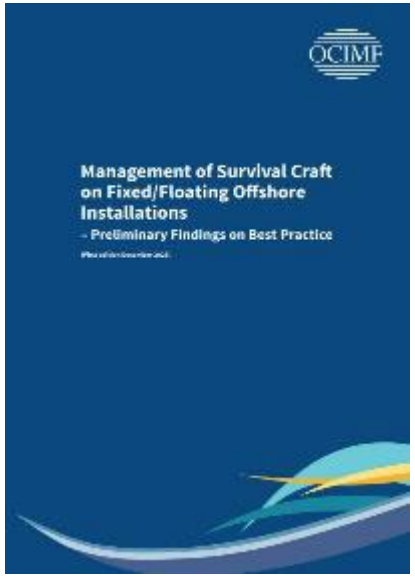
Books



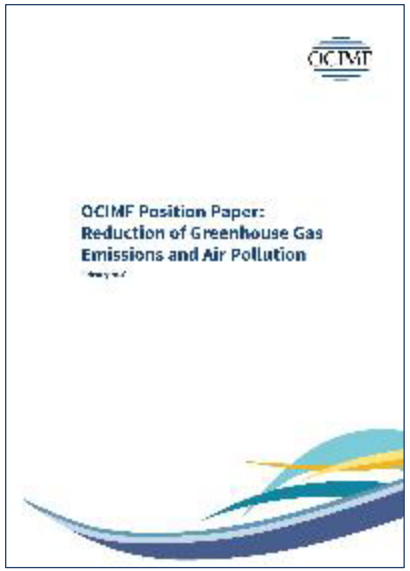
Information papers







Position paper



OCIMF Publications & advocacy

Some examples of ongoing and future opportunities

Ongoing Work

SHIP TO SHIP TRANSFER GUIDE

With support from CDI, ICS, SIGTTO and other industry stakeholders, and members of the Ship-to-Ship Expert Group

BMP UPDATE

With support from 29 industry associations, governments, and representatives from 15 member companies in the Marine Security Committee

DP ASSURANCE

With support from our industry partners IMCA, MTS and NI, and OCIMF Member Reps from the Offshore Vessel Operations Expert Group

EMISSIONS CAPTURE AND CONTROL and ONSHORE POWER SUPPLY

With support from Class, ports, and members in Environment Functional Committee and Engineering Expert Group

Future Work

HF APPROACH PAPER

NEW EMERGING FUELS

GLOBAL BARGE GUIDE

MSA REVIEW

Coffee Break – 30 mins
Group Photo

Filipe Santana, Engineering Adviser

Environmental Regulatory Updates and Engineering Solutions

Will maritime decarbonisation/energy transition happen?

Drivers

Maritime Decarbonisation

Regulation

- The IMO has set global ambitions and regulations reduce shipping emissions.
- Regional regulations, such as the EU and CARB, are driving change.

Cargo Owners and Consumers

- Companies and consumers demand sustainable practices throughout the supply chain to meet their commitments.
- The **Sea Cargo Charter is an example** of an initiative for the tanker section.

Insurance and Finance

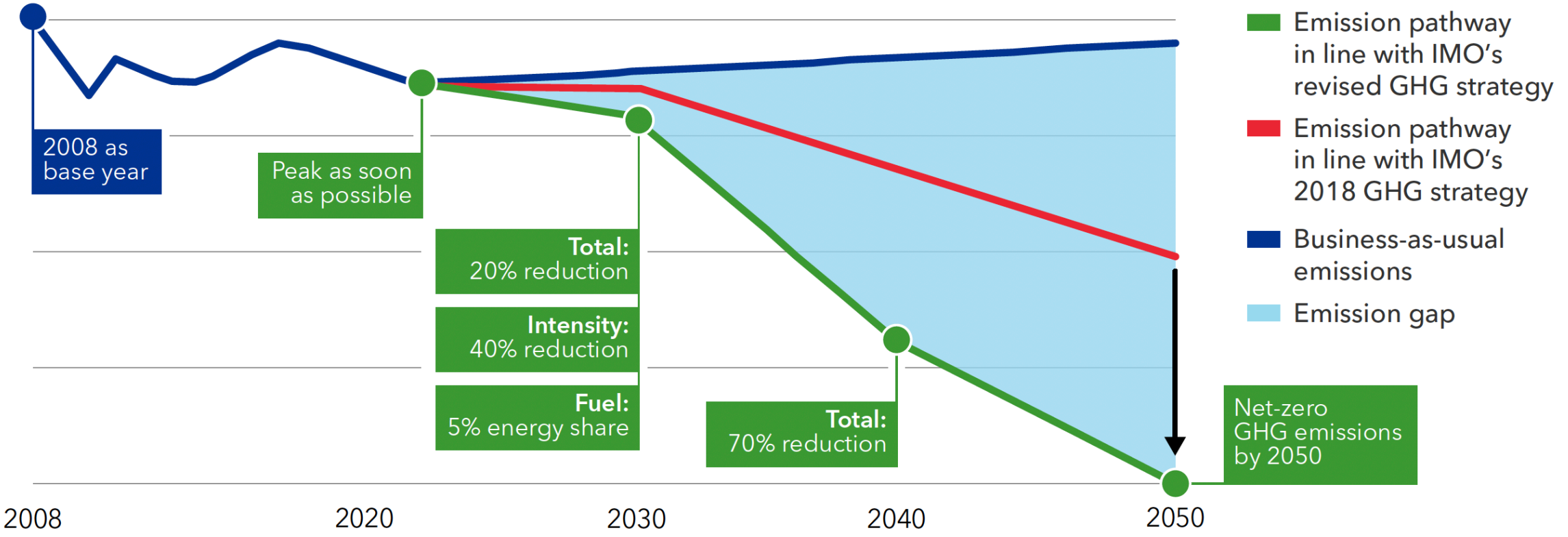
- Insurance companies and banks are more likely to finance shipping companies with strong decarbonisation strategies.
- The **Poseidon Principles is an example** of an initiative in the insurance sector.


INTERNATIONAL
MARITIME
ORGANIZATION

GHG emissions reduction pathway

Outline of ambitions and minimum indicative checkpoints in the revised IMO GHG strategy

Units: GHG emissions



Total: Well-to-wake GHG emissions; **Intensity:** CO_2 emitted per transport work; **Fuel:** Uptake of zero or near-zero GHG technologies, fuels and/or energy sources

Source: DNV's Energy Transition Outlook 2023

IMO's strategy for the reduction of GHG emissions

Elements	2018		2023
Peak Ambition	ASAP	=	ASAP
2050 Ambition	50% Total Annual GHG Emission Reduction	<	Net Zero (around / close to) "…taking into account different national circumstances…"
Phase Out	ASAP in this Century	<	Consistent with the long-term goal set out in Article 2 of the Paris Agreement*
2030 CI Ambition	40% CI Reduction by 2030 (CO2 Emissions per Transport Work)	=	40% CI Reduction by 2030 (CO2 Emissions per Transport Work)
CI / EE Ambition	Further phases for EEDI for new ships	<	Strengthening the energy efficiency design requirements for ships (unspecified)
Uptake	-	NEW	Uptake of Zero or Near-Zero GHG Emission Tech, Fuels, Energy Sources, at least 5% (striving for 10%) by 2030
2030 Checkpoint	-	NEW	20% Total Annual GHG Emission Reduction (striving for 30%)
2040 Checkpoint	-	NEW	70% Total Annual GHG Emission Reduction (striving for 80%)
New Terms	-	NEW	~~Offsetting~~, Just & Equitable Transition, Safety, Human Element

IMO measures to reduce GHG emissions

In simple terms

Existing Regulations

EEDI (Energy Efficiency Design Index)

- New ships must be designed to meet energy efficiency targets to reduce GHG emissions.

SEEMP (Ship Energy Efficiency Management Plan)

- Requires ships to have a plan for improving energy efficiency.

DCS (Data Collection System)

- Ships must report their fuel consumption data annually.

EEXI (Energy Efficiency Existing Ship Index)

- Sets energy efficiency standards for existing ships to reduce GHG emissions.

CII (Carbon Intensity Indicator)

- Measures and rates ships' operational carbon intensity to improve energy efficiency.

Regulations being considered

GHG Fuel Standard

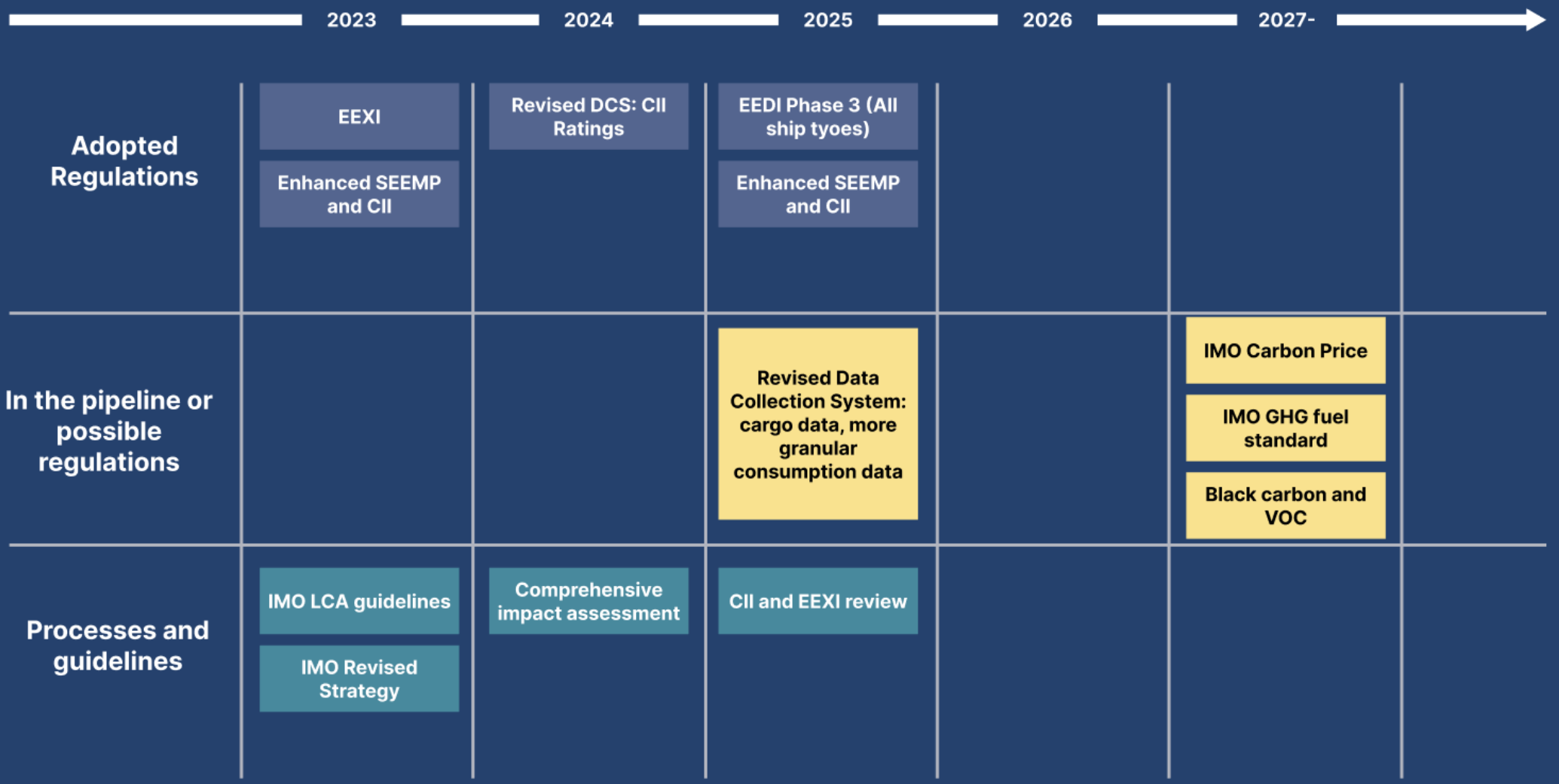
- Sets targets to reduce the GHG intensity of marine fuels over time.

Carbon Price

- Implements a pricing mechanism for maritime GHG emissions, potentially linked directly to the GHG-intensity mechanism.

IMO’s short and mid-term measures

Timeline



Terminology: Carbon Intensity Indicator (CII); Energy Efficiency Design Index (EEDI); Energy Efficiency Existing Ship Index (EEXI); Lifecycle Assessment (LCA); Ship Energy Efficiency Management Plan (SEEMP); Volatile Organic Compounds (VOC).

Development of IMO's Mid-Term Measures

Detailed timeline

When	Where	What
☑ March 2024	MEPC 81	Further Consideration of Candidate Measures
☐ Summer 2024	GHG-EW 5	Consider Initial Findings of CIA
☐ September 2024	ISWG-GHG 17	
☐ October 2024	MEPC 82	**Selection** of Economic and Technical Measure(s)
☐ March 2025	ISWG-GHG 18	
☐ April 2025	MEPC 83	**Approval** of Economic and Technical Measure(s)
☐ October 2025	MEPC ES2	**Adoption** of Economic and Technical Measure(s)
☐ Summer 2027		(Earliest) **Entry** into Force

Regional Regulations

EU and CARB in simple terms

EU ETS (EU Emissions Trading System)

- Requires ships to buy permits for their CO2 emissions to reduce GHG emissions.

SEEMP (Ship Energy Efficiency Management Plan)

- Requires ships to use cleaner fuels to reduce GHG emissions.

CARB At Berth Regulation

- Requires ships to reduce emissions while berthed at California ports.

CALIFORNIA
AIR RESOURCES BOARD

What is OCIMF doing to support maritime decarbonisation?

Vision

A global marine industry that causes no harm to people or the environment

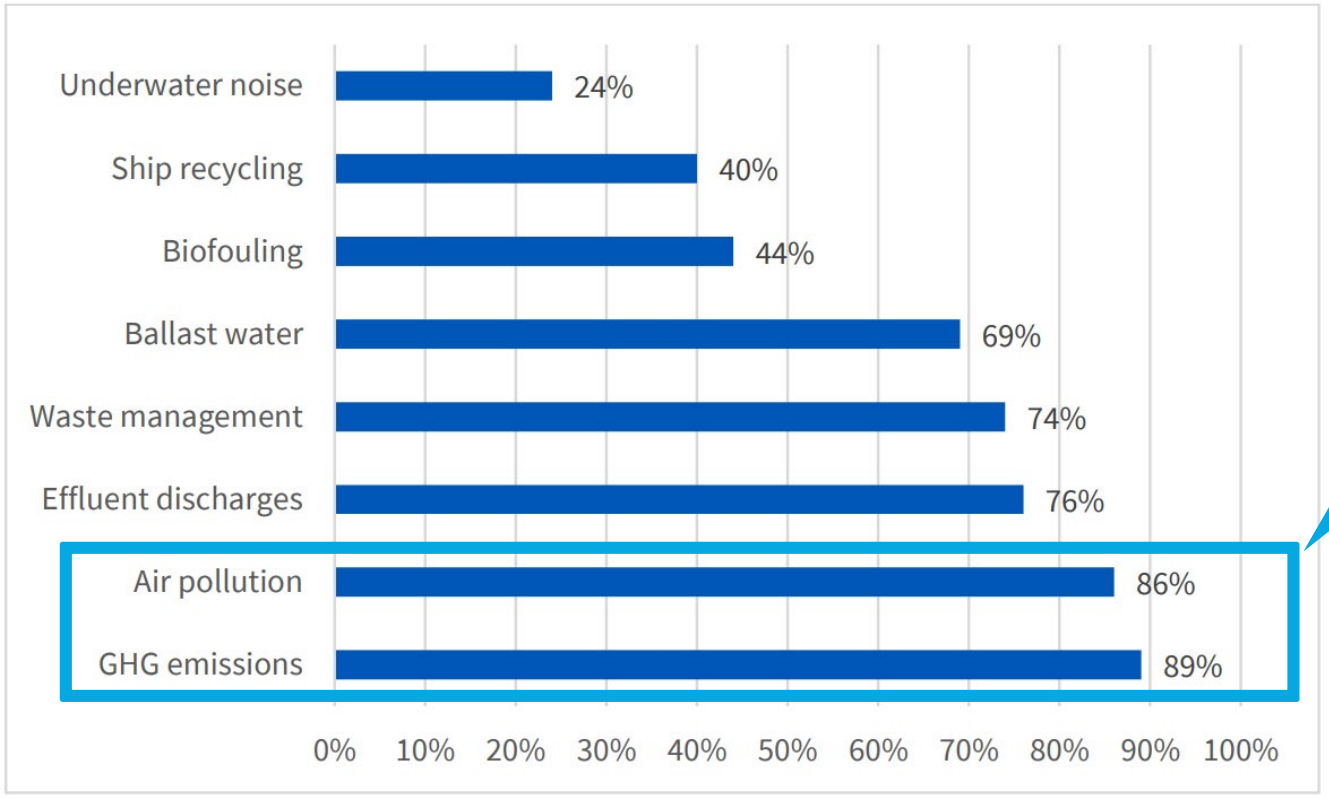
OCIMF

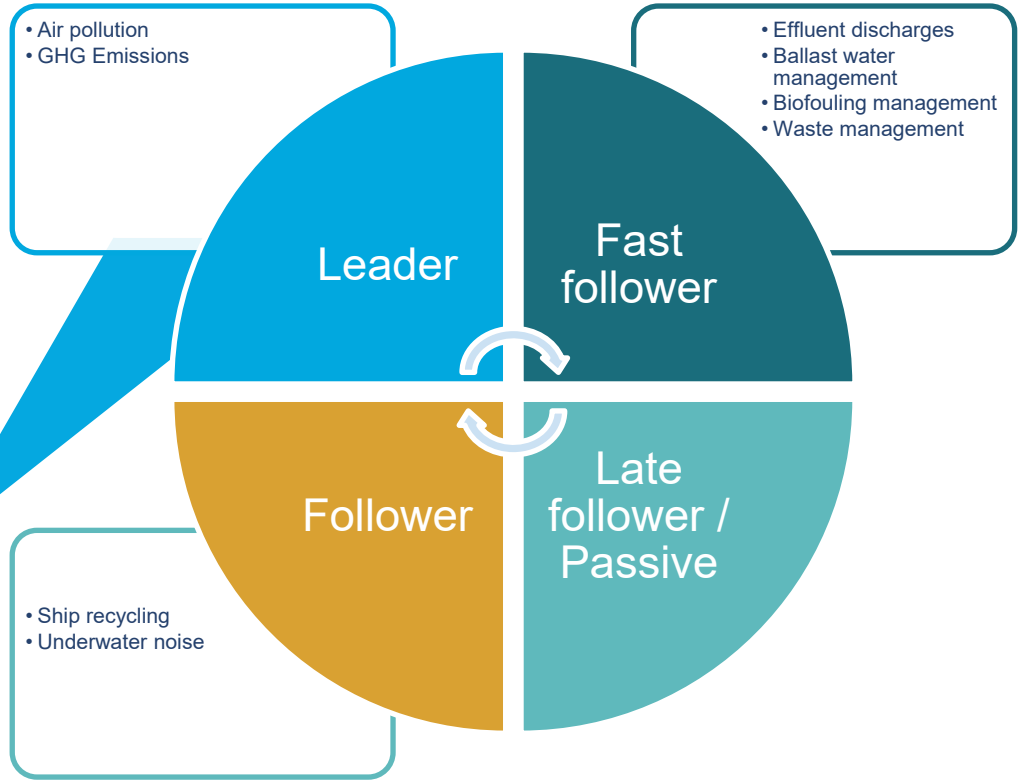
Organisational Structure

Environmental Committee

Environmental priorities

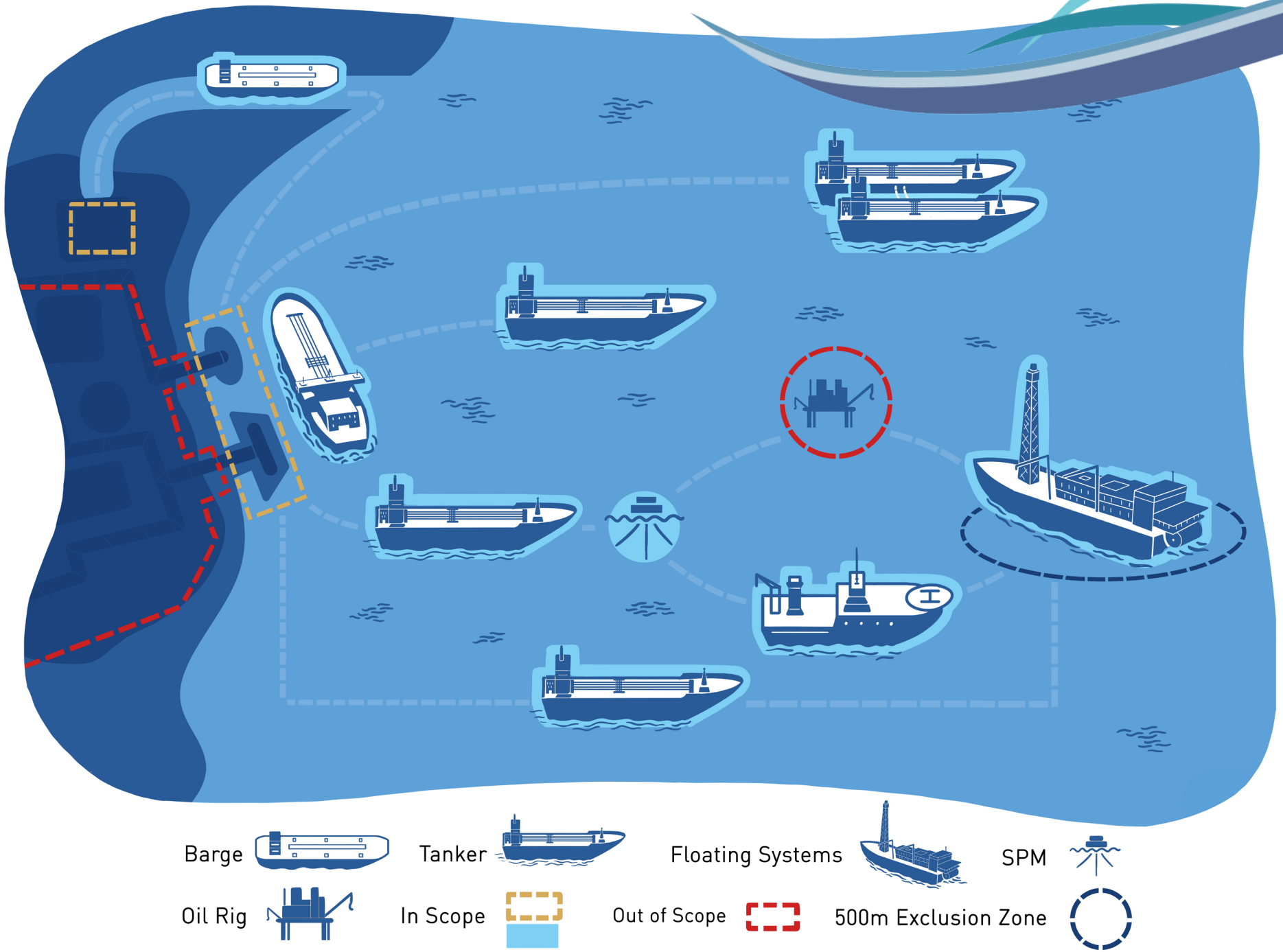
OCIMF





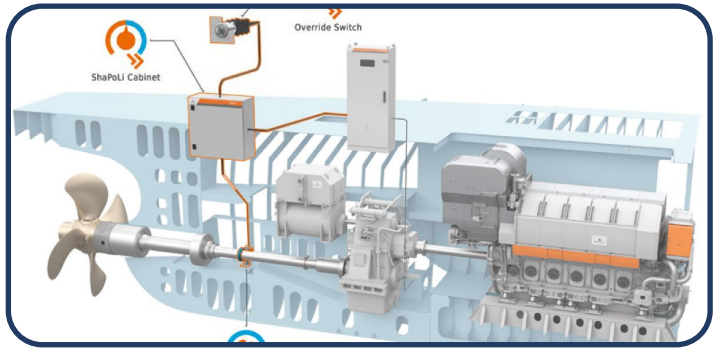
Survey: OCIMF members collective priorities in relation to the marine environmental issues

OCIMF Scope


Barge
Tanker
Floating Systems
SPM
Oil Rig
In Scope
Out of Scope
500m Exclusion Zone

New Publications

Filling industry gaps to enable the safe adoption of solutions for GHG emissions and air pollution reduction.



Risks Associated with Propulsion Power Limitations

Q2/24

Onshore Power Supply For Tankers and Terminals

Q3/24

Emissions Capture and Control at Berth

Q3/25

Regulatory Updates and Advocacy

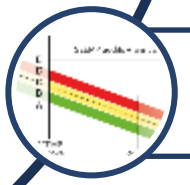
Advocating in the IMO and supporting regional regulators on the safe adoption of alternative fuels and fit-for-purpose regulations.

Marine Fuel LCA Guidelines

Safety of Alternative Fuels

Regulatory Gaps in Alternative Fuels

Reduction of VOCs



Revision of CII

Updating programmes

Strengthening controls related to GHG emissions and air pollution reduction.

Ship Inspection Report Programme (SIRE2)

Marine Terminal Information System (MTIS)

Offshore Vessel Inspection Database (OVID)

Barge Inspection Report Programme (BIRE)

Collaboration

IPIECA Study to understand the investment requirements and potential barriers for alternative fuel production and supply in alignment with the IMO 2023 Strategy.

IACS's Joint Industry Working Group on Safe Decarbonisation.

SGMF’s methanol bunkering guidelines.

Thank you

Captain Jones A. B. Soares
Transpetro Maritime, Transport Director

,

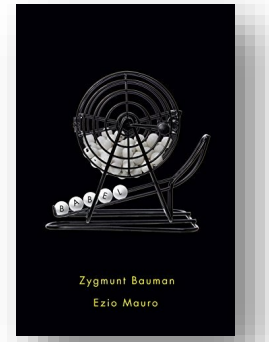
Transpetro’s Fleet Decarbonisation Journey

OCIMF

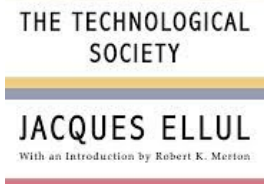
IN PROGRESS AN IMPORTANT

CHANGE OF ERA

"We are living in the interregnum between what is no longer and what is not yet".
Bauman and Mauro, 2016.

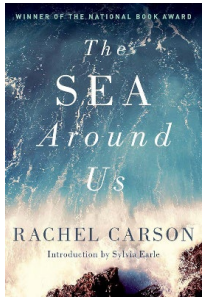


Because of the myth of progress, it is much easier to sell a man an electric razor than a straight razor.
Jacques Ellul, 1967.



"The human race is challenged more than ever before to demonstrate our mastery, not over nature but of ourselves".
Rachel Carson, 1951.

<u>For many centuries, maritime transport has protected itself from the environment. Today, we must protect it too.</u>



OCIMF DAY 2024 – Rio de Janeiro

DECARBONIZATION AND TRANSPETRO FLEET

—

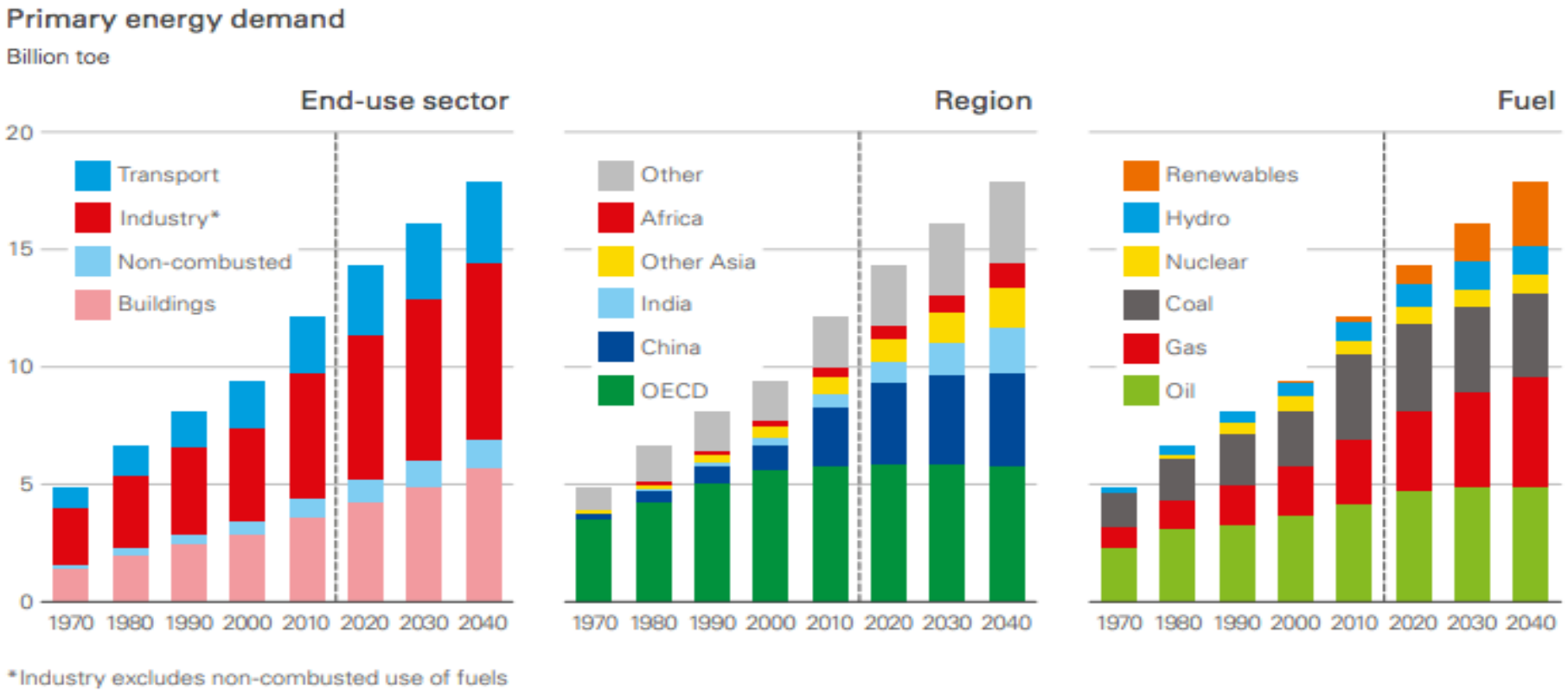
Capt. Jones A. B. Soares
M.Sc AFNI MIFSMA MNAMEPA MCCMM MABDM
Transpetro Maritime Transport Director

22 may 2024

TRANSPETRO

THE WORLD NEEDS ENERGY, EVERYONE...

...can grow more than 30% until 2040.



Fonte: BP

Brasil

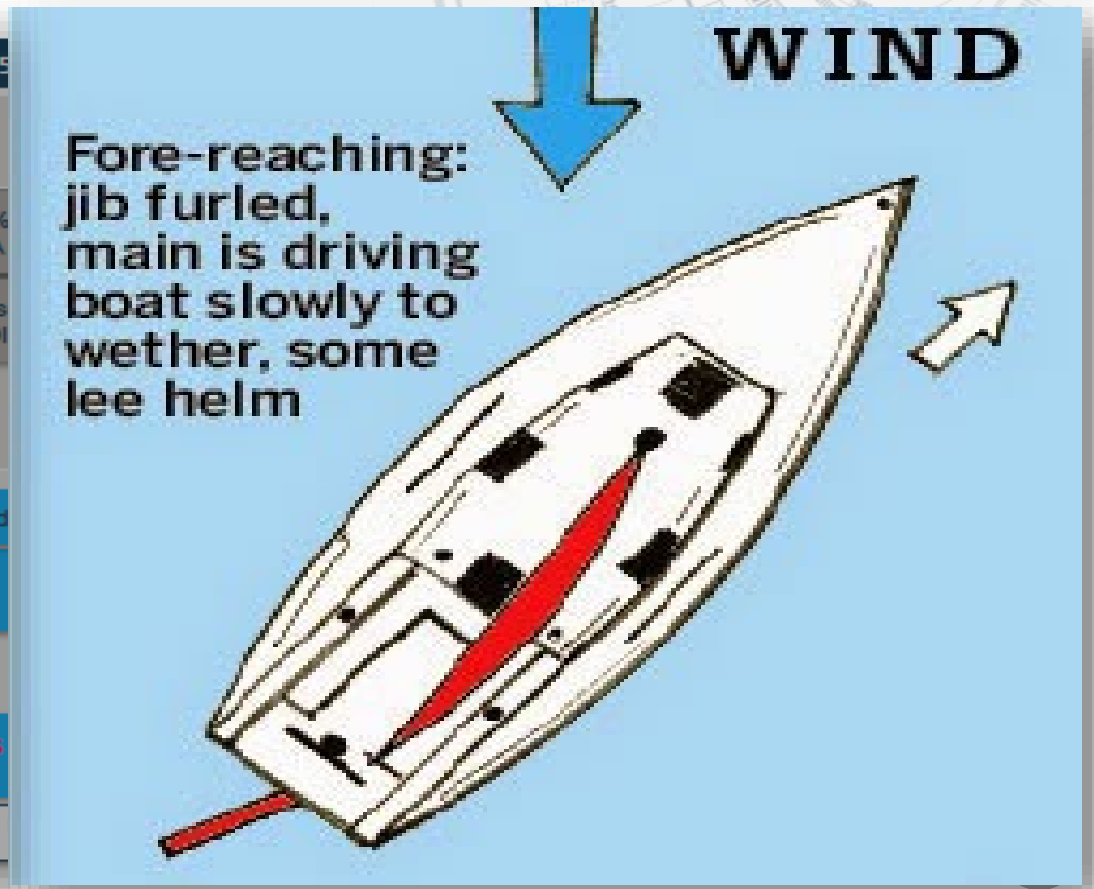
Energy demand also growing until 2040

How can we meet this growing demand in an accessible, safe and clean way in a scenario of restrictions on local and global greenhouse gas emissions?

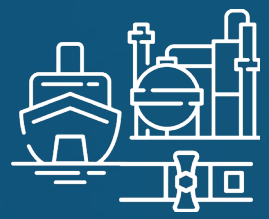
DECARBONIZATION SCENERY

For many centuries, maritime transport has protected itself from the sea environment.
Today, we must protect it too.

There´s no turning back. There´s no running-off (run downwind).
Like facing any storm/major change, we need to use good sailor technique, balance and believe.



WHO WE ARE



We are **TRANSPETRO**, a company providing logistics solutions for the oil, gas and biofuel industry.

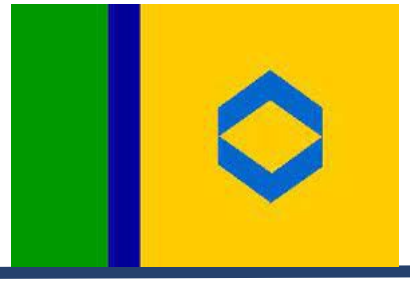
We operate terminals, oil pipelines, gas pipelines and ships in integrated manner, transporting and storing oil, derivatives and biofuels.

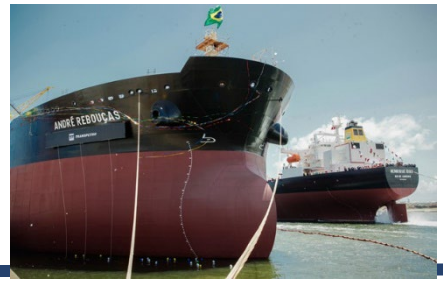
We also operate in the import and export of oil and derivatives, gas, and ethanol.

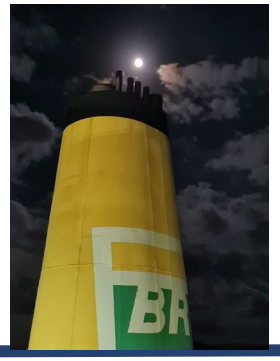
In Transpetro, your energy carried with accountability and efficiency.

TRANSPETRO

SUPPORTING THE JUST TRANSITION AND BRAZILIAN ENERGY SECURITY







1950
CREATION OF FRONAPE

1970
EXPANSION OF OPERATION

1998
CREATION OF TRANSPETRO

2005
PROMEF

2020
ROUGH SEAS

2023
RETURN TO PROPER NAVIGATION

TRANSPETRO STRATEGIC DRIVERS

And now pursue very strongly
ENERGY EFFICIENCY AND DECARBONIZATION

PURPOSE

Provide logistical solutions for the oil, gas and low-carbon products segment, contributing to human and social development, in an ethical, fair, safe and competitive manner.

VISION

To be the best logistics company for the oil, gas and low-carbon products segments in Latin America, in an integrated manner with Petrobras, generating value with sustainability, safety, respect for the environment and total attention to people.

VALUES

- Respect for life, people and the environment
- Integrity
- Sustainability
- Inovation
- Commitment to Transpetro, Petrobras and Brazil

P

BR TRANSPETRO

DECARBONIZATION PROJECTS FOR TRANSPETRO FLEET

Study and Implementation Plan

Higher Technical Maturity

Better Cost Effectiveness

Phase 1: 2021 to 2025

- High Performance AFS
- ROV Hull Cleaning
- Energy Saving Devices (ESD)
- Route and Trim Optimization
- Main Engine Upgrades
- Course and Speed Control Systems
- Mass Flowmeter ("*Coriolis*" type)
- Biodiesel Testing

Phase 2: 2026 to 2028

- Wind Assisted Propulsion System (WAPS)
- Hull Air Lubrication System
- Power Take-Off (PTO)
- Waste Heat Recovery System (WHRS)
- Shore Power Connection
- VOC Recovery System

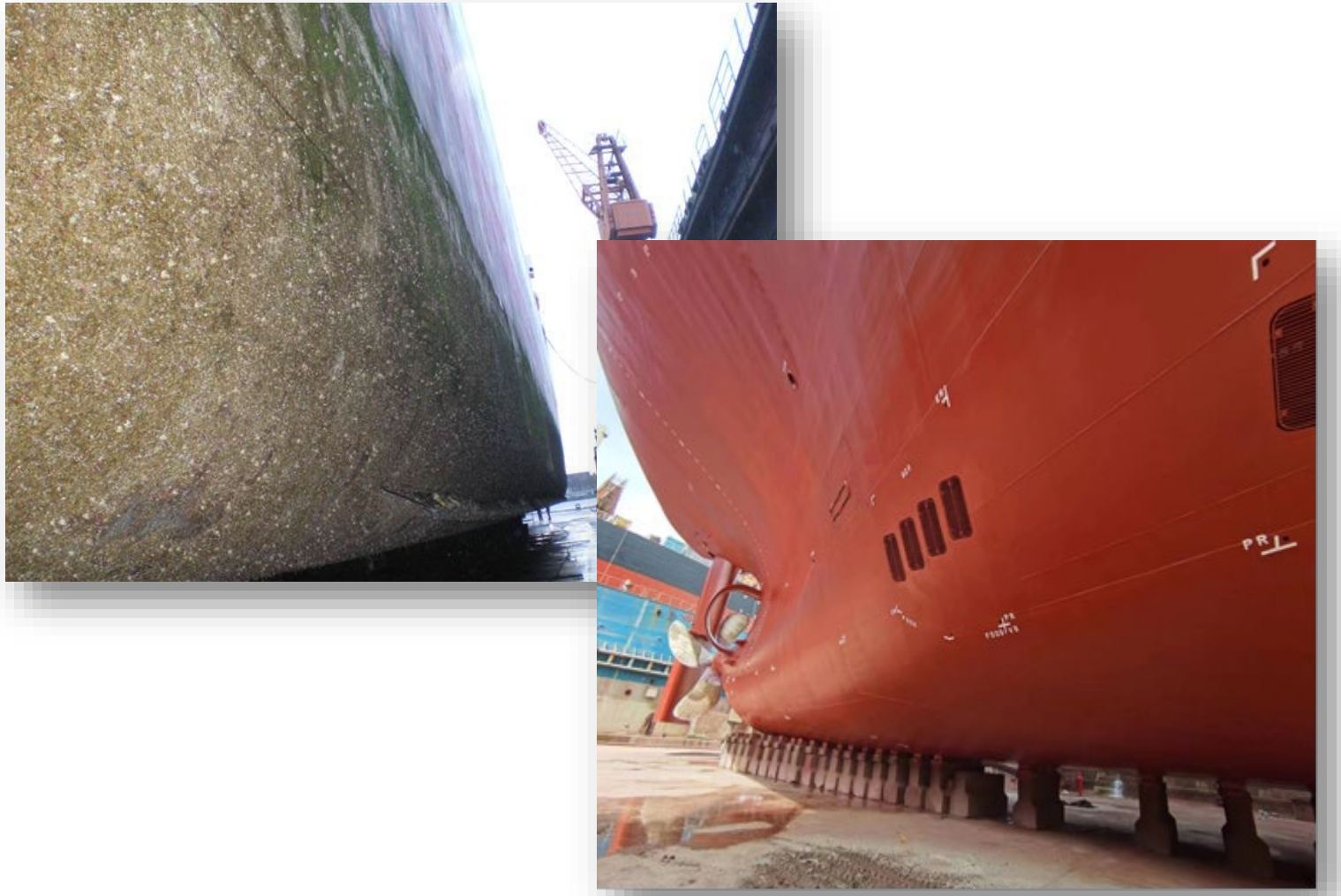
Phase 3: 2028 to 2030

- Alternative Fuels
- Dual Fuel Engine Retrofit
- CCS – Carbon Capture and Storage
- Hybrid Propulsion and Power Generation

Phase 1: 2021 to 2025

High Performance Anti Fouling System

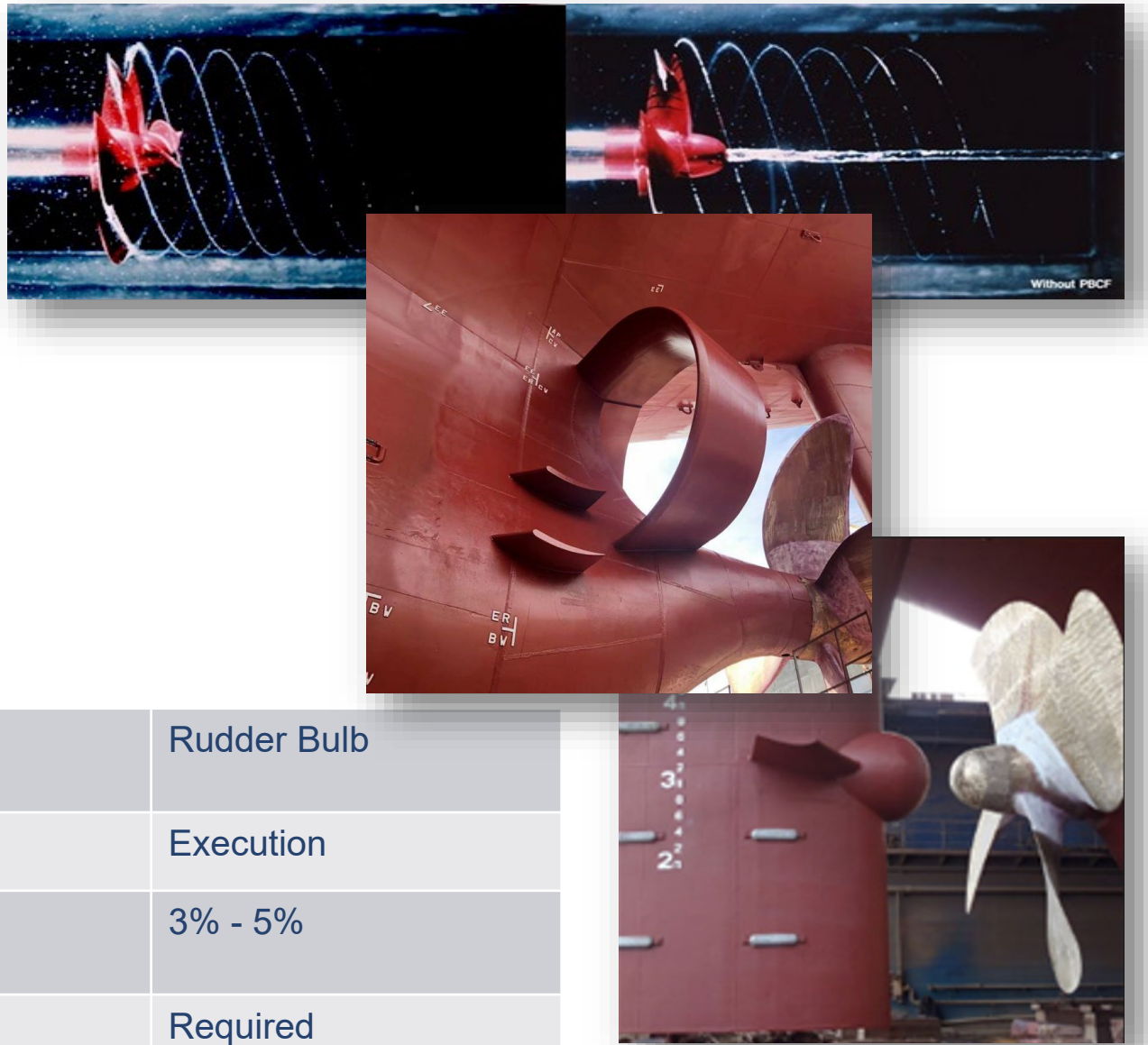
Status	Execution
Emission Reduction	2% - 5%
Dry-docking	Required



Source: Transpetro and Akzo Nobel

Phase 1: 2021 to 2025

Energy Saving Devices

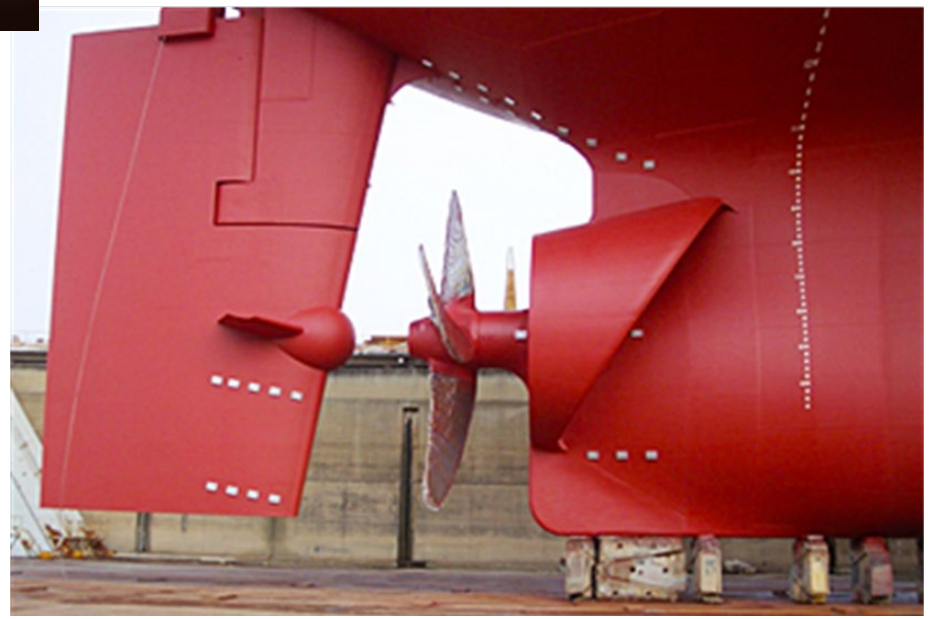


Technology	Propeller Boss Cap Fins	Pre Swirl Duct	Rudder Bulb
Status	Execution	Execution	Execution
Emission reduction	2% - 5%	5% - 7%	3% - 5%
Dry-docking	Optional	Required	Required

Source: Becker, Mitsui, IMC

Phase 1: 2021 to 2025

Energy Saving Devices

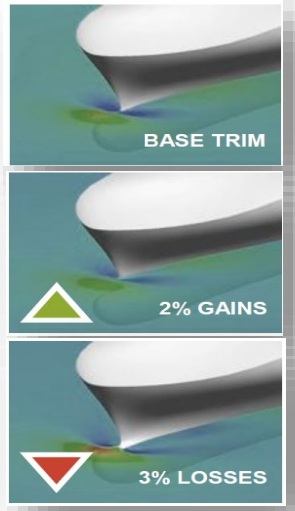


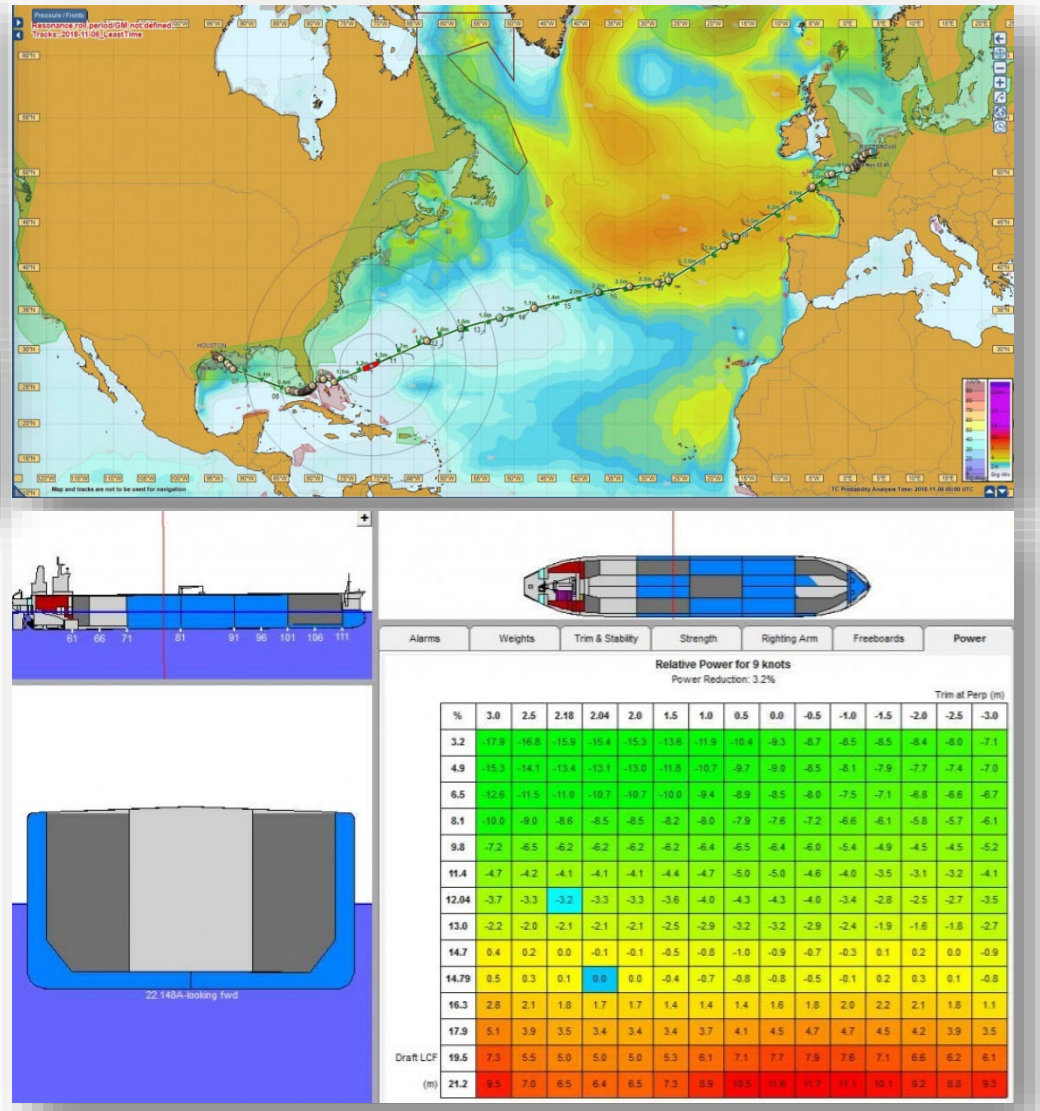
A study carried out by the Federal University of Rio de Janeiro (UFRJ), through the Coordination of Projects, Research and Technological Studies (Coppetec), proved that the ESD installed on the ship José Alencar, class 59, generate a reduction of 7% in fuel consumption and CO2 emissions. This result means a reduction in emissions of 850 tons of CO2 per ship, per year.

Source: Transpetro

Phase 1: 2021 to 2025

Route and Trim Optimization



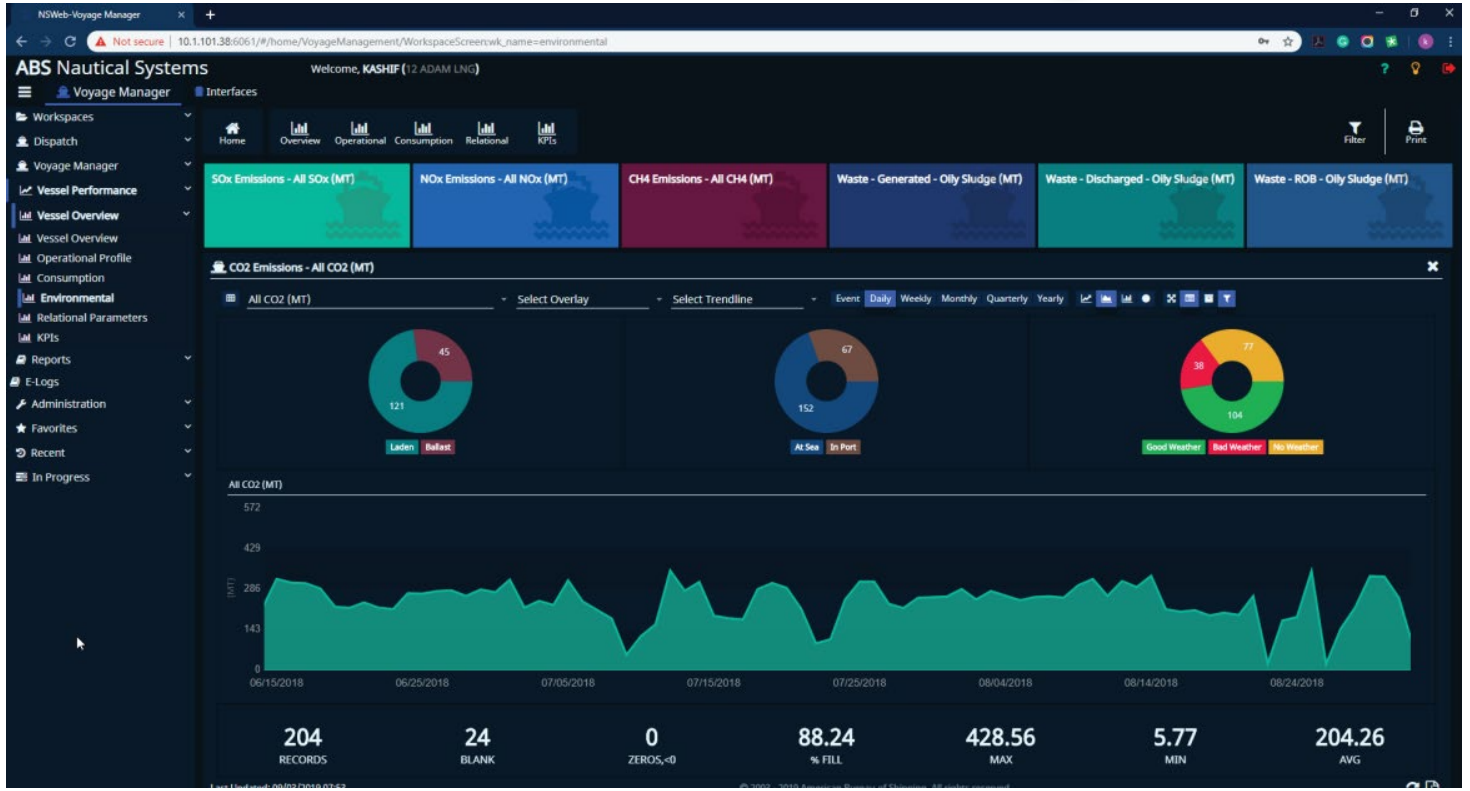


Technology	Route	Trim
Status	Planning	Execution
Emission reduction	3% - 6%	1% - 3%
Dry-docking	No	No

Source: WNI and Herbert

Phase 1: 2021 to 2025

Voyage Manager



MARITIME FLEET MANAGEMENT SOFTWARE

The ABS Nautical Systems® NS Voyage Manager enables voyage planning and compliance with a variety of regulatory and environmental regulations via easy noon reports and event data capture.

Source: ABS

Phase 1: 2021 to 2025

Field Test with Biodiesel in Transpetro Fleet

Some initial results:

- The estimate of the test is that the mixture **reduces about 7% of CO2 emissions**.
- An inspection was carried out on the engine, after consumption, and **no anomaly caused by the use of biofuel was identified**.
- Oil samples were taken from the engine for more detailed analysis, but not yet completed.
- The vessel was **equipped with telemetry** to enable **real-time monitoring of engine operating variables**.

Status	In progress
Emission reduction	"*TBD*"
CAPEX (USD/navio)	"*TBD*"
Dry-docking	Não

INTERNATIONAL TANKERS MONITORING CENTER - CNAN

CNAN supervises the fleet in real time (24/7) and its main focus is to **mitigate the risks to life and property**:

- Example: Remote monitoring of Navigational Passage Plan (route, speed and position);
- Easy communication with vessels and fleet managers.

Operations

24/7

HOURS/DAYS

Advantages:

- Additional tool of safety which can remotely monitor the fleet around the world in real time in regard of individual pre-approved proposed passage plan of each vessel.

OPPORTUNITIES:

- Some countries have **availability of raw materials**.
- Biofuel production **capacity and market supply**, given the high consumption of marine fuels.
- Possibility of **maximum use of existing infrastructure**.

ADJUSTMENTS:

- Maximum **adaptation to the operational and engineering conditions** of the ship/engine.
- **Less restricted specifications** and **greater flexibility**.
- **Technical and logistical factors** of the maritime sector, which differ from other modes of transport.

DECARBONIZATION PROJECTS FOR TRANSPETRO FLEET

Study and Implementation Plan

Higher Technical Maturity

Better Cost Effectiveness

Phase 1: 2021 to 2025

- High Performance AFS
- ROV Hull Cleaning
- Energy Saving Devices (ESD)
- Route and Trim Optimization
- Main Engine Upgrades
- Course and Speed Control Systems
- Mass Flowmeter ("*Coriolis*" type)
- Biodiesel Testing

Phase 2: 2026 to 2028

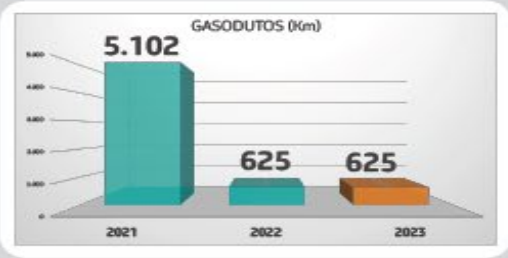
- Wind Assisted Propulsion System (WAPS)
- Hull Air Lubrication System
- Power Take-Off (PTO)
- Waste Heat Recovery System (WHRS)
- Shore Power Connection
- VOC Recovery System

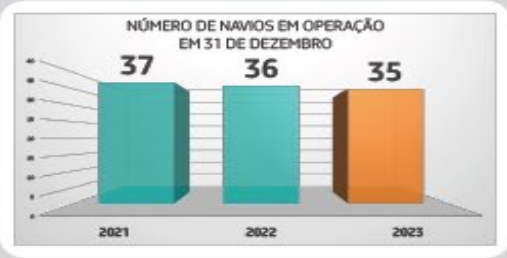
Phase 3: 2028 to 2030

- Alternative Fuels
- Dual Fuel Engine Retrofit
- CCS – Carbon Capture and Storage
- Hybrid Propulsion and Power Generation

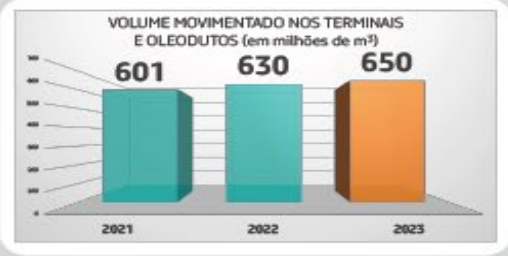
WE INCLUDED THE FLEET EMISSIONS INTENSITY INDICATOR AS KPI TOP METRIC

ATIVOS OPERACIONAIS

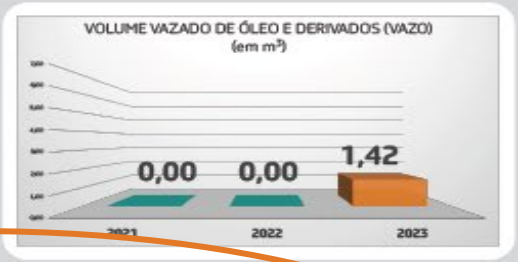


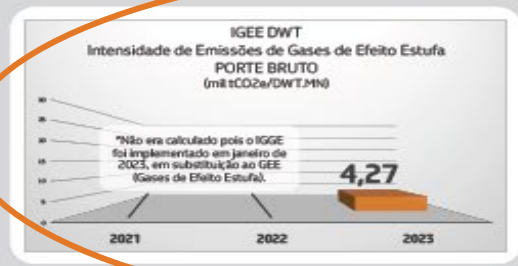


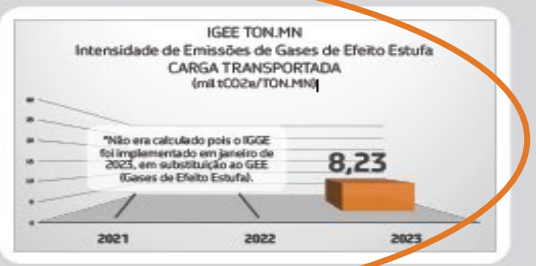
MOVIMENTAÇÃO

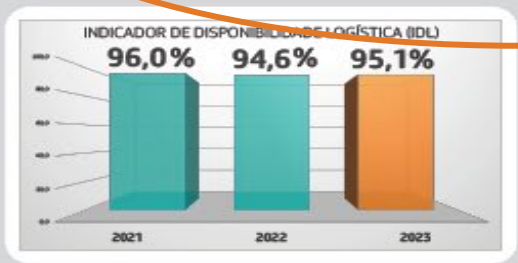


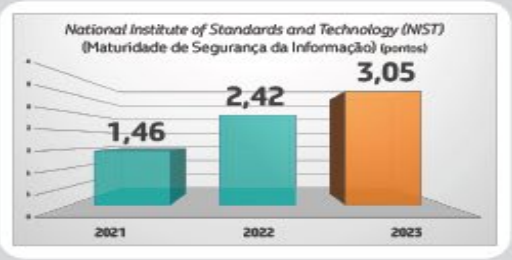
MÉTRICAS DE TOPO



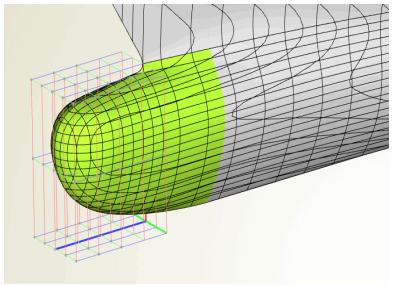






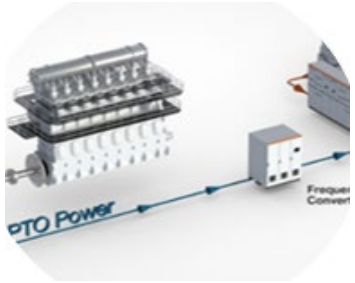


- Ships specified with **energy efficiency projects** being implemented in the existing fleet.
- **Additional specification** includes the following projects:



Optimized Hull and Propeller

- Ships built from 2025 onwards must be up to 30% more efficient than those in Phase 0 (Existing Fleet)



Shaft Generator

- Eliminates the use of AE when traveling
- Gain: 2 to 5%

Shore Power

- Use of shore power during port operations
- Gain: 5 to 7%

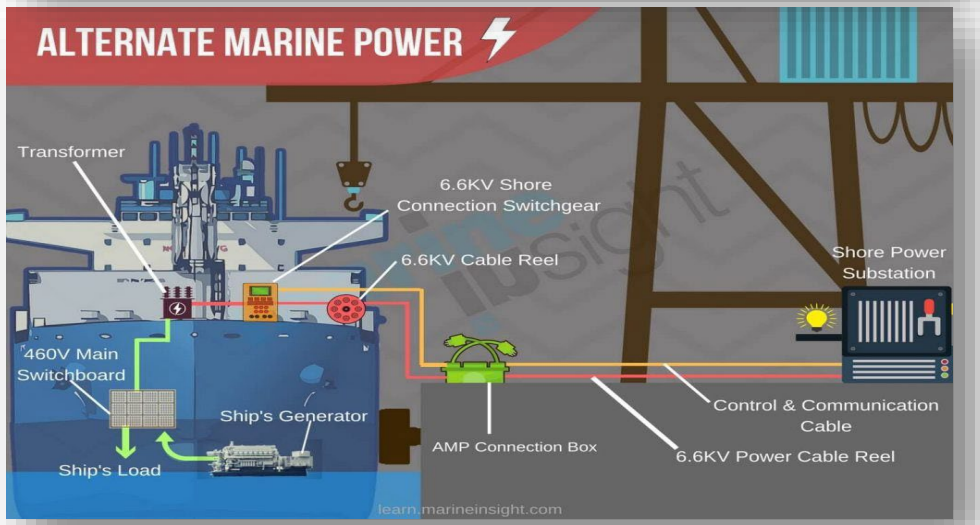
LED

- Reduction of electrical consumption
- Gain: 0.5 to 0.7%

DECARBONIZATION PROJECTS FOR TRANSPETRO TERMINALS
Study and Implementation Plan

- Transpetro already implemented a **plant of solar energy** in order to ensure 100% power supply for the Guarulhos Terminal (SP). This project will allow the generation of 4.1 million megawatt hours. The plan involved the installation of more than 5 thousand solar panels in an area of 26,000 m^2.

- Transpetro also started to study instalation of **Alternate Maritime Power or AMP** which helps reducing air pollution generated from ship's diesel generators by using shore electric power as a substitute.

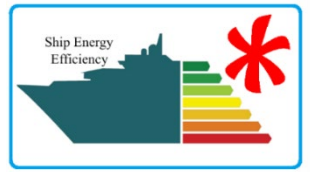


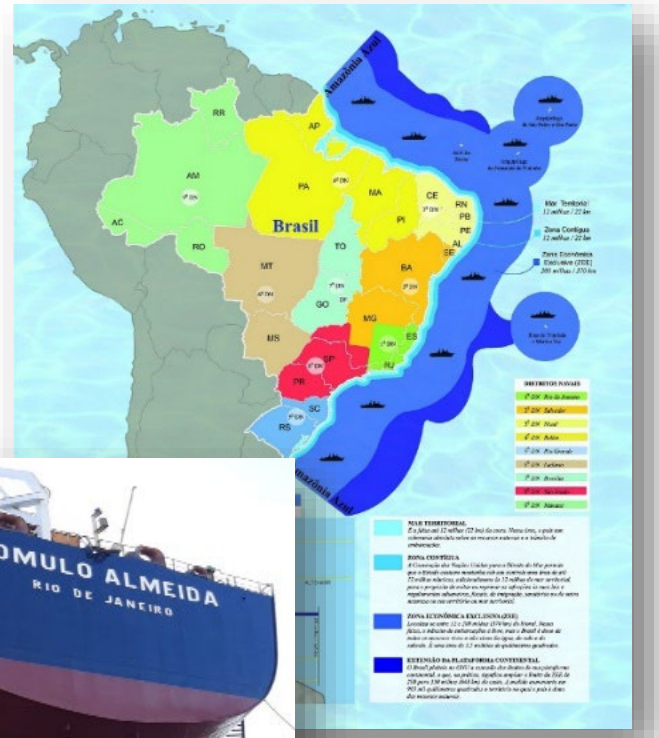
- Tranpetro started several studies related to decarbonization in its ships, pipelines and terminals business areas. **EEXI and CII set for all ship's and Decarbonization Passage Plan for Transpetro Fleet already in progress.**

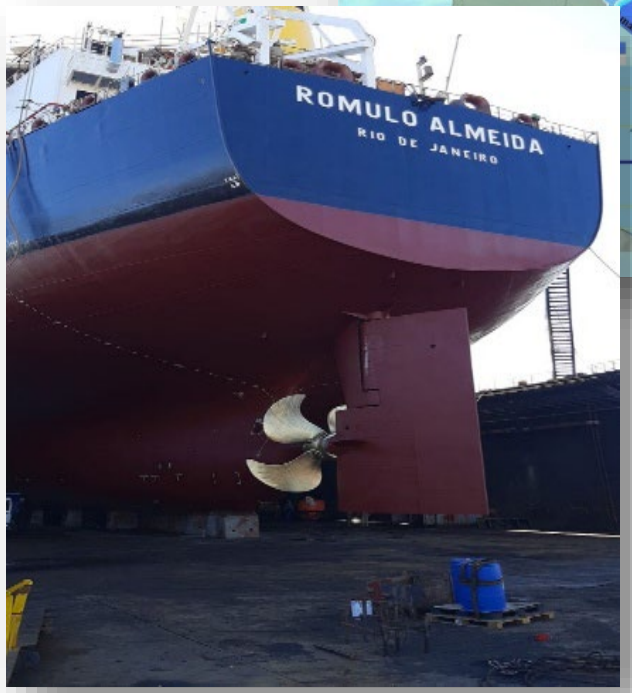
- Due to the long useful life of the vessels, this is a **slower transition process**, which needs to be **conducted by countries** considering their strategies, skills and energy policies, **specially "Just Transition and Energy Security".**

- It is noteworthy that **Brazil is in a prominent position in terms of biotechnology and bioenergy**, with a biofuels industry installed in the country, which is **competitive and can contribute to the decarbonization of the sector as a supplier of biofuels.**

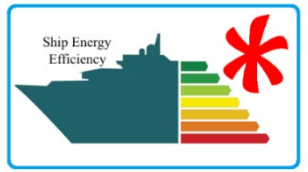
- For the **ten-year period**, there is **no projected use of only alternative fuels in maritime transport in Brazil.**

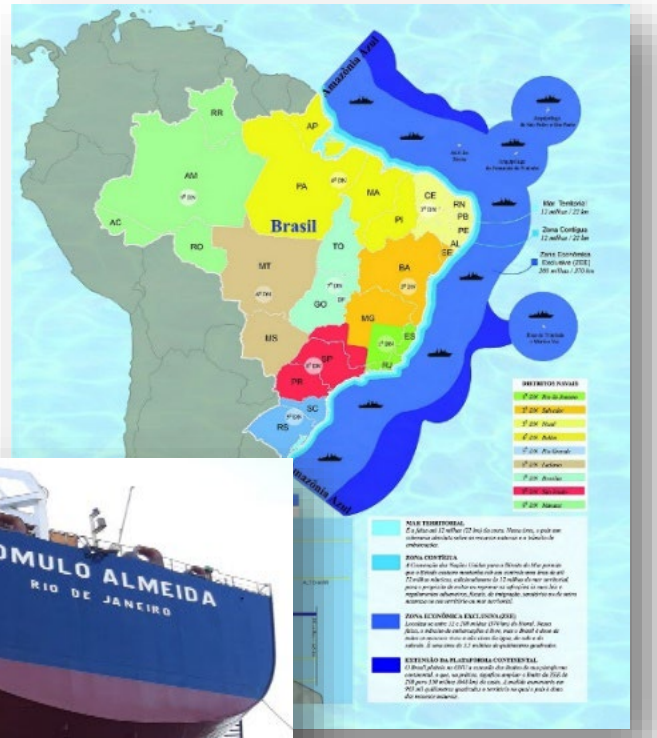


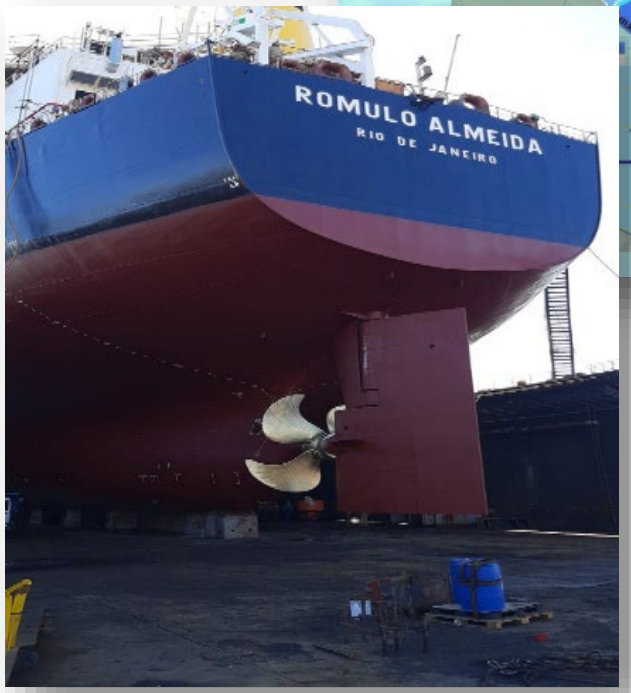




- Currently, **alternative fuels cost two to five times more than conventional fuels**, so they are not yet commercially viable.
- Fleet owners can, however, keep their options open with **flex-fuel vessels**.
- As of March 2022, nearly **40 percent of the order book** consists of ships capable of running on **one or more fuels**.
- For a decarbonized maritime sector, the **penetration of alternative fuels**, including biofuels, hydrogen, ammonia and electricity, will **need to evolve**. **Technological, supply, price challenges (including carbon tax), funding and logistical aspects must be addressed**.
- **Political support** will be essential also.







OCIMF DAY 2024 - Rio de Janeiro

DECARBONIZATION AND TRANSPETRO FLEET

Jones A. B. Soares
Capt. Jones A. B. Soares
M.Sc AFNI MIFSMA MNAMEPA MCCMM MABDM
Transpetro Maritime Transport Director

cmt.jones@transpetro.com.br

Professor – Dr Jean-David Caprace, Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering (COPPE), Federal University of Rio de Janeiro (UFRJ)

Best Practices for Alternative Fuels And Energy Saving Devices in Shipping

Towards Zero Emissions

Best Practices for Alternative Fuels And Energy Saving Devices in Shipping

by Prof. Jean-David Caprace

OCIMF day – May 2024

COPPE UFRJ
Instituto Alberto Luiz Coimbra de Pós-Graduação e Pesquisa de Engenharia

CLIMARINE INITIATIVE

CLIMATE CHANGE POLICIES FOR THE MARITIME SECTOR

Jean-David Caprace
COPPE-UFRJ

Paula Carvalho Perreda
FEA – USP

Cristofer Hood Marques
FURG

Andrea Lucchesi
USP

Luis Felipe Assis
POLI-UFRJ

F ÞǾǾÑŌP ĜÖÒŒÈÒ̆ŌŒÈÒŌ Ĭ ŒÒǾǾÒŌŊ

1

Urgent Need for Action

Shipping accounts for a significant portion of global GHG emissions [3%], making it a **critical sector** for decarbonization efforts.

2

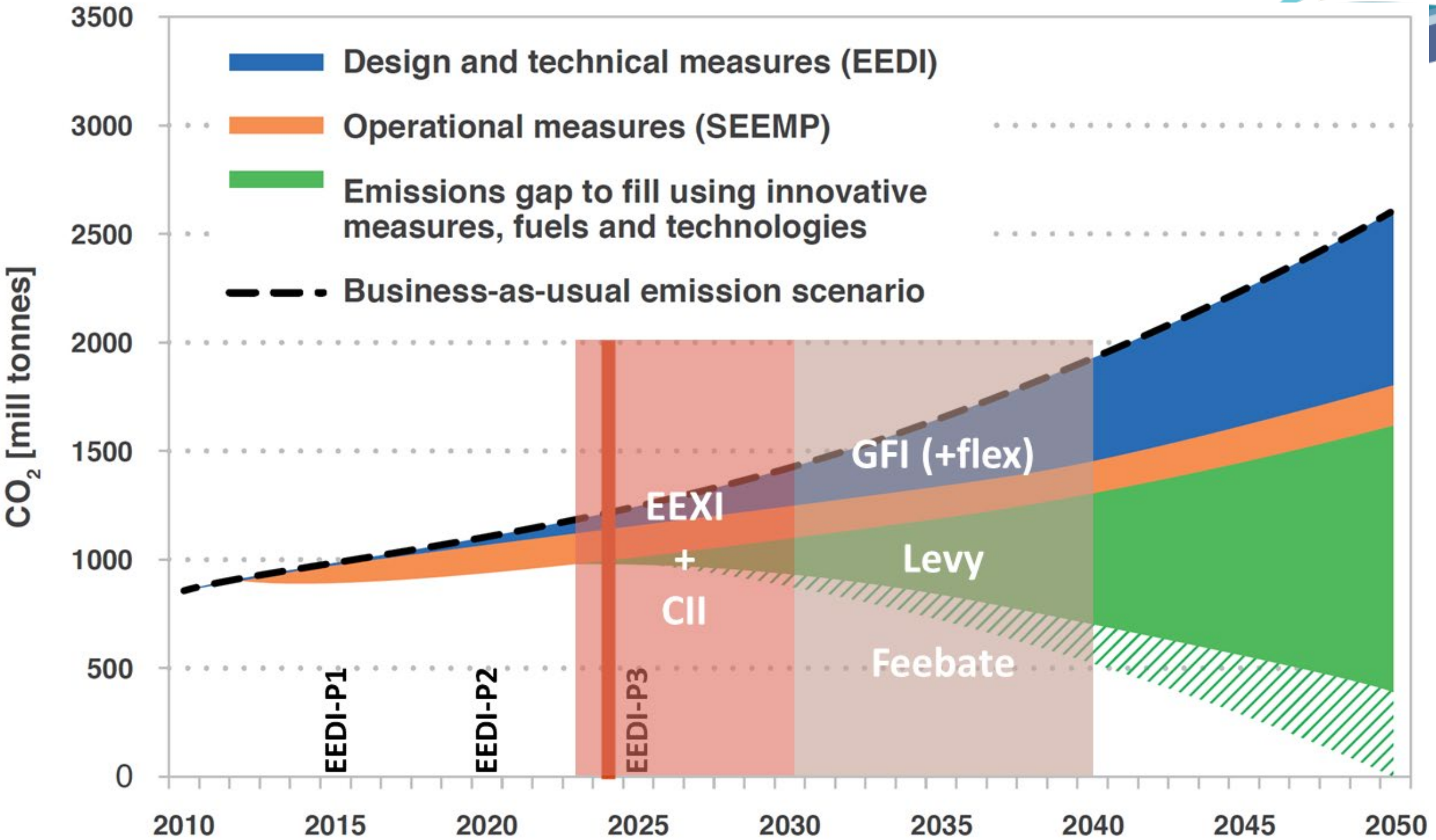
Regulatory Targets

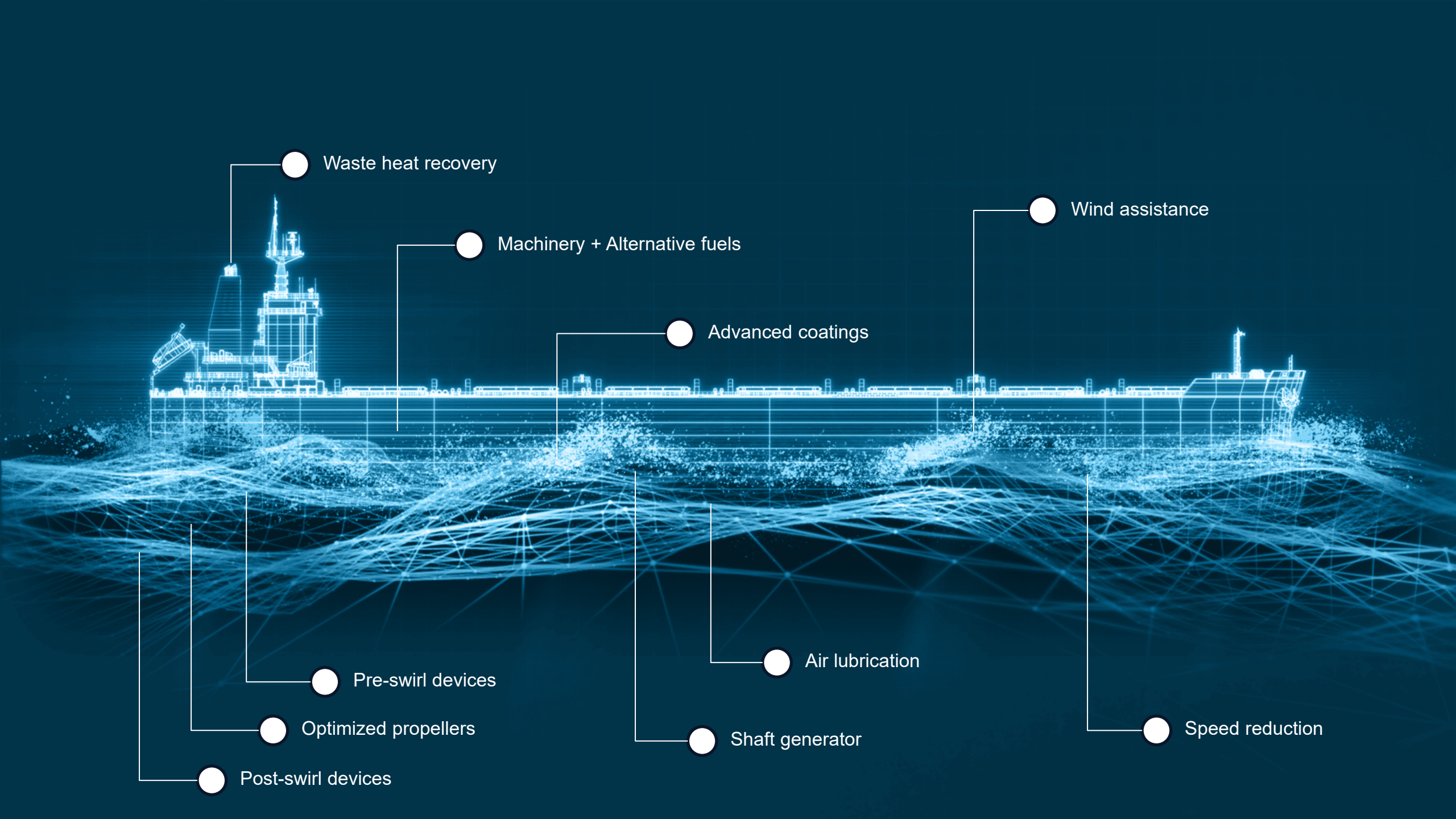
Governments and international organizations have set **ambitious targets** for emissions reductions in the shipping industry.

3

Technological Innovations

New **alternative fuels** and **energy-saving technologies** offer promising solutions to meet these emissions reduction goals.


Design and technical measures (EEDI)
Operational measures (SEEMP)
Emissions gap to fill using innovative measures, fuels and technologies
Business-as-usual emission scenario
CO_2 [mill tonnes]
3500
3000
2500
2000
1500
1000
500
0
2010
2015
2020
2025
2030
2035
2040
2045
2050
EEDI-P1
EEDI-P2
EEDI-P3
EEXI + CII
GFI (+flex)
Levy
Feebate


Waste heat recovery
Machinery + Alternative fuels
Advanced coatings
Wind assistance
Air lubrication
Pre-swirl devices
Optimized propellers
Post-swirl devices
Shaft generator
Speed reduction

Challenges in choosing the best options

Technical Challenges

Adapting new technologies to the unique requirements of the shipping industry poses **significant technical hurdles**.

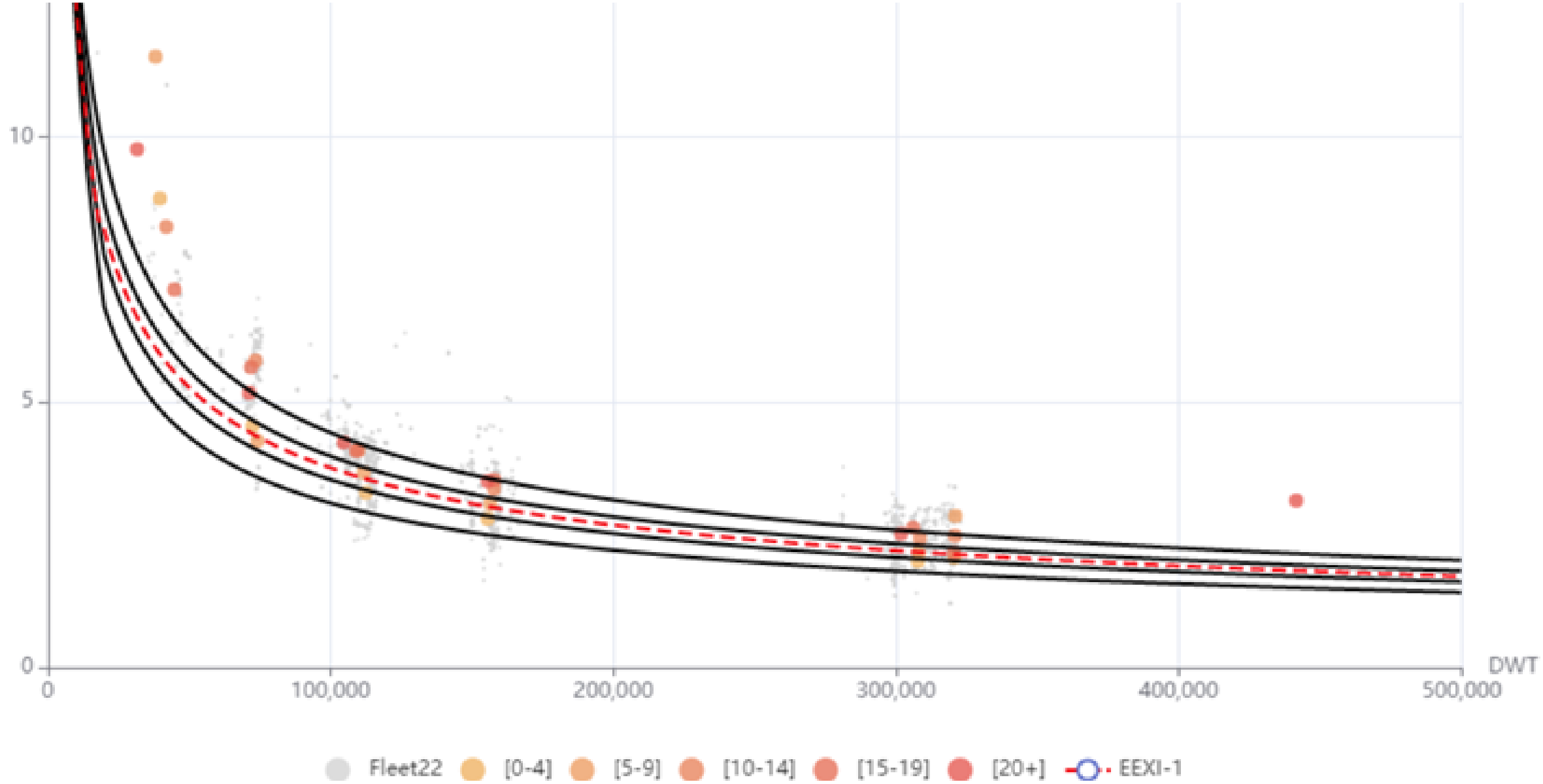
Economic Barriers

The **high costs** associated with transitioning to alternative fuels and technologies can be a major obstacle [CAPEX, OPEX, VOYEX].

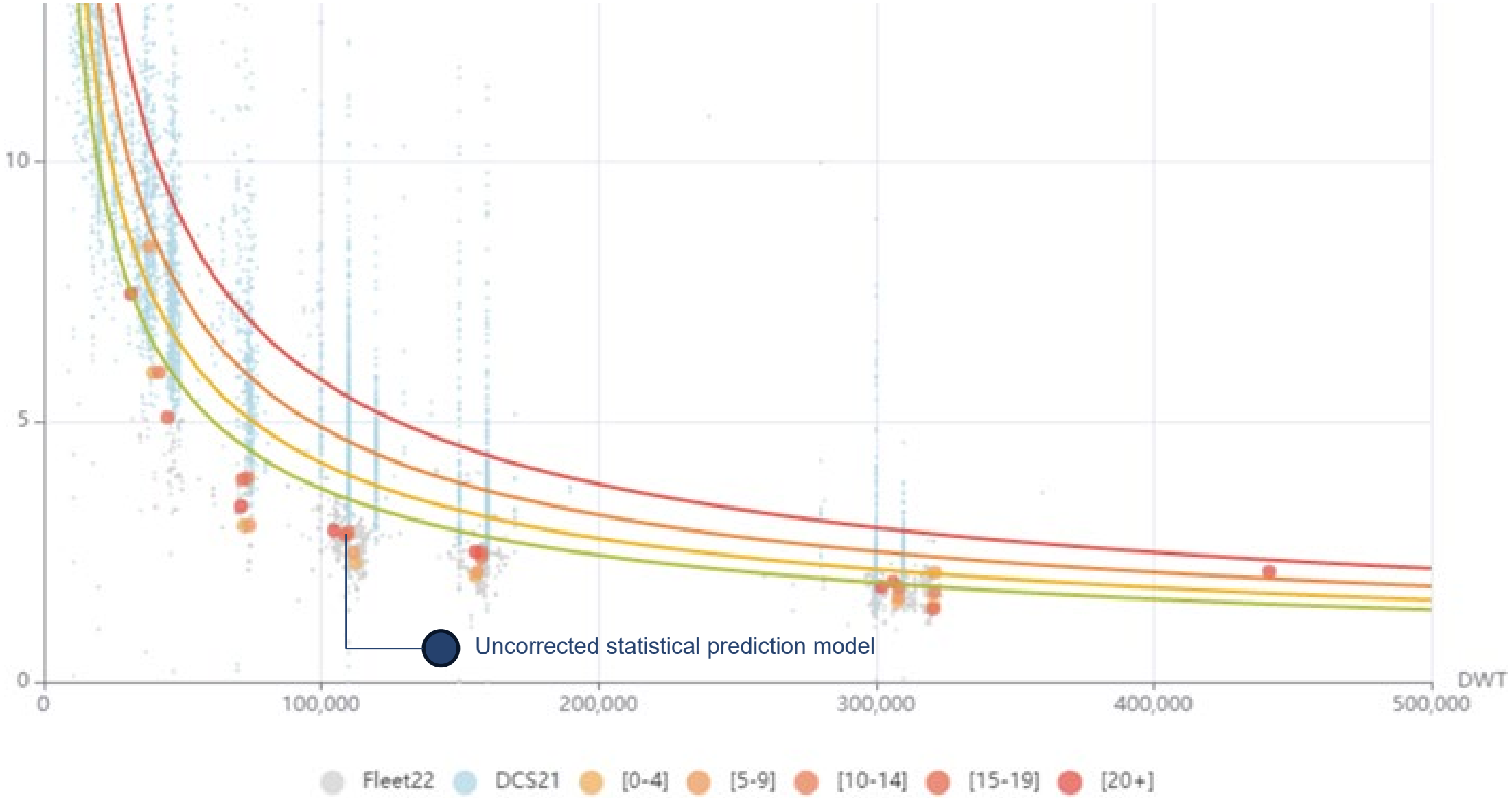
Regulatory Obstacles

Navigating the **complex web of international regulations** and policies adds complexity to the decarbonization process.

EEDI|EEXI – Oil tankers



CII 2022 – Oil tankers



Introducing technology pathway optimizer

Systematic Approach

To provide a structured framework to evaluate and **RANK** alternative fuels and technologies based on multiple criteria.

Informed Decisions

To help stakeholders make informed decisions by considering the **trade-offs between different factors**.

Adaptability

To be tailored to the **specific needs and constraints** of the shipping industry.

Criteria for Evaluation

Readiness Level

Assesses the **maturity and technical feasibility** of the alternative technologies.

Adoption Rate

Considers the likely rate of **adoption and availability** of the alternatives.

Cost-Effectiveness

Evaluates the economic viability and **return on investment** of the alternatives.

CAPEX, OPEX, VOYEX, GHGe WTT, GHGe TTW

The model

Criteria Definition

Readiness level, likely adoption rate, and cost-effectiveness are the key criteria used in the MCDA model.

1

2

Alternative Evaluation

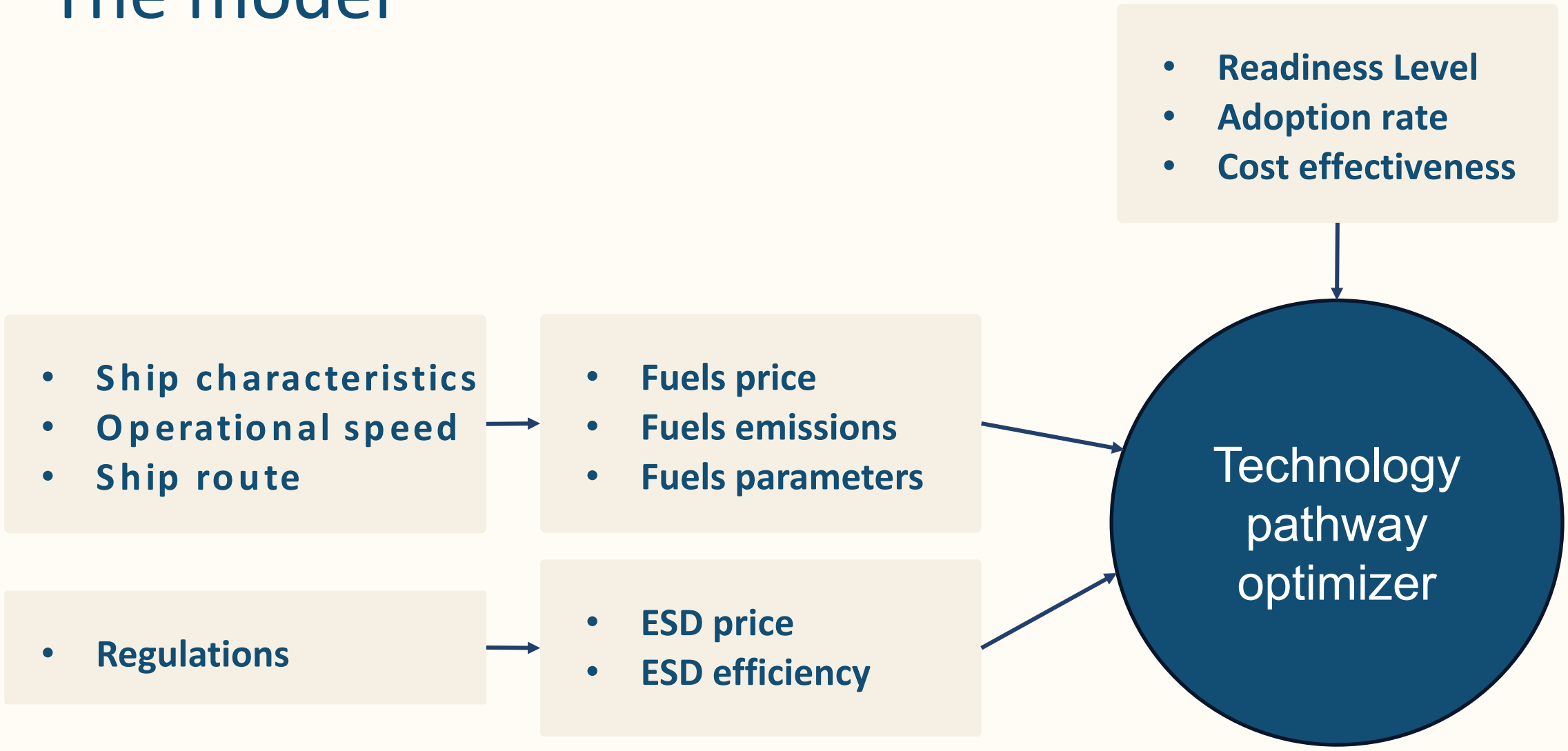
The model evaluates a range of alternative fuels, energy efficiency technologies, and operational strategies.

3

Ranking and Selection

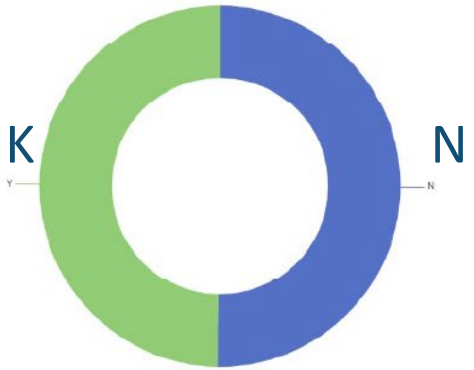
The MCDA method is used to rank the alternatives and identify the most promising solutions.

The model


• Readiness Level
• Adoption rate
• Cost effectiveness
• Ship characteristics
• Operational speed
• Ship route
• Fuels price
• Fuels emissions
• Fuels parameters
• Regulations
• ESD price
• ESD efficiency
Technology pathway optimizer

	SPEED									FUEL								
ShipSizeClass (mid life)	2018	2020	2022	2024	2026	2028	2030	2032	2034	2018	2020	2022	2024	2026	2028	2030	2032	2034
0: Bulk Carrier [0,9999]	OS20P	OS20P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
1: Bulk Carrier [10000,39999]	OS20P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	BIFAME	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
2: Bulk Carrier [40000,64999]	OS10P	OS10P	OS10P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
3: Bulk Carrier [65000,99999]	OS10P	OS10P	OS10P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
4: Bulk Carrier [100000,319999]	OS20P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	BIFAME	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
5: Bulk Carrier [320000,999999]	OS05P	OS20P	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	CHSFO	BIFAME	BIFAME	BISVO	CFLNG	CFLNG	CFLNG	BISVO	BISVO
0: Chemical Tanker [0,10000]	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
1: Chemical Tanker [10000,999999]	OS10P	OS10P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
0: Container Ship [0,2999]	OSBAU	OS20P	OSBAU	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	CHSFO	CFMDO	CHSFO	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
1: Container Ship [3000,5999]	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
2: Container Ship [6000,7999]	OSBAU	OSBAU	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
3: Container Ship [8000,11999]	OSBAU	OSBAU	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
4: Container Ship [12000,16999]	OS10P	OSBAU	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	CHSFO	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
5: Container Ship [17000,999999]	OSBAU	OS05P	OS20P	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	CHSFO	CFMDO	CHSFO	CHSFO	CHSFO	CHSFO	CHSFO	CHSFO	CHSFO
0: Crude Oil Tanker [0,49999]	OS10P	OS10P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
1: Crude Oil Tanker [55000,84999]	OS10P	OS10P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
2: Crude Oil Tanker [85000,124999]	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	CFLNG	BIFAME	BISVO	CFLNG	CFLNG	CFLNG	BISVO	BISVO
3: Crude Oil Tanker [125000,199999]	OS20P	OS10P	OS05P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
4: Crude Oil Tanker [200000,319999]	OS20P	OSBAU	OS10P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
5: Crude Oil Tanker [320000,999999]	OS10P	OS10P	OS10P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
0: General Cargo Ship [0,4999]	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	CFLNG	CFLNG	BISVO	BISVO
1: General Cargo Ship [5000,9999]	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
2: General Cargo Ship [10000,999999]	OS05P	OS05P	OS05P	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	OSBAU	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
0: LNG Tanker [0,99999]	OSBAU	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIDME	BIDME	BIFAME	BISVO	CFLNG	CFLNG	CFLNG	BISVO	BISVO
1: LNG Tanker [100000,149999]	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
2: LNG Tanker [150000,179999]	OS05P	OS10P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	BIDME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
3: LNG Tanker [180000,219999]	OS20P	OS20P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	BIFAME	CFMDO	CFMDO	CFMDO	CFMDO	CFMDO	CFMDO	BISVO	BISVO
4: LNG Tanker [220000,999999]	OS10P	OS10P	OS20P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	CFLNG	CFLNG	BISVO	BISVO
0: Oil Products Tanker [0,9999]	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	CFLNG	BIFAME	BIFAME	BISVO	BISVO	CFLNG	CFLNG	BISVO	BISVO
1: Oil Products Tanker [10000,24999]	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	OS20P	BIFAME	BIFAME	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
2: Oil Products Tanker [25000,39999]	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
3: Oil Products Tanker [40000,54999]	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	OS10P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
4: Oil Products Tanker [55000,84999]	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	CFLNG	CFLNG	BIFAME	BISVO	BISVO	BISVO	BISVO	BISVO	BISVO
5: Oil Products Tanker [85000,124999]	OS20P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	OS05P	BIFAME	CFLNG	BIFAME	BISVO	BISVO	CFLNG	CFLNG	BISVO	BISVO

(a) PIDPR

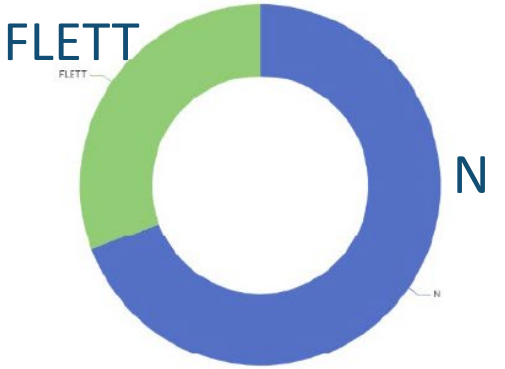


(b) PIDPO

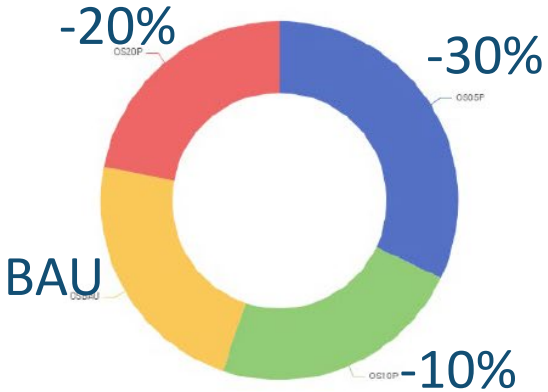
(c) PIDPH

(d) FRALB

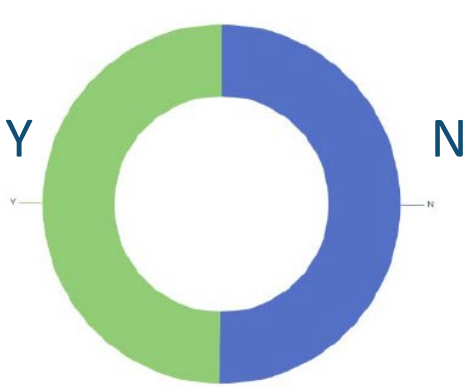
(e) POSGE



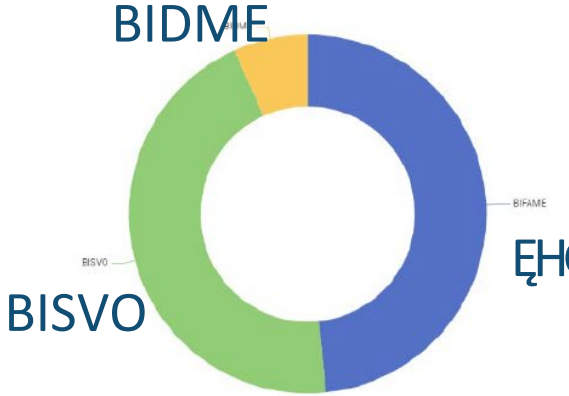
(f) ASSWI



(g) SPEED



(h) ACOAT



(i) FUEL

Top 10% best alternatives of a bulk carriers

[100000, 319999] DWT

Results and conclusions

Key Findings

The model identifies the **most promising alternative** fuels and technologies for different ship types, sizes, ages and scenarios.

Technological Synergies

The results shows the preferred **combinations of technologies** that can effectively reduce emissions in the shipping industry.

Higher flexibility

In front of the uncertainties adopting the **drop in fuel options with high energy density** in combination with existing ESD seems to be the best option.

Conclusion

The model provides a robust and systematic approach to evaluating and prioritizing alternative fuels and technologies for the shipping industry, paving the way for a more sustainable and emissions-free future.

Q&A

OCIMF

Lunch Break – 1.0 hour

Ton Mol, Barge Adviser

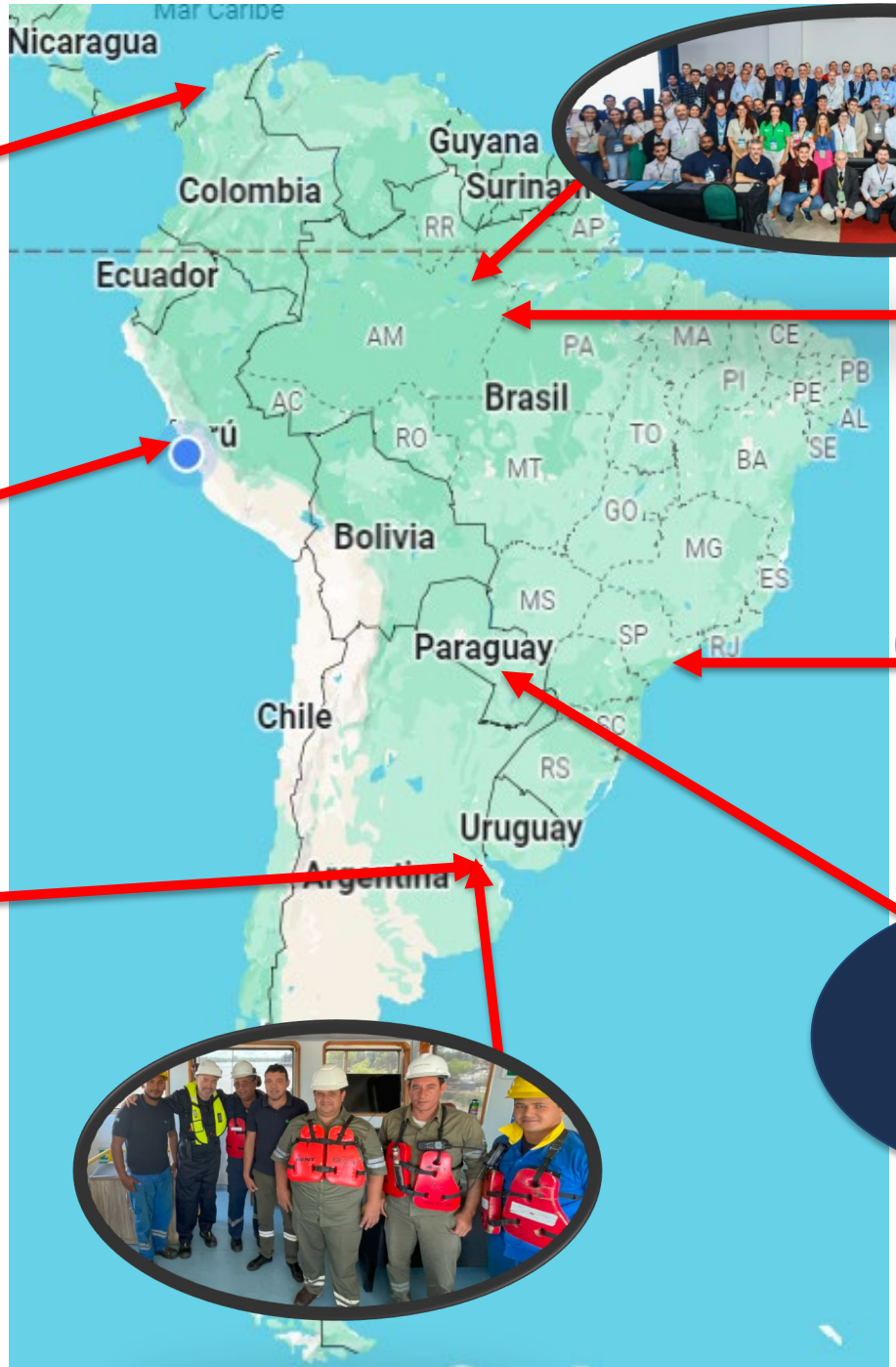
Barging Updates

OCIMF

Publications and advocacy

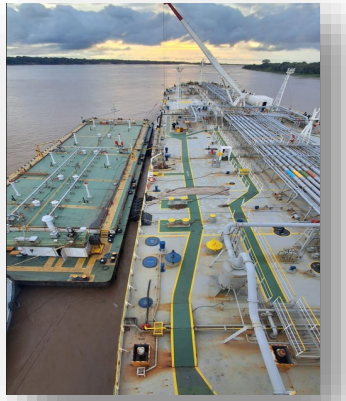
Barging – Committee/expert group structure

Engagement in SCA



October ’24 – Barging Operators Event

OCIMF Barging Strategy 2024-2028



Milestones: **Q1-2025**
Implement - BIQ & BPQ for N/A & SCA.

Milestones: **Q3/Q4-2025**
Complete Global Barge Guide

2024/25: Advocacy of Barging issues across regions as part of the Work schedule and engage with authorities/members

Q2/Q3 2025 – Q2 2026:
Gap assessment of regional needs for China & SE Asia (covering India, Malaysia & Indonesia)

Vision & Ambition: Global Barge Guide & BIRE 2.0 (post launch of SIRE 2.0)

Actions

2024 | 2025 | 2026 | 2027 | 2028

Timeline

P&A

Advocacy

Programmes

NA – North America

SCA – South & Central America

China & SE Asia – Malaysia, Indonesia, India and Singapore

Key Risks identified in SCA region

Programmes & Inspections

- BIRE - BIQ updates – ongoing
- Inspector training and courses

Security, Collisions & Grounding

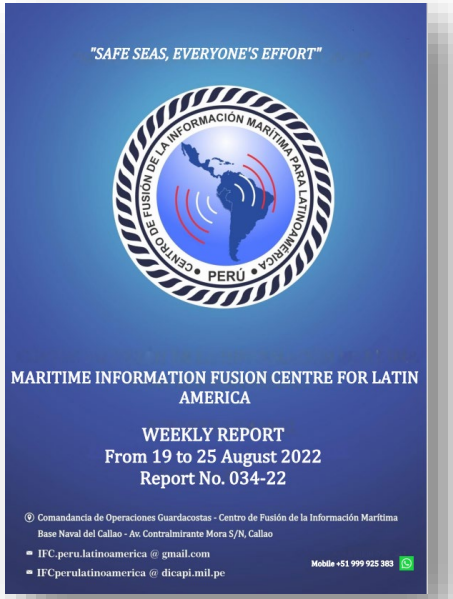
- Raising awareness with Operators
- Events attended – SLOM, Barge Operators Meetings
- Engaged with the MSC for regional support – visited IFC

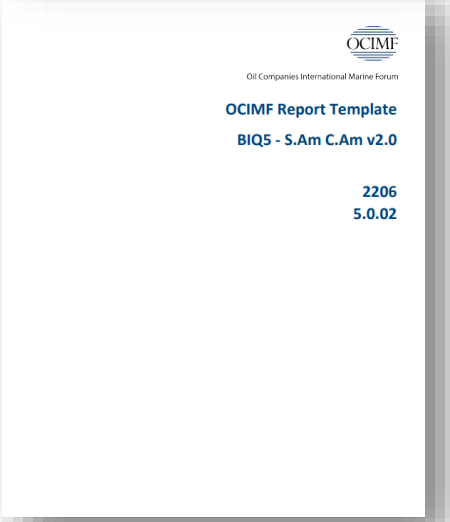
Loading & Discharging

- IP on Open Loading released

Best Practices

- ISGINTT 2 – Translations
- Global Barge Guide





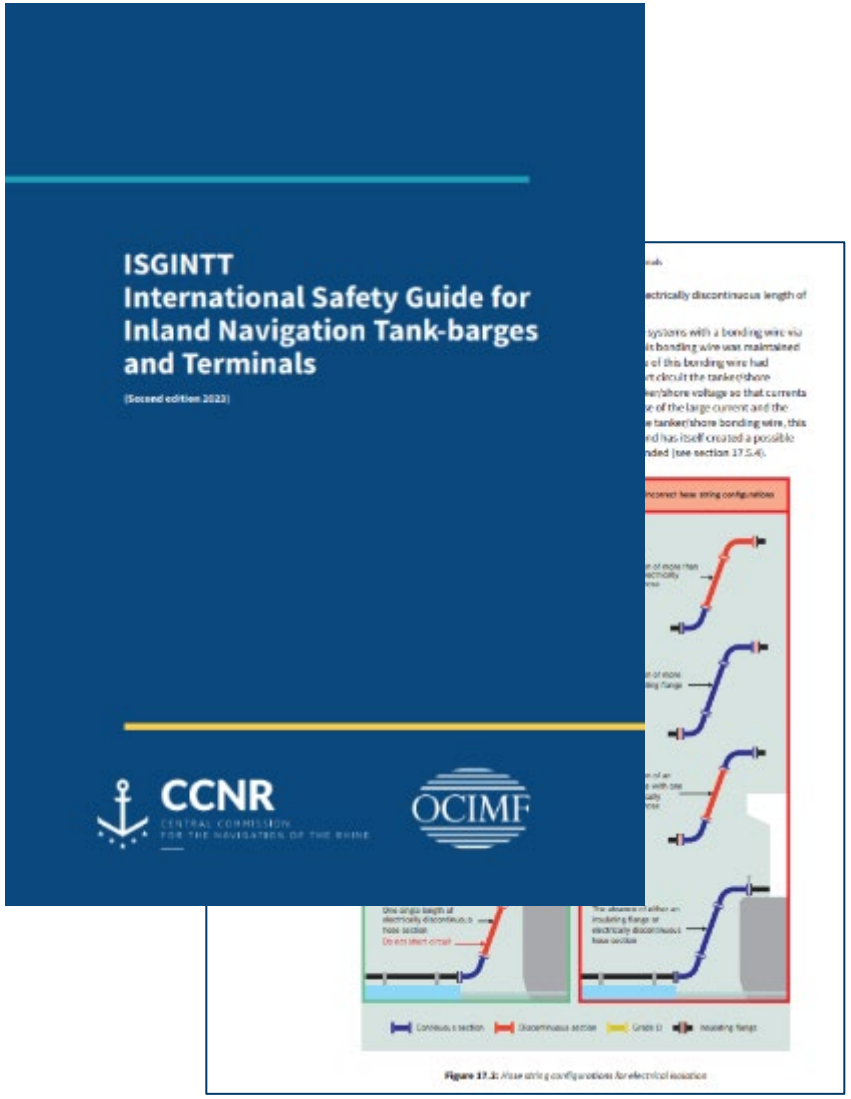
Recent Publications

Converting inland tank barges

This paper gives guidance to regional barge companies in South and Central America on how to build or convert their inland barges for cargo operations under closed conditions, to improve safety and conform to international standards

ISGINTT 2023

The purpose of ISGINTT is to improve the safe transport of dangerous goods at the interface between inland tank barges and other vessels or shore facilities (terminals).



Erik Frank, Raizen

Ton Mol

Security Overview- South & Central America

OCIMF

Security Adviser

Russell Pegg

Security Adviser

Russell graduated from Britannia Royal Navy College in 1979 and served in a variety of sea going appointments before qualifying as a Warfare Officer in 1989 followed by staff training in South Africa & assignments in Washington DC and the UK Ministry of Defence.

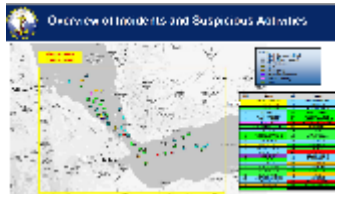
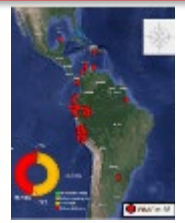
In 1999, he was appointed Head of Policy at the Directorate of Overseas Military Activity which led to international appointments at NATO and in January 2008 a move to Naples where he served as the Head of Operations at NATO's Maritime Command responsible for the Article V Operation, ACTIVE ENDEAVOUR.

Developing the policy to create a UK National Maritime Information Centre to enhance maritime development, safety, security and resilience, he was appointed as the inaugural Director in 2010, a post he continued to hold after leaving the Royal Navy. Russell joined the Secretariat in May 2014 and is responsible for threat and risk advice to the membership and management of the Maritime Security Committee.
He was awarded the NATO Meritorious Medal and made an Officer of the British Empire for services to maritime security in 2008. He is a Fellow of the Chartered Management Institute and Associate Fellow of the Nautical Institute.

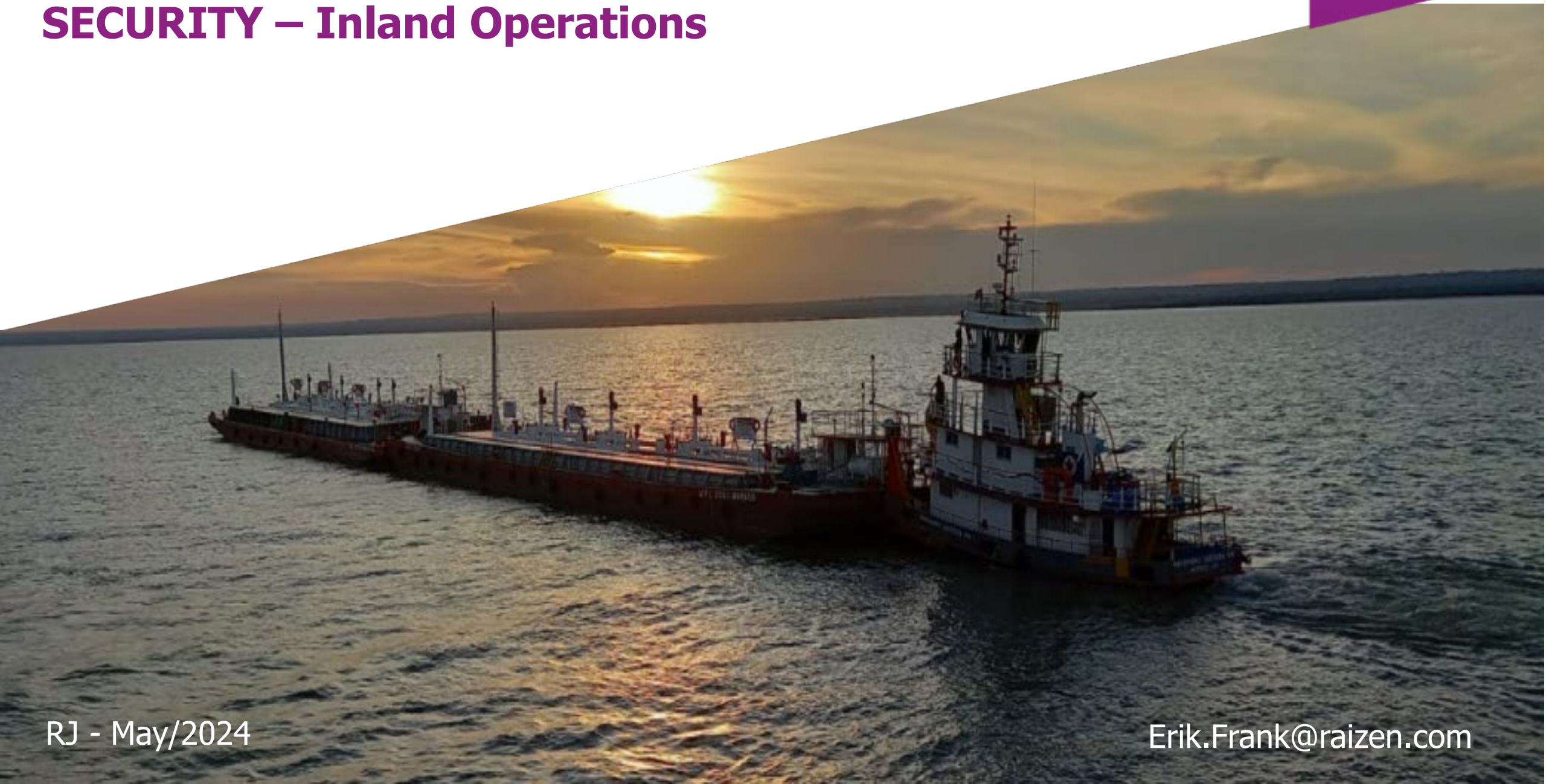
Publications and advocacy

Maritime Security Committee

Current maritime threats

THREAT DESCRIPTIONS	
 **RED SEA & MIDDLE EAST**	• Boardings, loitering Munitions - Arabian Gulf • UAV, UUV, loitering Munitions, missiles – SRS/GOA • Piracy - Indian Ocean • Cyber
 **GULF OF GUINEA**	• Piracy • Kidnapping and ransom
 **SOUTHEAST ASIA**	• Piracy • Armed robbery • Terrorism
 **LATIN AMERICA**	• Piracy • Maritime crime

SECURITY – Inland Operations

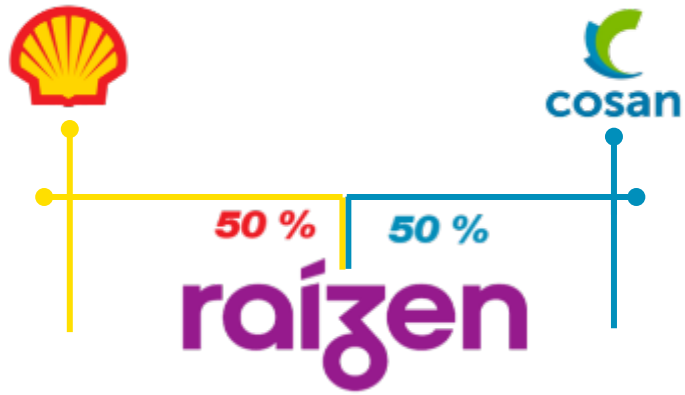


RJ - May/2024

Erik.Frank@raizen.com

About Raízen

Raízen, a company 100% owned by Shell and Cosan, whose core business is the physical supply of fuels, is firmly established in Brazil as the market leader in distribution. It operates in a large and integrated supply chain that includes, in addition to distribution, the import, sale, and physical supply of fuels.



As a global reference in bioenergy, we are leading the way in the energy transition and redefining the future of energy.

WE ARE A GIANT. WE ARE GLOBAL!

Brazil
+ Argentina
+ Paraguay
+ Colombia
+ USA
+ Singapore
+ Philippines
+ Switzerland
+ UK

Numbers from the 2022-2023 crop year

35 BIOENERGY PARKS

70+ DISTRIBUTION BASES

68+ AIRPORT FUELING STATIONS

8,000 + FUEL STATIONS

5 OFFICES

1,800+ SHELL SELECT CONVENIENCE STORES AND OXXO PROXIMITY MARKETS

19 PORTS BASES

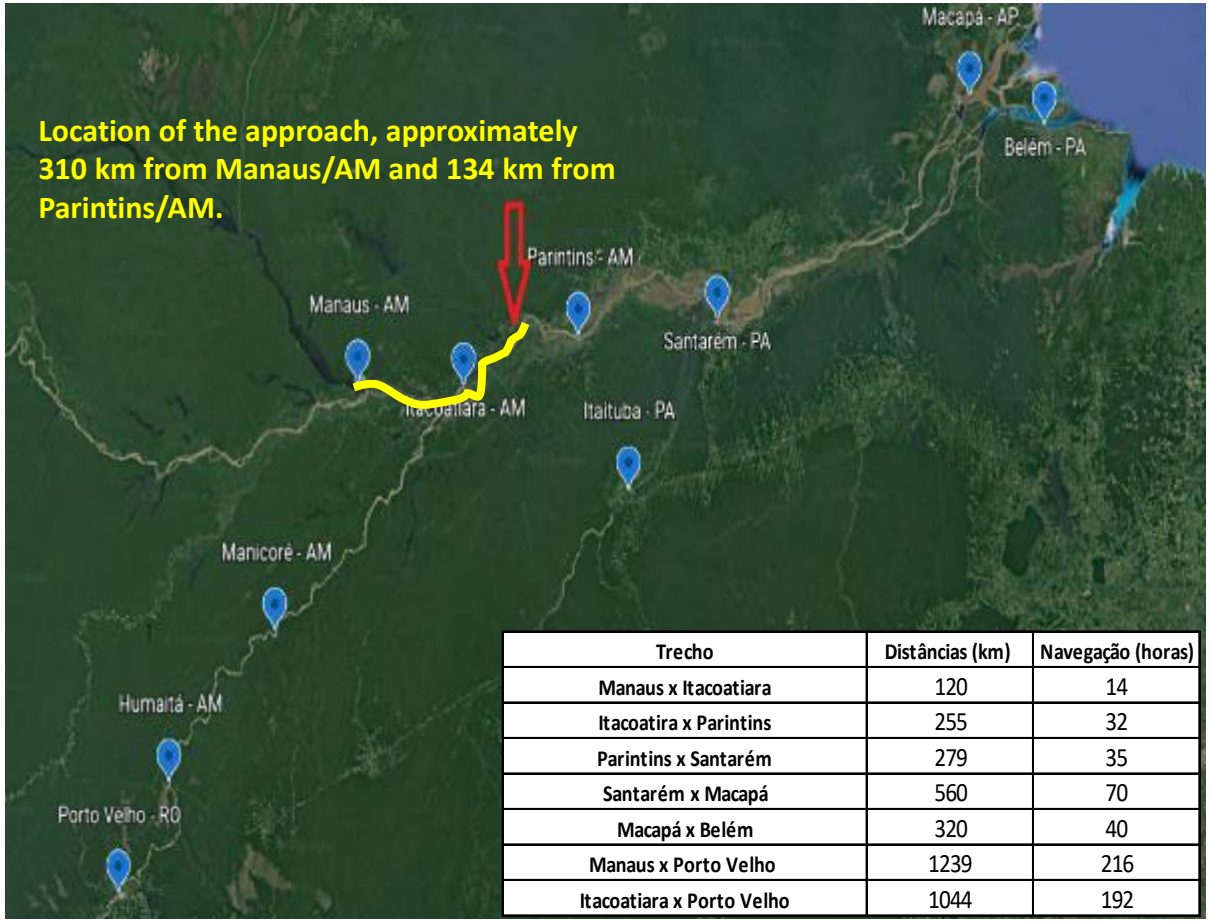
2 LUBRICANT PLANTS

INTEGRATED ECOSYSTEM

History

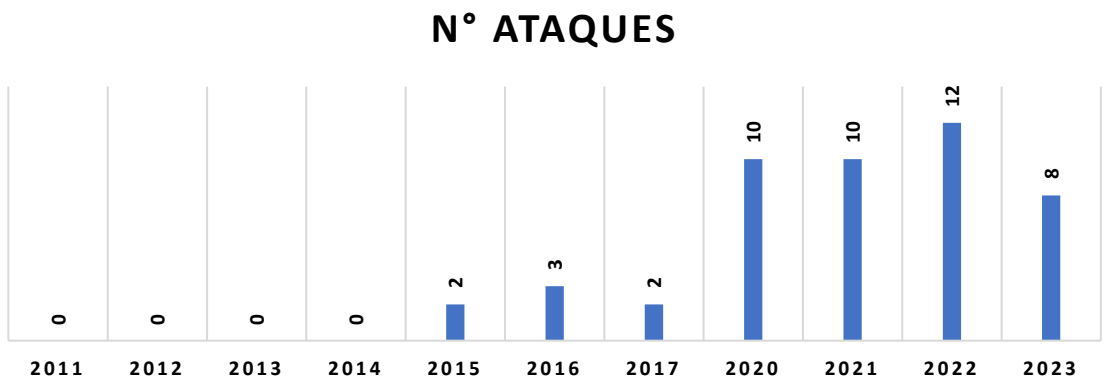
There has been a significant increase in navigation on the rivers of the Northern Region for the transportation of raw materials and finished products, fostering the movement of cargo on barges between the states of Pará, Rondônia, and Amazonas. In Amazonas alone, there is a concentration of 61 ports, and the main routes pass through the Amazon-Solimões, Negro, Tocantins, and Madeira rivers. Consequently, there has also been an increase in cargo theft cases in the region.

Hot Areas



Trecho	Distâncias (km)	Navegação (horas)
Manaus x Itacoatiara	120	14
Itacoatira x Parintins	255	32
Parintins x Santarém	279	35
Santarém x Macapá	560	70
Macapá x Belém	320	40
Manaus x Porto Velho	1239	216
Itacoatiara x Porto Velho	1044	192

✓ **The distance traveled from Porto Velho to Belém is 1,800 km.**



Localidade	Quantidade de Eventos	Tipo de Produto
Itacoatiara - Am	7	Diesel
Porto Veho - RO	12	Gasolina
Macapá - AP	3	Gasolina
Belém - PA	2	Gasolina
Manicoré - AM	4	Gasolina e Diesel
Manaus - AM	11	Gasolina e Diesel
Santarém - PA	5	Gasolina e Diesel
Parintins - AM	3	Gasolina e Diesel
Total	47	

✓ **Between 2011 and 2023, a total of 47 attacks were recorded.**

Note: source from the "Pirate Attack Report" issued by SINDARMA and information from local transporters.

Attacks in recent years - Dynamics and Consequences

- ✓ **Dynamic of the attacks:** Heavily armed groups, sometimes characterized by military attire, use small fast boats for approach (speedboats and launches) and medium-sized support vessels (barges) for the transshipment of the product.

- ✓ **Transhipment Method:** In the initial cases, theft was done using drums in smaller volumes. Nowadays, they dock a small barge or regional vessel alongside the loaded barge, start pumping with motor pumps with a maximum flow rate of 50m³/hour, stealing around 600,000 liters. There were cases of complete theft of the barge, and during the journey, they continue monitoring the vessels crossing the waterway**.**

- ✓ **Average Operation Time:** The entire approach takes on average of 24 hours for large volumes (160m³), with cases that have taken almost a week.

- ✓ **Behavioral Issue:** They use a lot of aggression, torturing, threatening with death, and/or physically assaulting the crew, as well as keeping the entire crew and vessel hostage during the attack.

- ✓ **Probable Destination:** Sale to illegal gold mining, supplying communities, sale to land grabbers in support of deforestation.

Note: All information was generated through case histories that occurred in the regions.

Influence on the Market

Meetings with the Legal Fuel Institute (Instituto Combustível Legal - ICL) and the Brazilian Institute of Petroleum and Gas (Instituto Brasileiro de Petróleo e Gás - IBP)

Based on the companies' experience and international procedures, the **MANUAL OF BEST PRACTICES FOR THE PROTECTION OF FUEL TRANSPORTATION RIVER CONVOYS** was developed.

- General Actions and Fundamental Requirements
- Risk Assessment
- Recommendations to prevent criminals on board
- Evaluation and implementation of Closed-Circuit Television - CCTV
- Evaluation and implementation of a second line of defense on vessels
- Organic Surveillance
- Navigation in Risk Areas
- Recommendation of actions to be taken with criminals on board
- Management and Onboard Facilities

Implementation Timeline of the Manual

Main actions taken

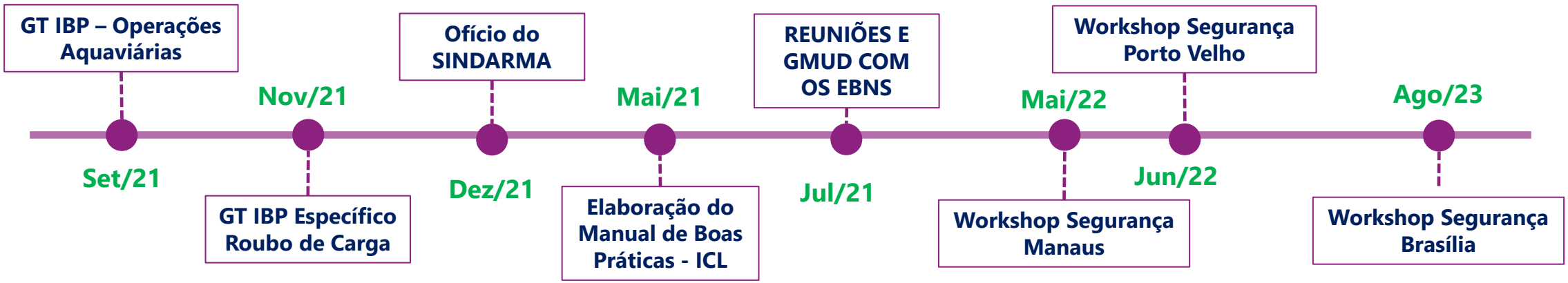
Establishment of a Working Group at IBP.

Support to ICL for the development of the Best Practices Manual.

Implementation of the Protocol.

Interface with Public Security Agencies and conducting Workshops.

Embedded technology + quick response.



Events in the industry – After Best Practices Manual

After the dissemination of the best practices manual and adoption of the protocol, there was a significant reduction in events.

SEM ESCOLTA

Mês	EBN	Volume Roubado (litros)	Rota	Distribuidora	Proximidade
jan/22	Socorro Carvalho	480.000	Manaus x Porto Velho	VIBRA	Nova Olinda - AM
fev/22	NaveAmazonia	520.000	Manaus x Porto Velho	ATEM	Borba - AM
mai/22	ED Lopes	450.000	Manaus x Porto Velho	VIBRA	Borba - AM
mai/22	CNA**	0	Manaus x Porto Velho	RAÍZEN	Itacoatiara-AM
jun/22	Rio Negro	150.000	Belém x Macapá	VIBRA	Breves-PA
ago/22	Navecunha	100.000	Manaus x Porto Velho	VIBRA	Porto Velho-RO
ago/22	Trevo	500.000	Manaus x Macapá	IPIRANGA	Borba - AM
out/23	Bertolini	15.000	Porto Velho x Santarém	-	Humaitá-AM
nov/23	AmazonGás	10.000	Coari x Santarém	Amazonas Gás	Manacapuru-AM
nov/23	Fogás	15.000	Coari x Santarém	Amazonas Gás	Manacapuru-AM
nov/23	Passarão	18.000	Manaus x Porto Velho	-	Porto Velho - RO
		2.258.000			

COM ESCOLTA

Mês	EBN	Volume Roubado (litros)	Rota	Distribuidora	Proximidade
mai/22	Transdourada*	0	Manaus x Macapá	VIBRA	Itacoatiara-AM
jul/22	Navecunha	0	Manaus x Iquitos (PER)	PERUPETRO	Tefé-AM
jul/22	NaveAmazonia	0	Manaus x Porto Velho	ATEM	Itacoatiara-AM
set/22	Oziel	0	Manaus x Porto Velho	VIBRA	Manaus - AM
nov/22	ED Lopes	0	Manaus x Porto Velho	VIBRA	Itacoatiara-AM
jan/23	Rio Negro	0	Manaus x Iquitos (PER)	PERUPETRO	Tefé-AM
fev/23	ED Lopes	0	Manaus x Iquitos (PER)	PERUPETRO	Tefé-AM
mar/23	Trevo	120.000	Manaus x Iquitos (PER)	PERUPETRO	Tefé-AM
dez/23	Navecunha	100.000	Manaus x Porto Velho	Ipiranga	Porto Velho - RO
		220.000			

Obs: The profile of the attacks has changed, and since February 2023, attacks on general cargo convoys have become more frequent

NO ATTACKS REPORTED in 2024

Events in the industry - Pos MBP

The ongoing monitoring with public safety entities and agencies has been a standard procedure.

ICL + IBP

Inland Safety Workshop

- Workshop Manaus (May/22)
  Workshop Porto Velho (Jun/22)
- Event Brasília (Aug/23)
- Event Manaus (Mar/24)

- Monthly meetings with other Distributors

IBP, ICL, Raízen, Transpetro, Ipiranga, and Vibra

- Inland Operations Working Group

- ATAC ICL Program

Outros

Meeting with Shipowners' Union

- Sindarma - Amazonas
- Sindarpa – Pará

- **Training for Government Agencies (ongoing)**

- Safety Working Group on Waterways in Belém, Porto Velho

- Brazilian Navy Safety Committee
  Bi-monthly meetings

Influence with Public Autorities

The Arpão River Base was launched in January 2024 to combat drug trafficking, fuel theft, and piracy on the rivers of the Amazon.
It total, there are 4 bases: Tiradentes – Solimões River, Paulo Pinto Nery – Madeira River, Arpão I – Coari / Solimões River and Arpão II – Barcelos (Rio Branco).

Next Steps and Challenges

1. Amazonian Summer and Navigation Restrictions (Aug / Nov);

2. Communication Monitoring;

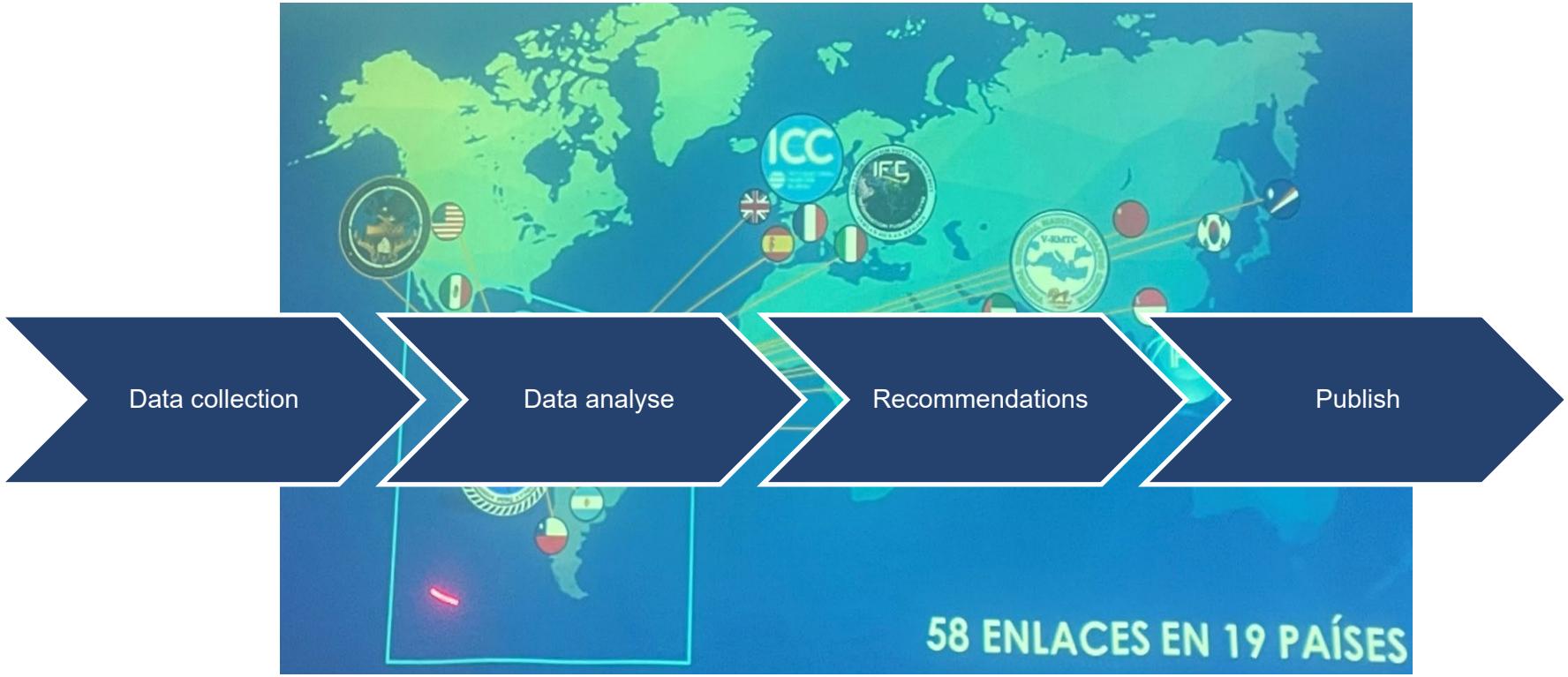
3. Maritime Professional Education - Maritime Professional Education Program (PREPOM);

4. Security Workshop (August);

5. Engagement with IFC – Information Fusion Center – Peru

IFC – Information Fusion Centre Peru for Latin America

- **Founded on August 1, 2019, by the National Maritime Authority of Peru**
- **Provide timely and accurate information to all members for the purpose of safeguarding human life at sea, in rivers or lakes, the repression of illegal activities, the protection of the aquatic environment at the national and international levels.**
- **Monitoring and reporting incidents that occur in the aquatic environment, for which it maintains constant communication with the countries of the Operational Network for Regional Cooperation of Maritime Authorities of the Americas (ROCRAM),**



"MARES SEGUROS Y PROTEGIDOS, ESFUERZO DE TODOS"

CENTRO DE FUSIÓN DE LA INFORMACIÓN MARÍTIMA PERÚ PARA LATINOAMÉRICA

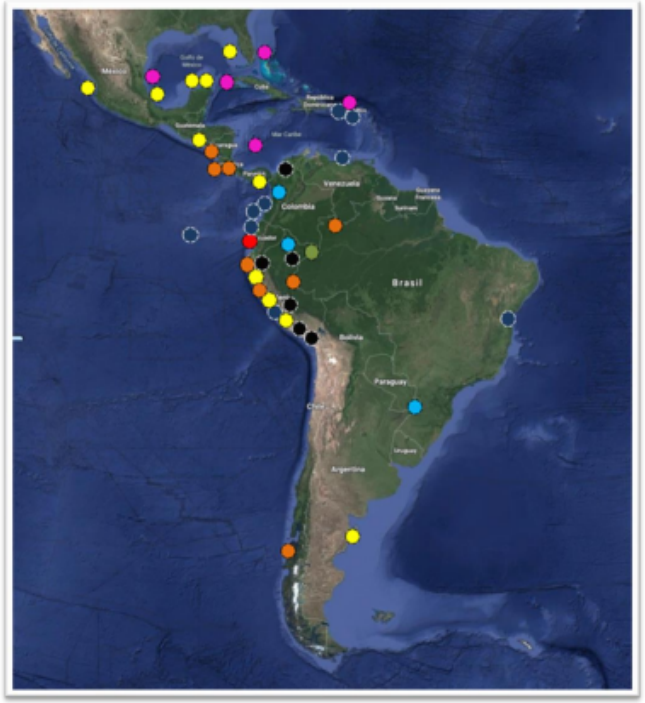
REPORTE SEMANAL
Del 3 al 9 de Mayo del 2024
Reporte Nº 019-24

Comandancia de Operaciones Guardacostas - Centro de Fusión de la Información Marítima
Base Naval del Callao - Av. Contralmirante Mora S/N, Callao

IFC.peru.latinoamerica @ gmail.com
IFCperulatinoamerica @ dicapi.mil.pe

Móvil +51 913862174
Centro de Fusión de la Información Marítima para Latinoamérica
IFC_PERU

Resumen Semanal de Incidentes en el Área de Interés del IFC – Perú para Latinoamérica



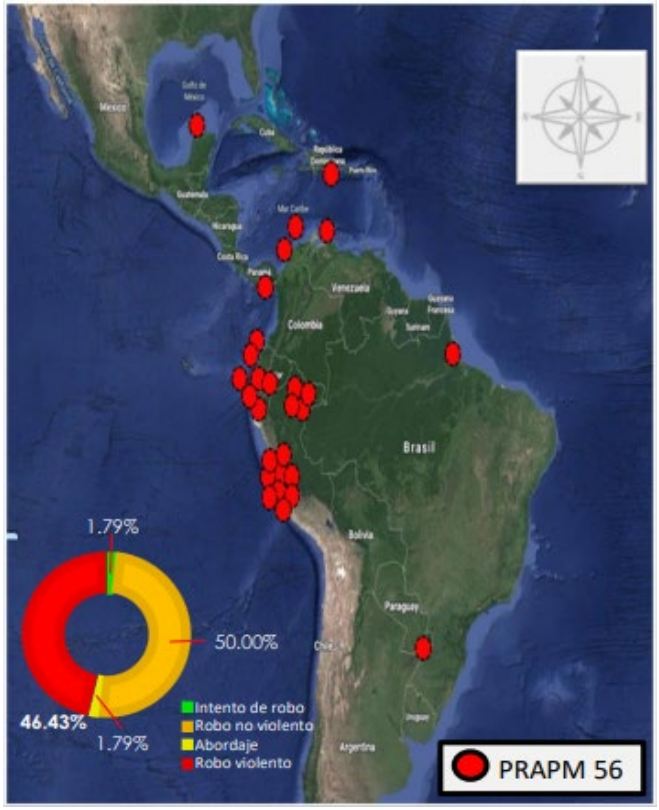
Período del 3 al 9 de mayo del 2024, los incidentes reportados dentro del área de interés del IFC - Perú para Latinoamérica son los siguientes:

Categoría	N° de incidentes
Pillaje, Robo a Mano Armada y Piratería en el Mar (PRAPM)	1
Terrorismo Marítimo (TM)	0
Narcotráfico (N)	9
Incidentes Marítimos (IM)	11
Pesca Ilegal, no Declarada y no Reglamentada (INDNR)	8
Contrabando y Tráfico Ilegal (C&TI)	3
Migración Irregular y Trata de Personas (MITP)	5
Protección Ambiental (PA)	1
Ciberseguridad (CS)	0
Otros	6

Pillage, Armed Robbery and Piracy - 56 cases

Drug Trafficking 531 cases

Illegal, Unreported and Unregulated Fishing 199 cases



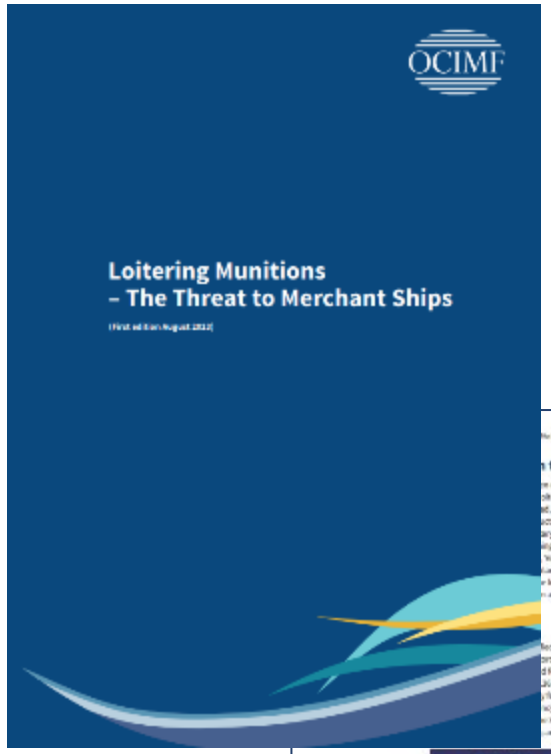
Maritime Incidents 838 cases

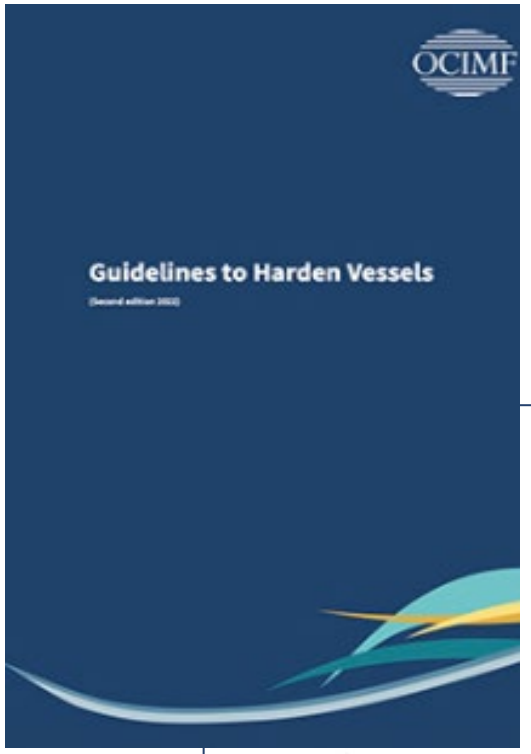
Smuggling and Illicit Trafficking 204 cases

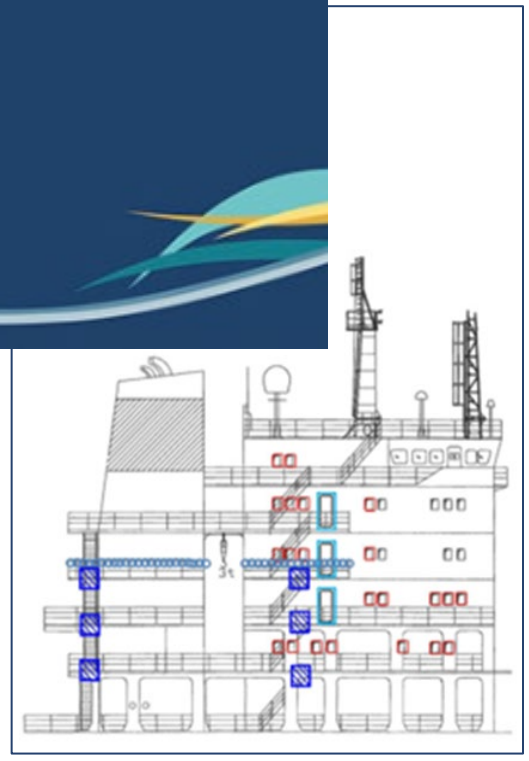
Irregular Migration & People Trafficking 255 cases

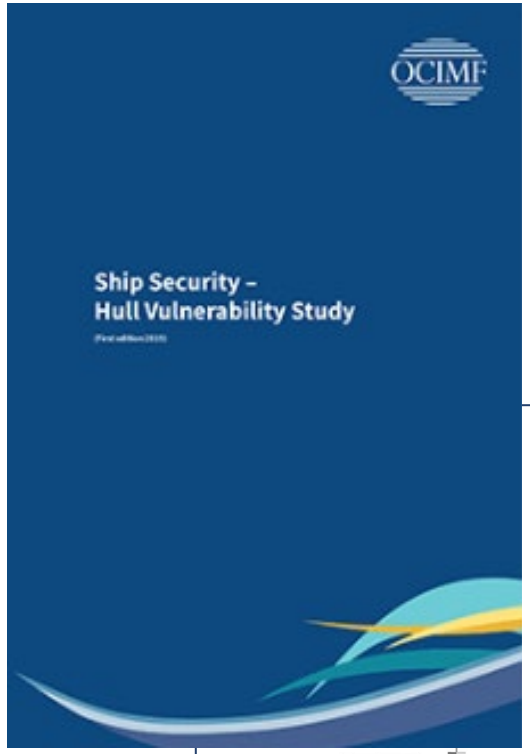
Security Publications Updates

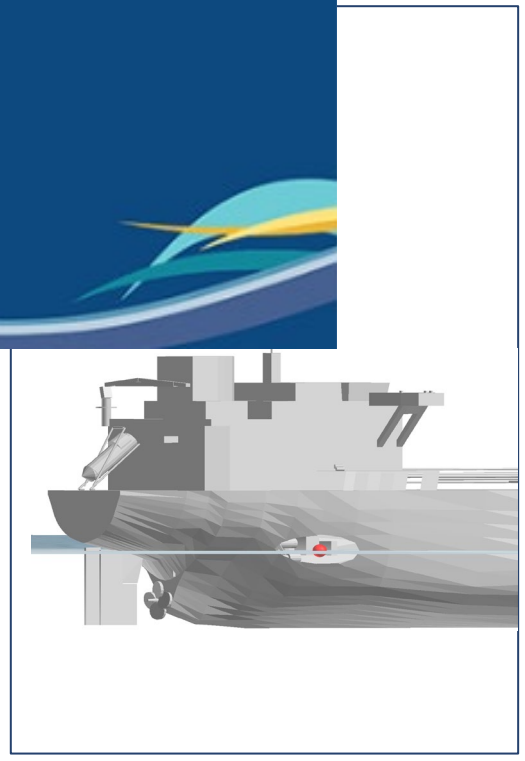
Recent publications and guidance











BMP Update

An updated version of BMP will be produced in 2024. This version will be updated to include current threats in the Middle East as well as the Black sea.

Cyber security

OCIMF will be working with industry stakeholders to update the Guidelines on Cyber Security Onboard Ships in 2024. This version will be updated to include current threats as well as new technologies.

Programmes Overview

Programmes


Executive Committee
Secretariat
Risk advisory function
Managing Director
Principal Committees
Publications and Advocacy Tankers, Barges, Terminal interfaces
Expert Groups
Nautical
Engineering
Structures
Ship-to-Ship interfaces
Ship-to-Shore interfaces
Barges
Publications and Advocacy Offshore
Expert Groups
Floating Systems
Offshore Vessel Operations
Programmes Committee
Expert Groups
Inspection Processes
Programmes Governance
Innovation and Technology
Functional Committees
Legal
Human Factors
Environment
Maritime Security

Programmes Overview

Inspections Programmes

- Ship Inspection Report (SIRE)
- Barges Inspection Report (BIRE)
- Offshore Vessel Inspection Database (OVID)
- Marine Terminal Information System (MTIS)

Management Self Assessments

- Tanker Management Self-Assessment (TMSA)
- Offshore Vessel Management Self-Assessment (OVMSA)
- Marine Terminal Management Self-Assessment (MTMSA)
- Ship to Ship Service Provider Self-Assessment (STSSPMSA)

Programmes focus area 2024

- Project delivery of SIRE 2.0
- Review of Offshore Vessel Inspection Questionnaire 3 (OVIQ3)
- Review of Barge Inspection Questionnaire (BIQ)
- Strengthening of Management Self Assessments (MSA's)

Filipe Santana, Engineering Adviser

Offshore

OCIMF

Offshore Adviser

Graham Coles

Offshore Adviser

Graham began his career at sea, sailing as a cadet with an offshore operator and progressively sailed on various types of offshore support vessels that included Platform Supply Vessels, Anchor Handling Tug supply vessels, Dynamic Positioning Dive Support Vessels and DP construction vessels for a period of nearly 12 years.

In 2007, Graham moved ashore and began working as a Marine Superintendent for an offshore vessel operator. Over the next four years, he progressed to the role of Operations Manager and was responsible for supporting a fleet of 27 offshore vessels. Between 2011 and 2016, Graham worked for Exxon Mobil (IMT) and BG Group in several upstream marine assurance positions.

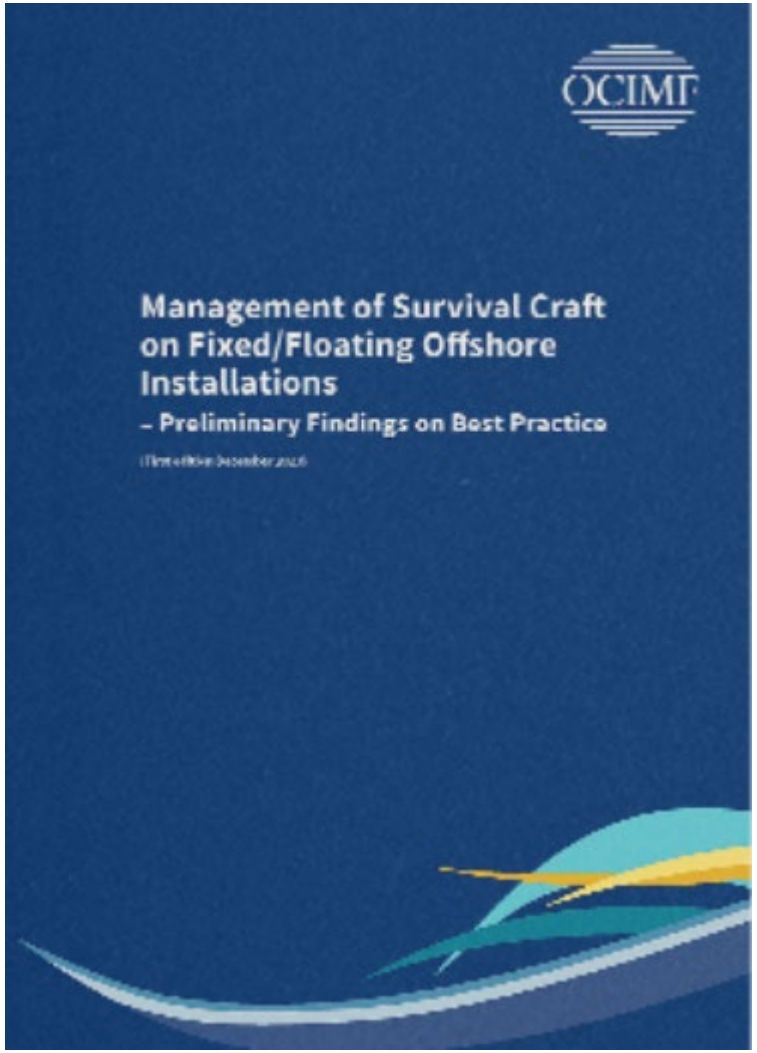
In 2016, he joined Chevron as a Marine Advisor as part of the 'Future Growth Project – Wellhead Pressure Management Project', (FGP-WPMP). After three years supporting this project, Graham moved to Bangkok to take over the role of Marine Safety, Reliability and Efficiency (MSRE) Process Authority for Asia South Business Unit. This role was responsible for leading and implementing upstream marine assurance activities across the region.

Graham has previously participated in OCIMF activities at OVID Focus Group (OFG), Offshore Marine Operations Group (OMOG), and he has also acted as OCIMF DP Representative to the Nautical Institute, Dynamic Positioning Training Executive Group (DPTEG).

Publications and advocacy

Offshore Committee and Floating Systems/Offshore Vessels Ops Expert Groups

Management of Survival Craft on Fixed/Floating Offshore Installations

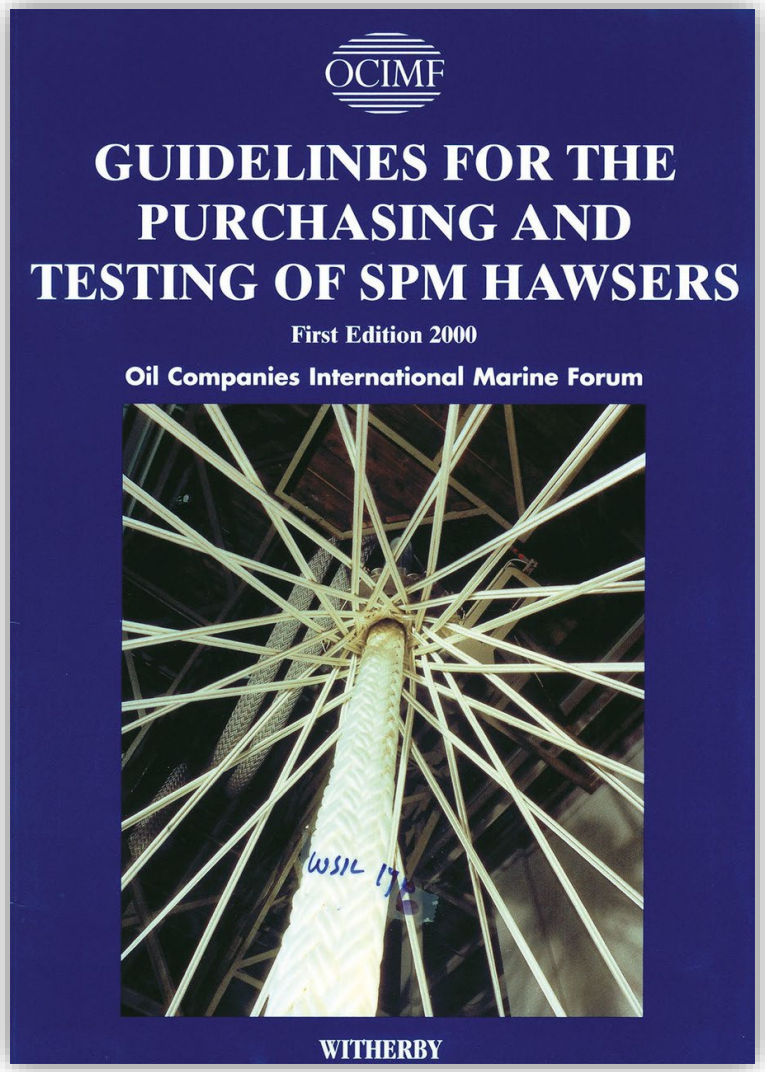


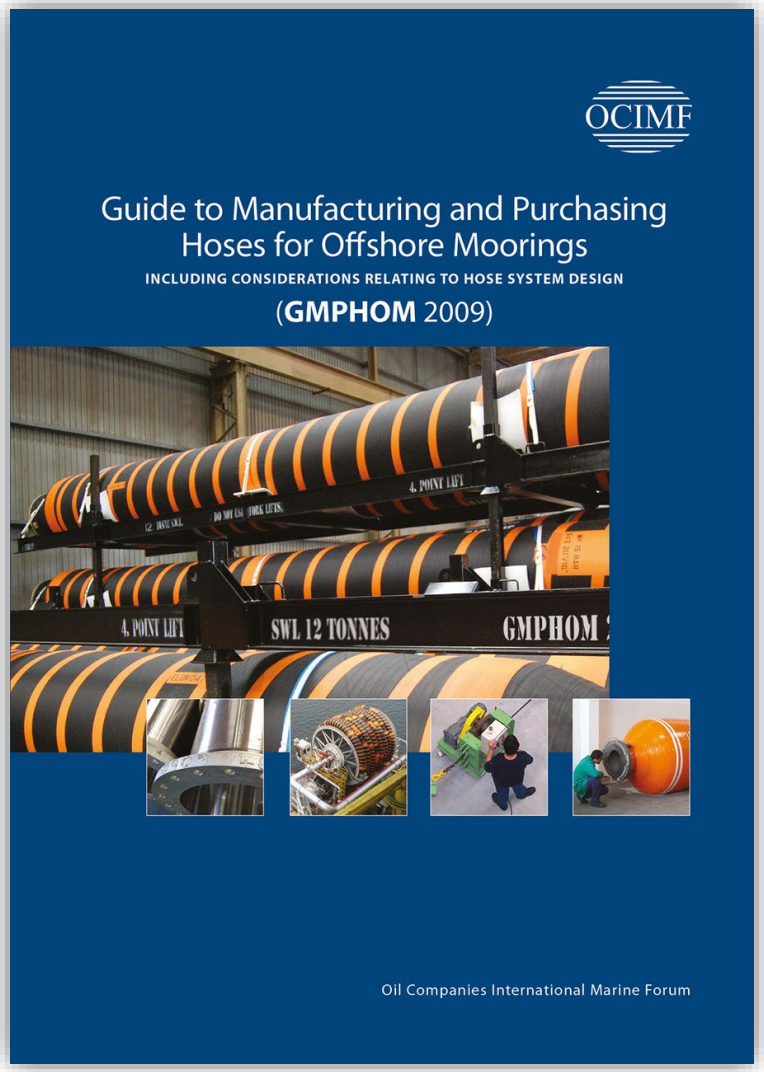
This information paper aims to **drive improvements to current Life Saving Appliance design and safeguards**, regulatory requirements, industry best practices and programmes.

It makes a case for change to the IMO, government marine regulatory authorities, industry partners and LSA Original Equipment Manufacturers to drive towards an **agreed international standard that is fit for purpose for the design, maintenance, training, testing and operation of offshore facility survival craft**.

Publications
Offshore

Revisions in progress





SPM HAWSERS – Summary of Changes

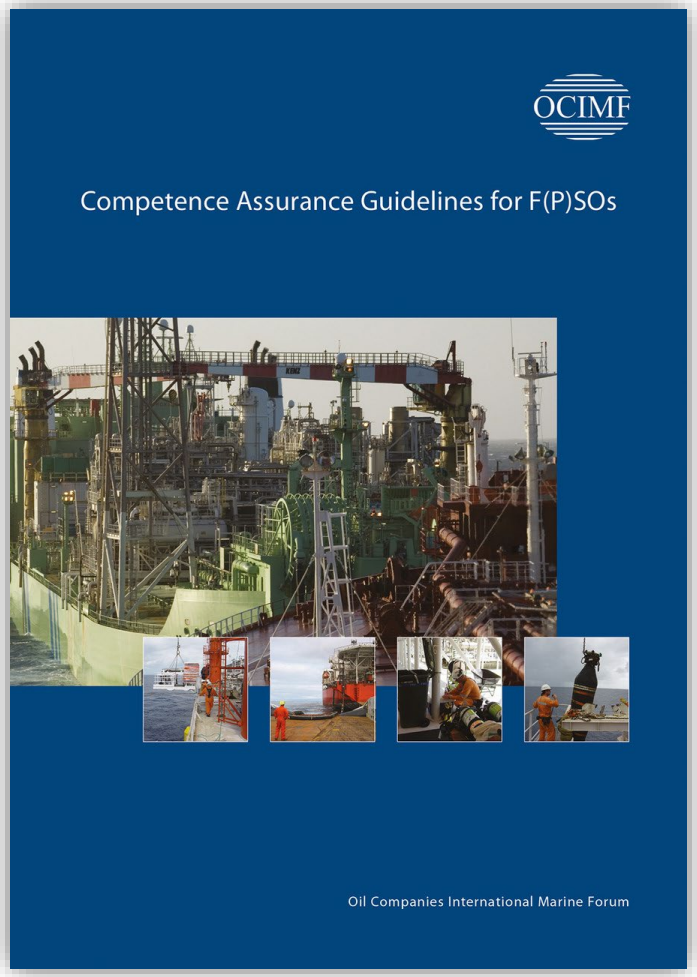
- Update of supporting **forms to allow electronic completion**.
- Update to **reference standards**.
- Increased guidance in case of **flotation** use.
- Review and validation against current **manufacturing and test procedures**.

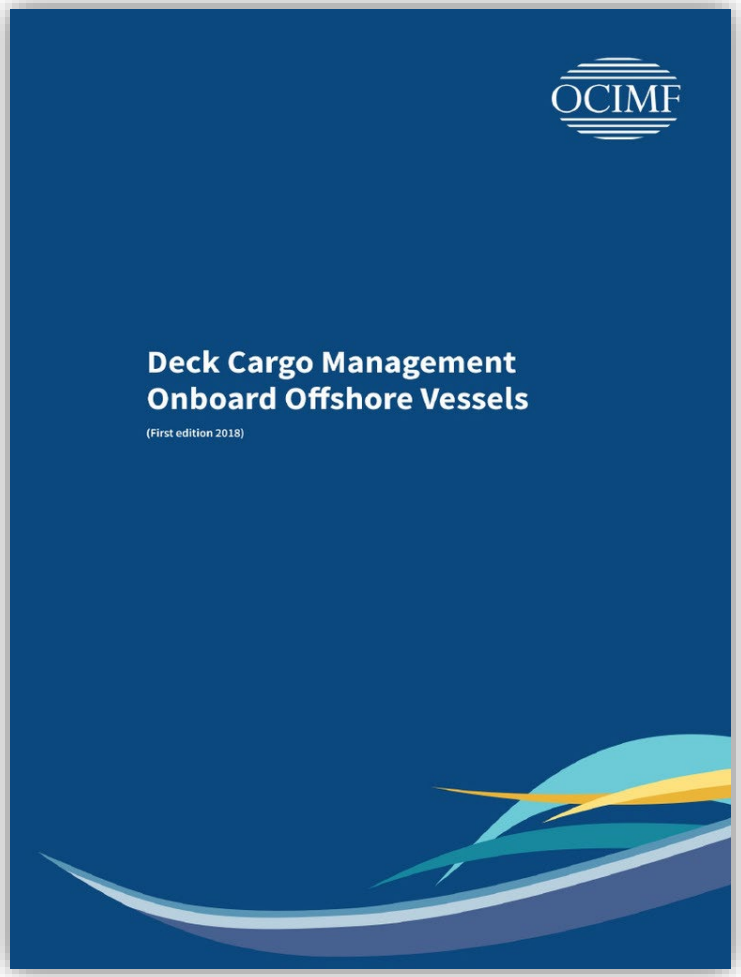
GMPHOM – Summary of Changes

- Update reference to relevant **industry guidance and standards** (e.g., ATSM and ISO).
- Review all **diagrams** and references to ensure relevance and accuracy.
- Align **terminology** (eg, MWP vs RWP) with current BS standards.
- Incorporation **of Marine Breakaway Coupling Information Paper** and update to content.
- Incorporate **Dynamic Torsion Load Tests for Offshore Hoses Information Paper** (as an update to GMPHOM section 3.4.10.3).

Publications
Offshore

Planned revisions (short term)





Planned new publication (short-term)

- Management of Survival Craft on Fixed/Floating Offshore Installations

Planned revision (medium-term)

- Cargo Guidelines for F(P)SoS, 2018
- Guidelines for Offshore Tanker Operations, 2018

Focus areas overview

Offshore - 2024 Priorities

Collisions, Allisions and Groundings

- DP Assurance
- Management of attending vessels within the offshore safety zone

Loss of primary containment

- FPSO Assurance and asset integrity

LSA Operations

- Best Practice for the Management of survival craft on fixed / floating installations

Emerging Risks

- Use of Maritime Autonomous Vessels (MASS) in Offshore sector
- Diving and ship husbandry
- Improving industry data (incident reporting, analysis & sharing)

Members Collaboration

Offshore

In progress

- Management of lifesaving appliances on fixed/floating installations
- Management of attending vessels
- FPSO Asset integrity and assurance
- DP Assurance

Planned work

- Industry data
- Diving and ship husbandry

Programmes

Offshore

In progress

- OVIQ Update – Pending integration Q3 2024
  - OVIQ/MODU Small craft inspection templates
  - OVPQ
  - Crew matrix

Planned work

- OVMSA – Commence Q2 2024

Offshore Advocacy

OCIMF collaborates in the development and global dissemination of industry's best practices

OCIMF

has consultancy status at the

International Maritime Organization (IMO) since 1971

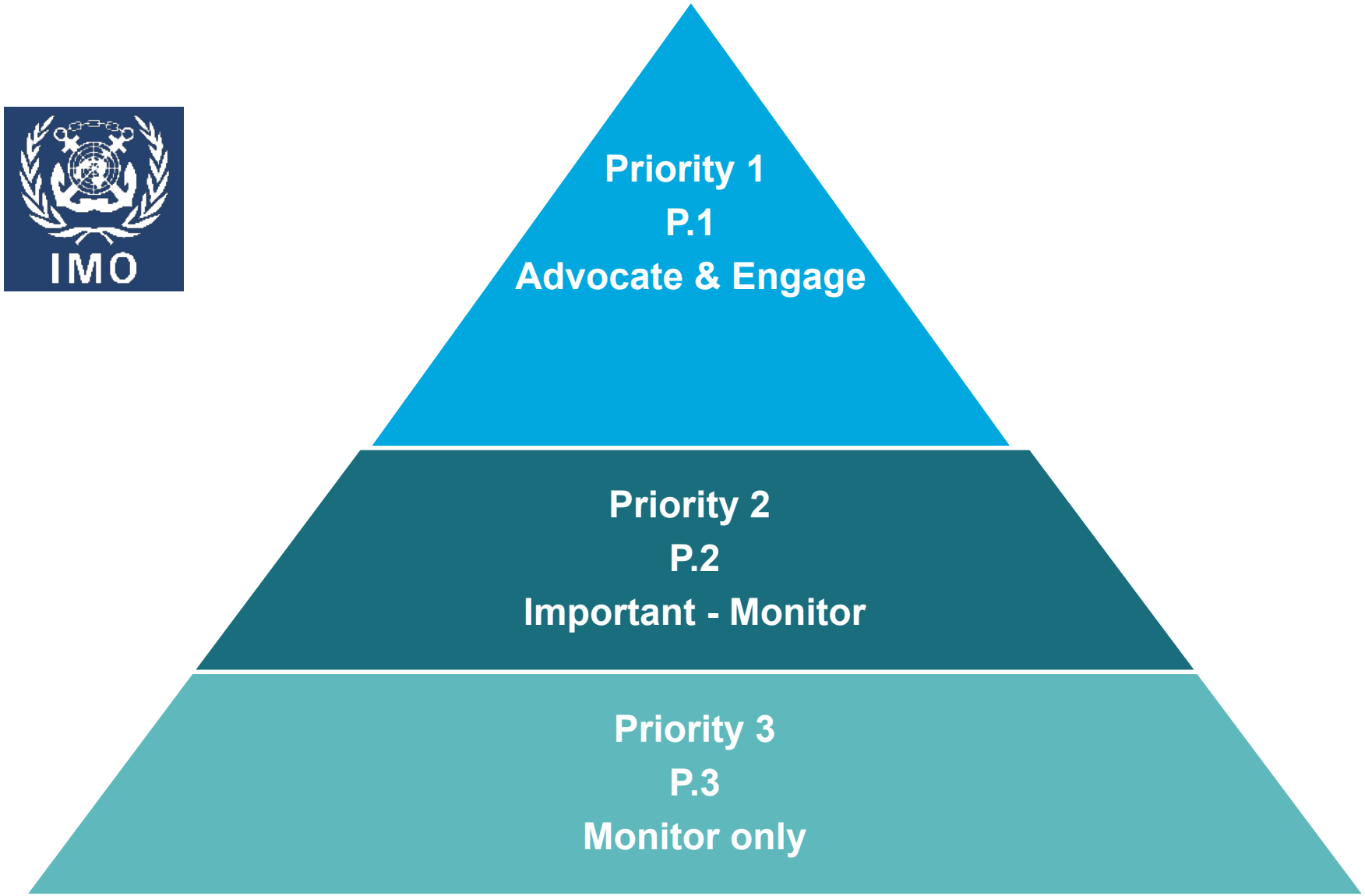
OCIMF

Saurabh Sachdeva, P&A Director
Chief Accredited Representative to IMO

IMO Regulatory & Safety Updates

OCIMF

Advocacy at IMO by OCIMF – Prioritisation matrix



Our current advocacy and engagement at IMO

Casualty – Incident investigations & Fatalities

Dark Fleet

Security

Seafarers Wellbeing & Safety

Offshore

Life Saving – Safe management Offshore Platforms & FPSO integrity standards

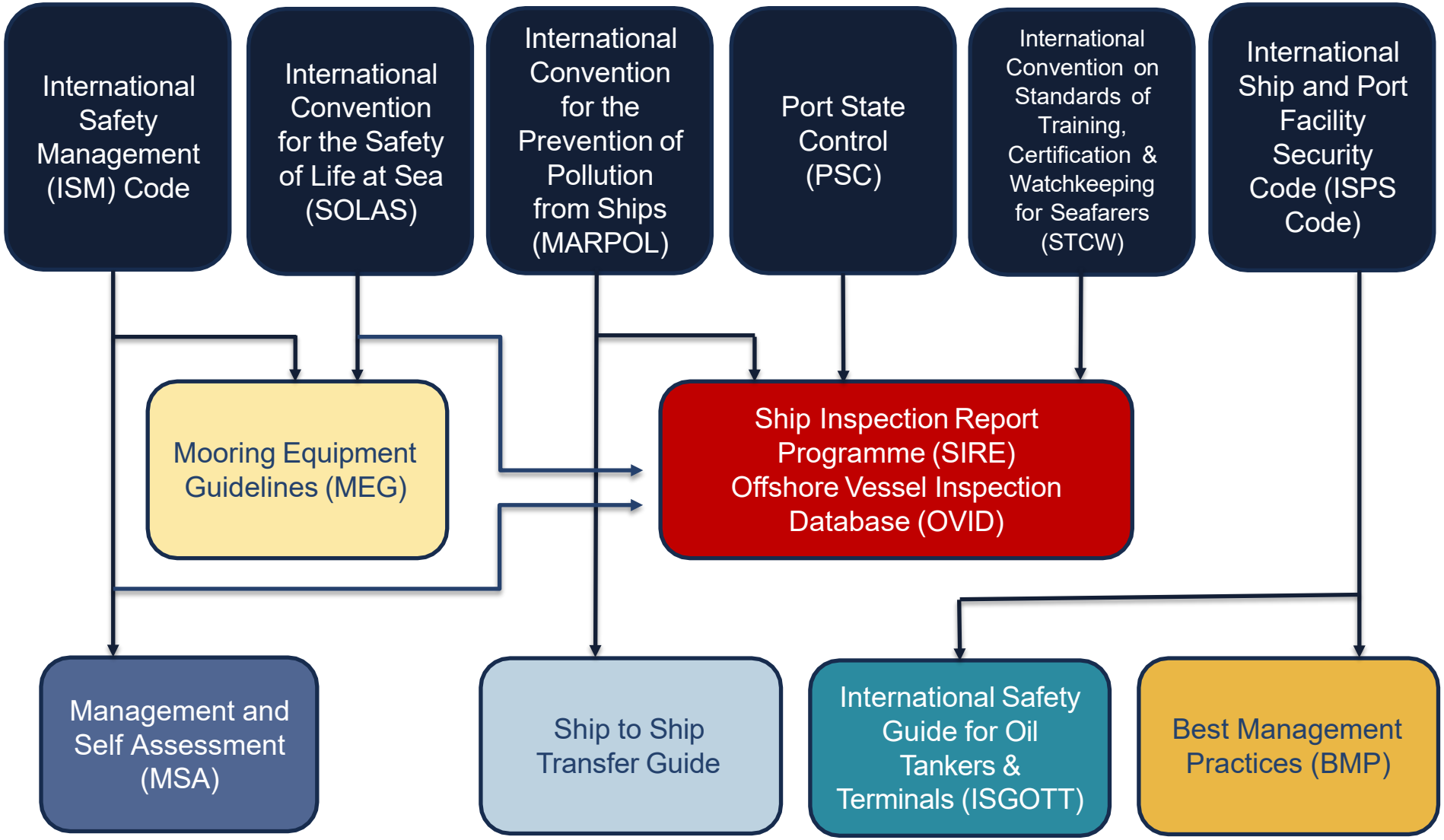
Environment

GHG Emissions

New Fuel Standards

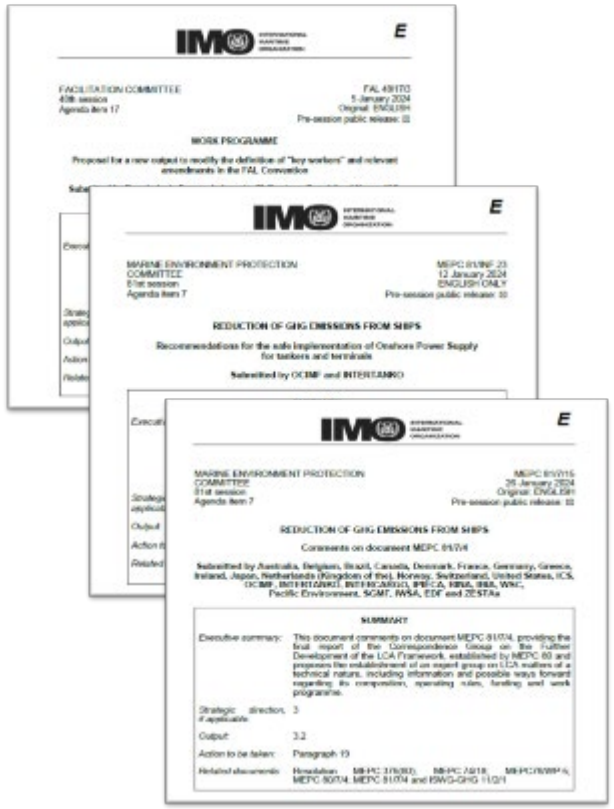
VOC management Operational Efficiency

OCIMF and IMO Regulations



OCIMF submissions to the IMO – authored or co-sponsored

We are actively engaging with multiple IMO stakeholders on topics that matter to OCIMF – Summary of Q4 2023/Q1 2024

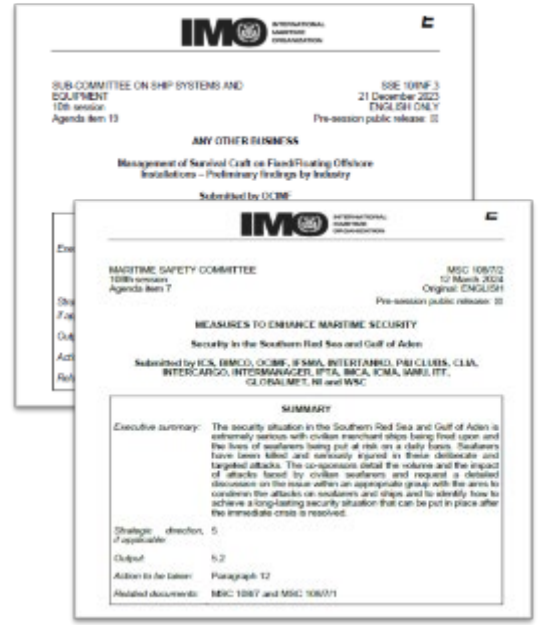


- Safe adoption of new technologies – onshore power
- Offshore safety – critical lifeboat ops
- Security in the Red Sea – Driving collaboration across industry
- Casualty Investigation – Standardised approach and "no-blame" culture
- GHG – Holistic analysis of marine fuels lifecycle
- Seafarers as key workers

OCIMF

Our Vision

A global marine industry that causes no harm to people or the environment

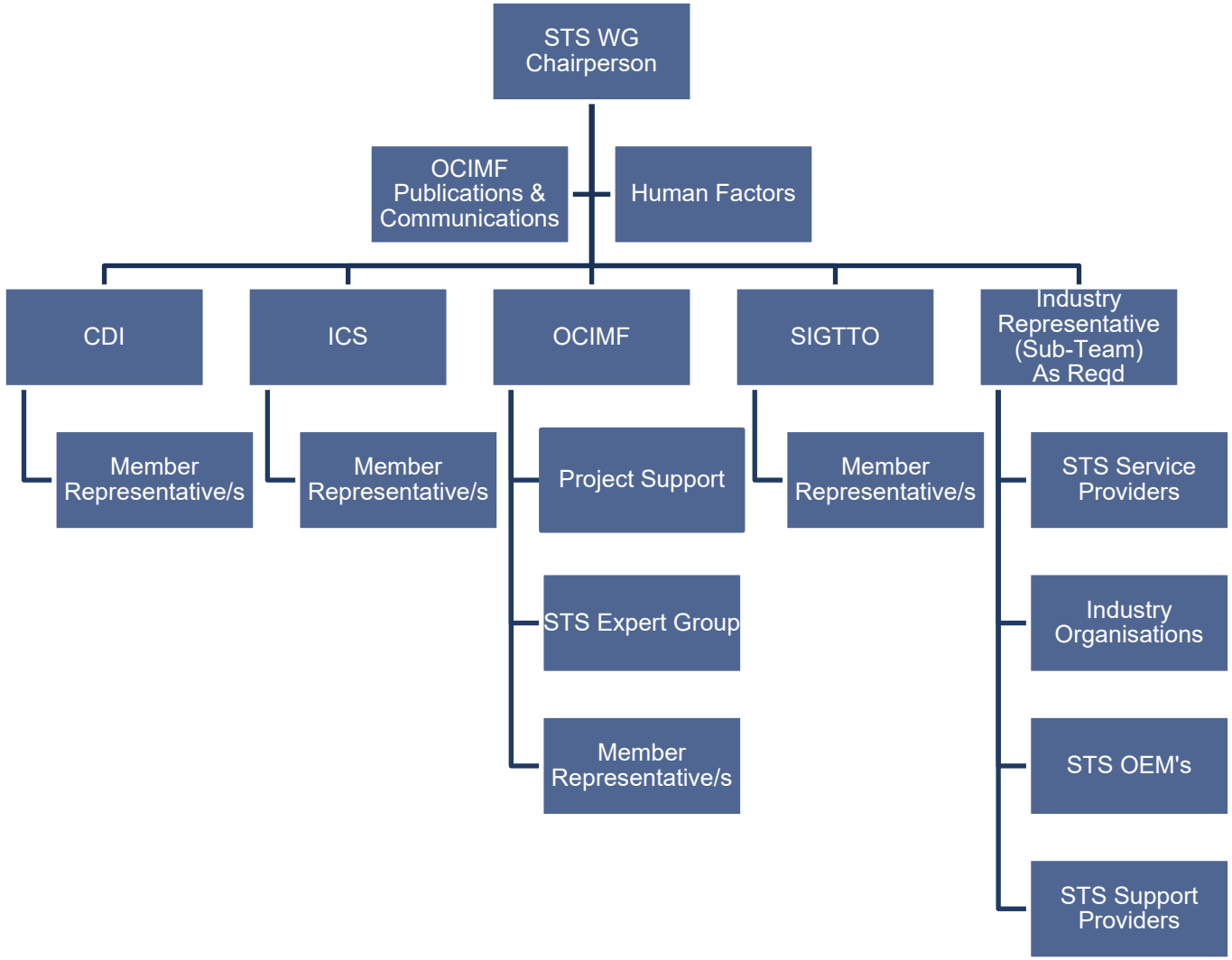


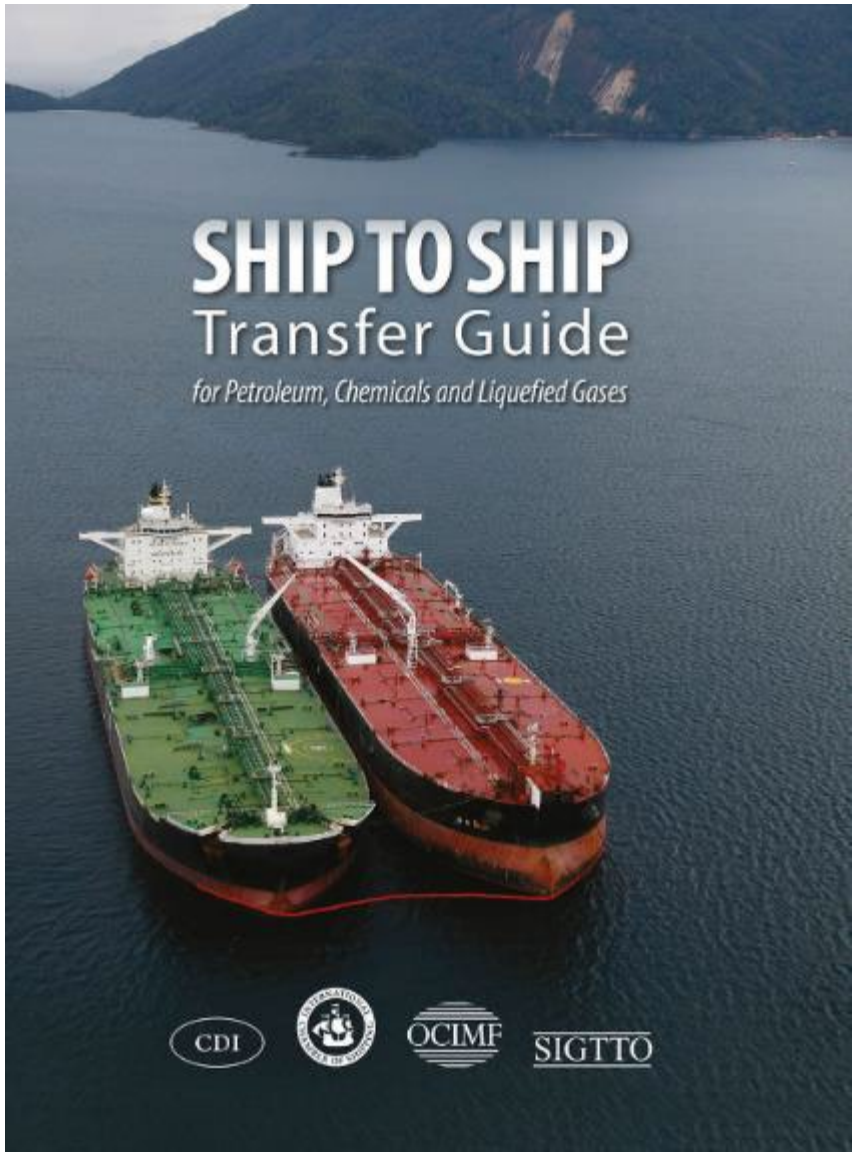
Tankers & Terminals updates

Publications and advocacy

Offshore Committee and Floating Systems/Offshore Vessels Ops Expert Groups

Publication revision – STS Transfer Guide for Petroleum, Chemicals and Liquefied Gases – 2nd Ed



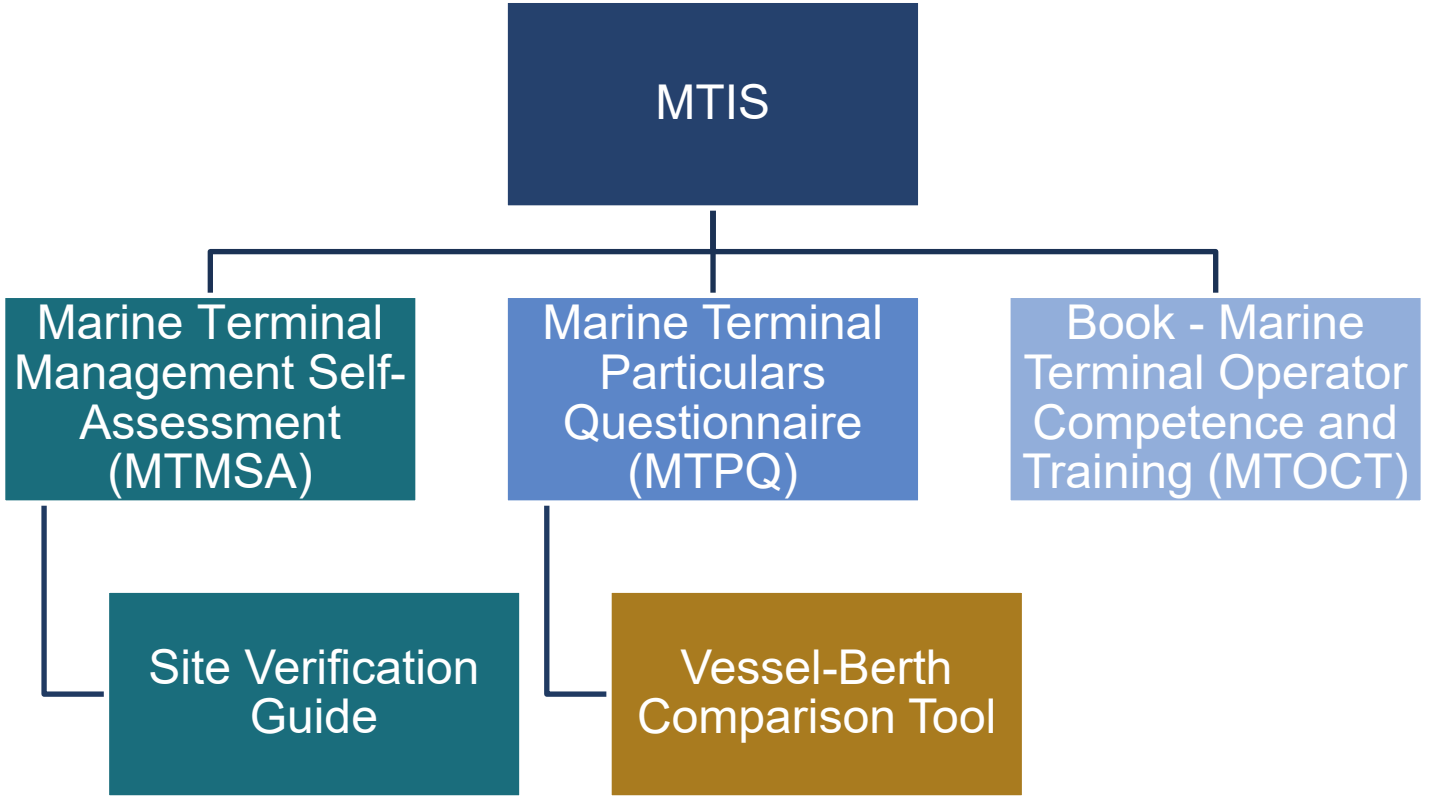


MTIS - Marine Terminal Information System

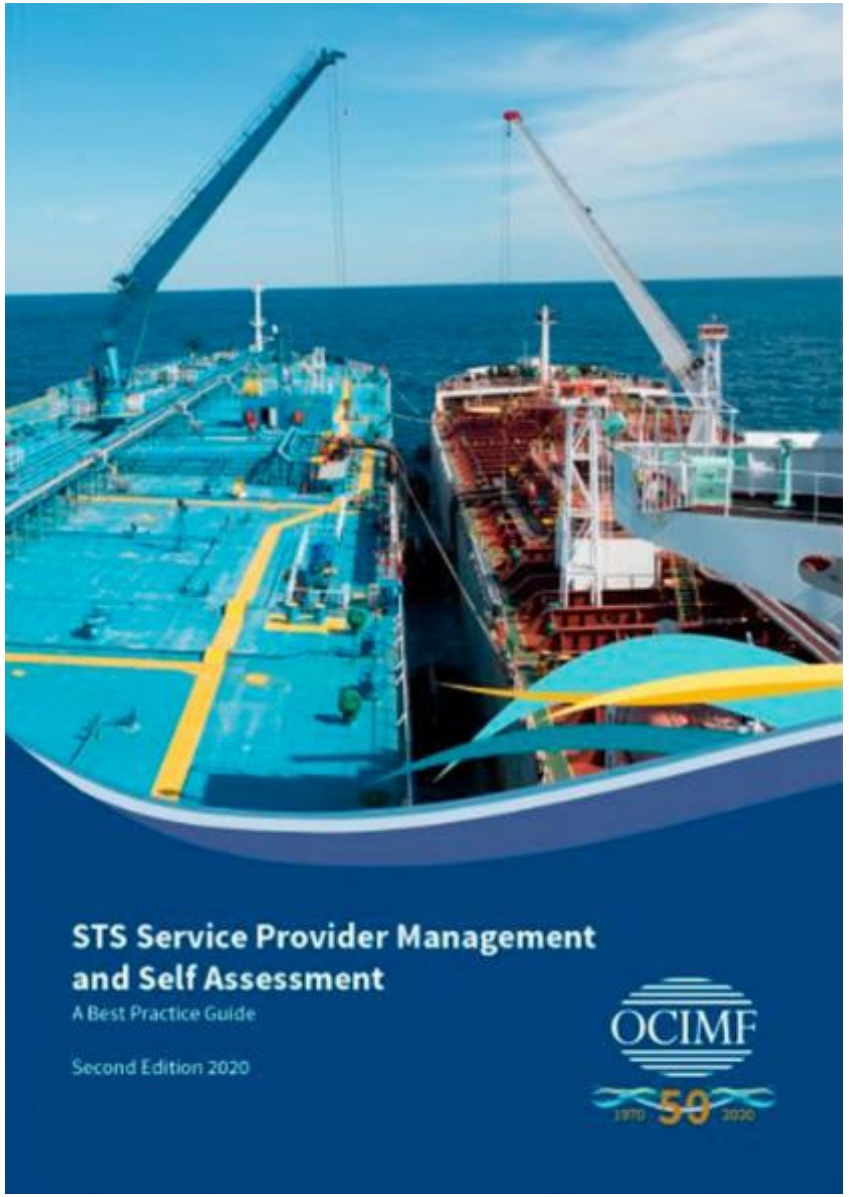
A system for global ship-shore safety management

The goal of MTIS is to ensure that all terminals worldwide reach a common high standard of safety and environmental protection

- Improving safety
- Optimising efficiency
- Increasing visibility



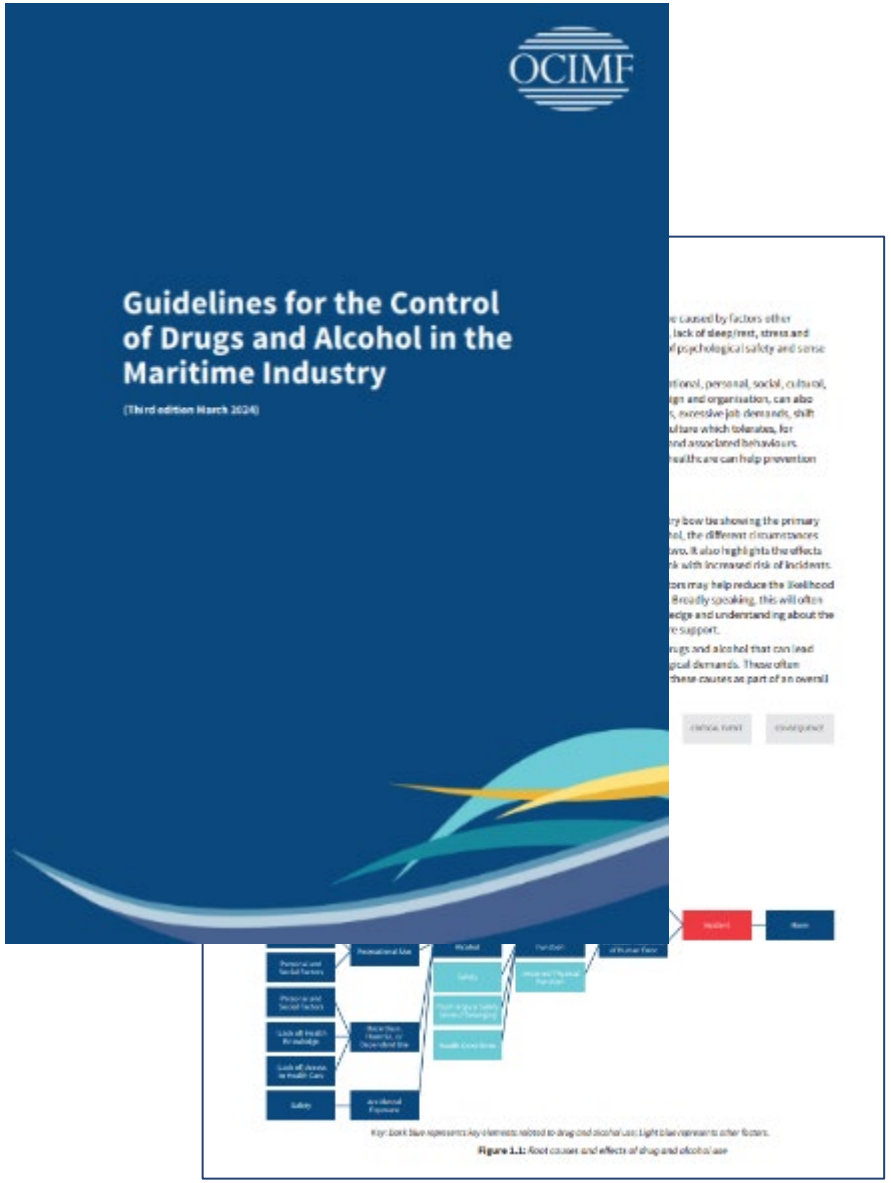
Ship-to-Ship Service Provider Management and Self-Assessment Guide



The Self-Assessment programme encourages STS Service Providers to assess their safety management systems against selected key performance indicators. It provides a minimum expectation level and increasing levels of best practice guidance.

Guidelines for the Control of Drugs and Alcohol in the Maritime Industry

Replaces previous OCIMF's Guideline for the Control of Drugs and Alcohol Onboard Ship from June 1995 – 1st Edition



Francisco Barreto, President SLOM
Latin American Society of Marine Terminal Operators

Collaboration at SLOM

OCIMF

#TOGETHER
WE CAN
DO IT

SLOM
Sociedad Latinoamericana de Operadores de Terminales Marítimo Petroleros y Monoboyas

INSTITUTIONAL PRESENTATION

20 YEARS BUILDING LATIN AMERICAN INTEGRATION

CIMF

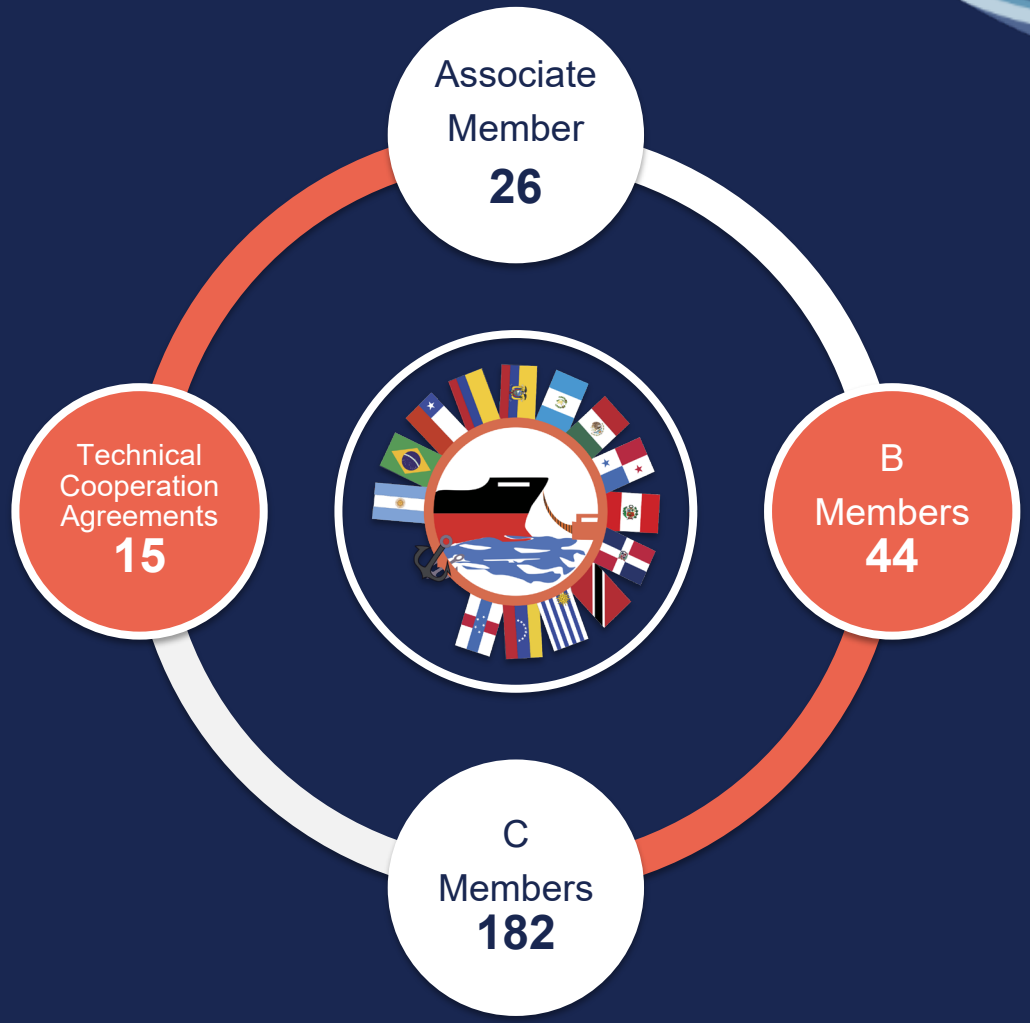
SLOM
Sociedad Latinoamericana de Operadores de Terminales Marítimo Petroleros y Monoboyas

¿Who we are?

SLOM is an international non-profit association, our main objective is to achieve the integration of **Oil Maritime Terminals** with organizations, authorities, and providers companies within the sector, performing technical exchange activities and disclosuring **good practices** to promote **safe, sustainable and efficient operations.**

Partner Entities

OCIMF
The Nautical Institute
ILTA
AMPP
arpel
CIP
Red PBIP México
WISTA Colombia
ANDI MÁS PAÍS
Oil Spill Response
ISCO International Spill Control Organization



Maritime Authorities

PERÚ Autoridad Portuaria Nacional
Ministerio de Defensa Nacional Dirección General Marítima Autoridad Marítima Colombiana
ARMADA DE CHILE DIRECTEMAR Dirección General del Territorio Marítimo y de Marina Mercante
Ministerio de Transporte y Obras Públicas Ecuador

¿How is the integration going?

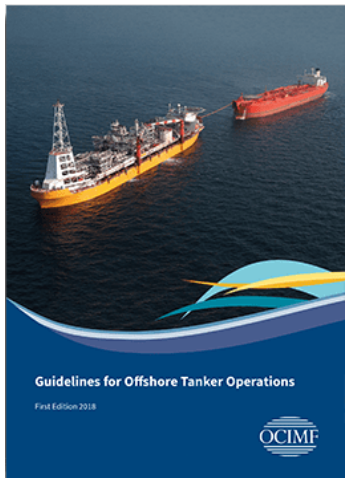
SLOM
Sociedad Latinoamericana de Operadores de Terminales Marítimo Petroleros y Monoboyas

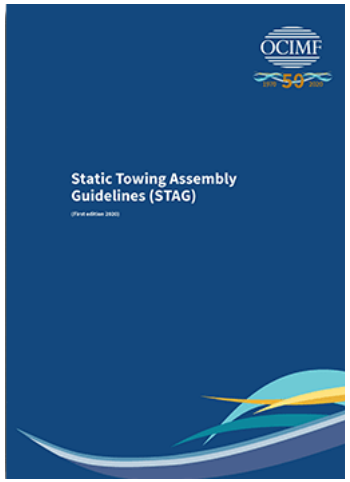
OCIMF

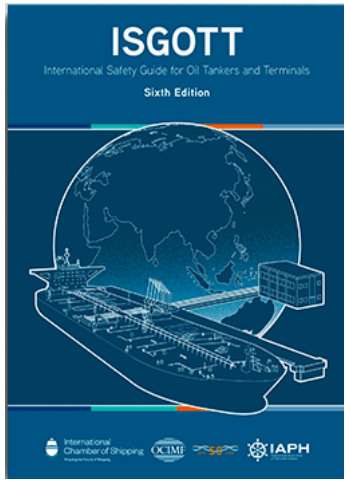
SLOM INTEGRATION

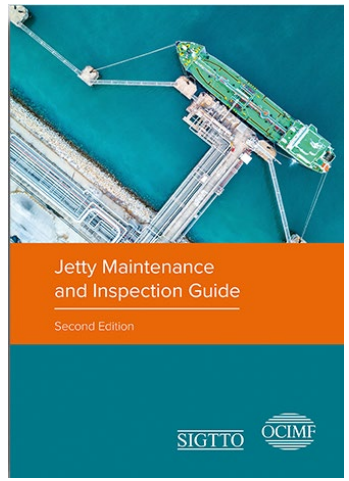
INTERCONNECTS OPERATING COMPANIES TO PARTICIPATE IN IMPORTANT GUIDELINES

- ✓ Jetty Maintenance and Inspection Guide (JMIG) - 2023
- ✓ International Safety Guide for Oil Tankers and Terminals (ISGOTT) - 2020
- ✓ Static Towing Assembly Guidelines (STAG) – 2020
- ✓ Guidelines for Offshore Tanker Operations (GOTO) - 2018









SLOM & OCIMF

Integrated from the first Lessons Learned

7° **INTERNATIONAL WORKSHOP**

ON LESSONS LEARNED IN THE **OPERATION OF MARITIME OIL TERMINALS**

FIRST TIME FROM CHILE

Who is it for?

Associate Members SLOM or operators in the region.

Where?

COPEC head office Santiago, Chile.

When?

June 6th & 7th of 2024

Exclusive event for companies that operate oil terminal ports and single-point mooring buoys, including LPG, LNG, chemical product terminals, and offshore operations.

REGISTER YOUR CASE

DEADLINE

May 15th of 2024

WITH THE SUPPORT OF:

COPEC

SLOM
Sociedad Latinoamericana de Operadores de Terminales Marítimo Petroleros y Monoboyas

WORKSHOP ON LESSONS LEARNED 2024

20 YEARS BUILDING LATIN AMERICAN INTEGRATION

"The role of the operators in the energy transition"

HOST OPERATOR

ANCAP

XX JORNADA SLOM

September 11th, 12th and 13th 2024
Punta del Este / Uruguay

- A space for integration and INTERACTION between key industry players.
- Platform for acquiring, sharing and generating KNOWLEDGE.
- Focus on current and future ENERGY TRANSITION challenges.
- Scenario for the dissemination of new technologies, products and SPECIALISED services in the maritime, port and oil sector.
- Commemoration of the SLOM TWENTY anniversary.

THANK YOU

www.slom.co

slom-operadores

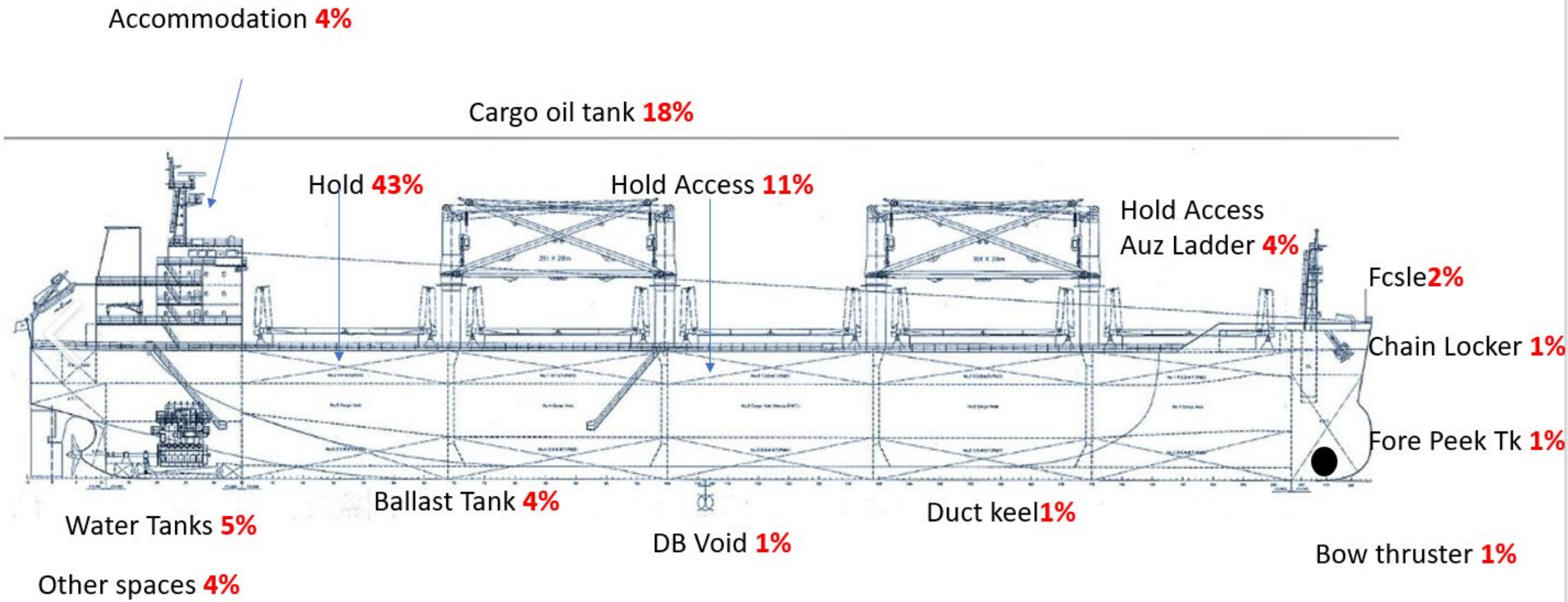
@SLOM_Operadores

@slomoperadores

SLOM Operadores
Marítimo Petrolero

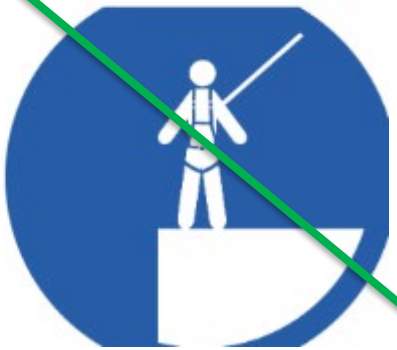
Applying Human Factors

Where enclosed space accidents happen all ship types
1996 to 1st January 2024



Slide provided courtesy of INTERMANAGER

IOGP - Life Saving Rules – Confined space example



Confined Space

Obtain authorisation before entering a confined space

- I confirm energy sources are isolated
- I confirm the atmosphere has been tested and is monitored
- I check and use my breathing apparatus when required
- I confirm there is an attendant standing by
- I confirm a rescue plan is in place
- I obtain authorisation to enter

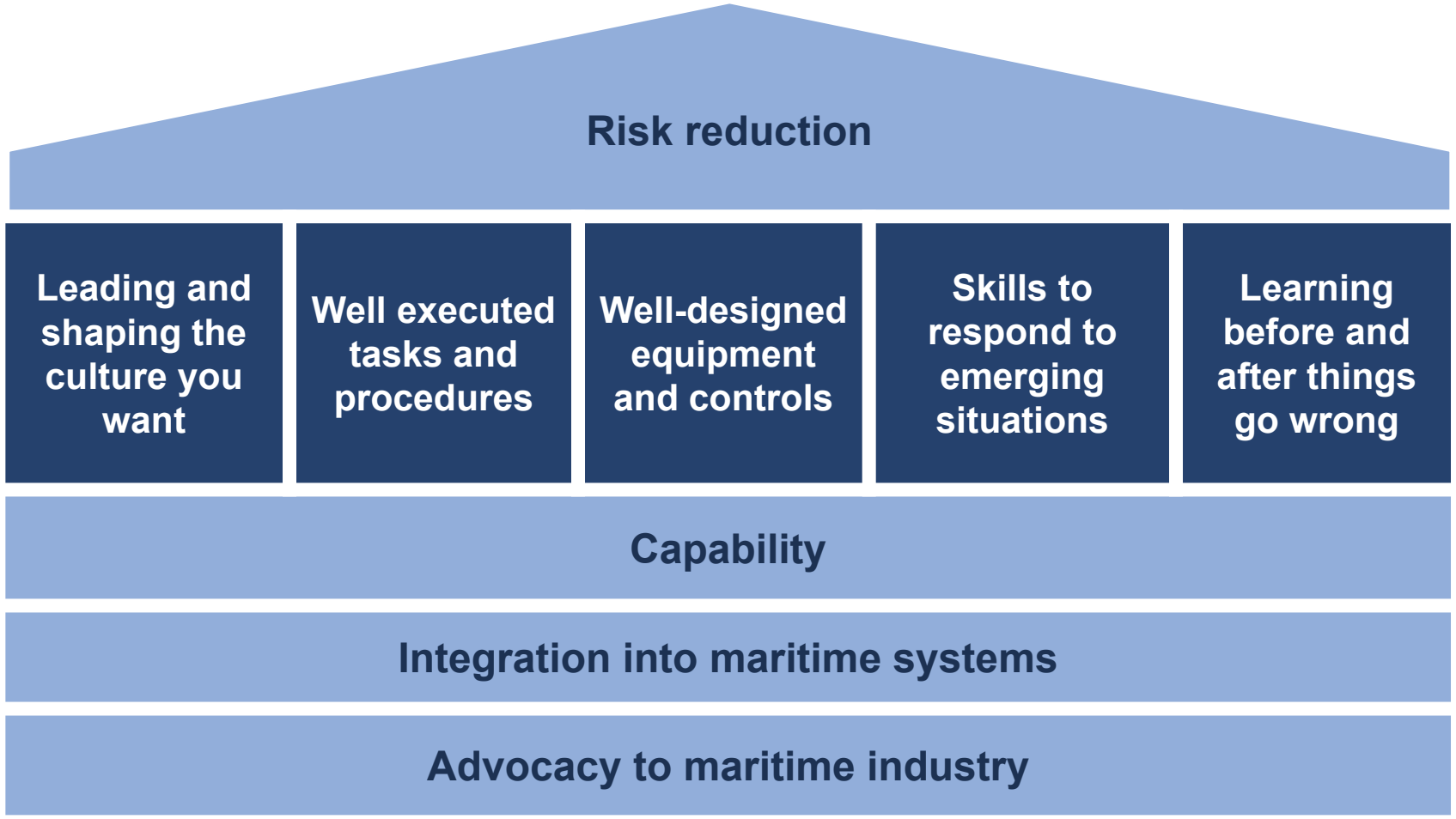
Considering Human Factors in all we do

Our People

Our goal is to materially reduce maritime risk to crew, ships and terminals. **Leaders help shape the conditions that influence what people do and people will make mistakes.** Mistakes are typically due to conditions and systems that make work difficult. Understanding the conditions in which mistakes happen helps us prevent or correct them.

Framework

Allows companies to understand how HF effects critical safe operations and apply good OCIMF practice



Closing Remarks by MD, Karen Davis

Thank you!

Our Vision

A global marine industry that causes no harm to people or the environment

OCIMF

www.ocimf.org

Oil Companies International Marine Forum
29 Queen Anne's Gate, London, United Kingdom, SW1H 9BU

Tel: +44 (0) 20 7654 1200