

Report of the 45th Annual General Assembly

Held at the Radisson Blu Seaside Hotel
Helsinki, Finland, 26-27 September 2019



AGA Proceedings - Part B

- 1 Report of Proceedings**
- 2 Annex A - Secretary General's Report**

AGA Proceedings - Part C (This document)

- 3 Annex B - SAREX**
- 4 Annex C - An Introduction to FSOU**
- 5 Annex D - Corral Bay, Chile**
- 6 Annex E - Captain Returns to his Alma Mater**
- 7 Annex F - Human Element Industry Group**
- 8 Annex G - Regulatory Scoping Exercise for MASS**
- 9 Annex H - Safety of Navigation in Malacca Strait**
- 10 Annex I - Maritime Anti-Corruption Network (MACN)**
- 11 Annex J - Action & Control, Physical & Mental Action, Regulation of Activity or Freedom of Actions**
- 12 Annex K - Overriding Authority and How to Defend It.**

ANNEX B

Agenda Item 15 - SAREX

Presented by Captain Tor Husjord and Maritime Forum North (Norway)



See next page



Agenda

- SARiNOR – search and rescue / people
- SARiNOR 2 – salvage of property and protection of the environment
- SARex Svalbard – equipment testing and competence development
- Implementation
- Success factors



Maritimt Forum is a network/umbrella organisation for the Norwegian Maritime Industry.



The organisation consists of 8 regional maritime forums and a national secretariat in Oslo.

Our main goal is to make Norway the most attractive location to run, own and develop maritime business.

- Public information work to make the industry and its importance visible in Norwegian society.
- Political impact for industry common interests.
- Strengthening cooperation and the dynamics of the cluster.



Project partners



The Norwegian Maritime Officers' Association



Joint Rescue Coordination Centre



norge



The Norwegian Seafarer's Union



The Norwegian Seafood Research Fund



The Norwegian Coastal Administration



The Norwegian Government's High North policy (2012)



"The Government will maintain and *improve* Norway's capability for effective search and rescue to ensure that Norway can carry out search and rescue operations in its own and adjacent SAR regions."

«Responsibility therefore lies with individual companies and their industry organisations to work systematically to reduce the risk of accidents, and to ensure that they are able to manage crises themselves to a greater extent than is required in other waters.»

"The Government wishes to contribute to openness about the problems involved, and to the development of knowledge and transfer of experience.«

The High North is presently Norway's most important foreign policy area.



Background

- 80% of all Arctic maritime activity takes place inside Norway's sector
~ 80% of the risk
- 90% of Norway's maritime zone is located in polar area.
- Increased traffic in the Arctic is forecasted.
- Through the international search and rescue agreement between the Arctic Council member states, Norway's responsibility for search and rescue has been extended all the way up to the North Pole.
- Similarly, Norway also has a widened responsibility for environmental preparedness.



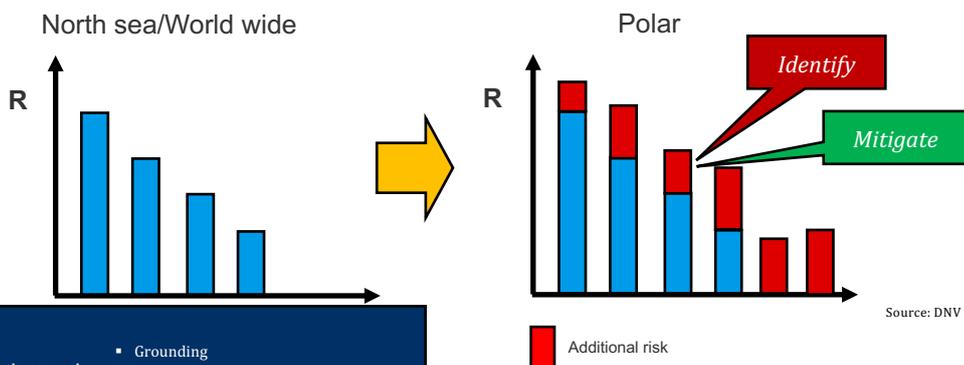
Emergency preparedness, Search and Rescue are required for future development, value creation and management of the resources in the Arctic region.

- ***Tourism***
- ***Fisheries***
- ***Aquaculture***
- ***Oil and gas / energy***
- ***Sea bed minerals***
- ***etc.***

... and the activity level is increasing.

Added risk for polar operations

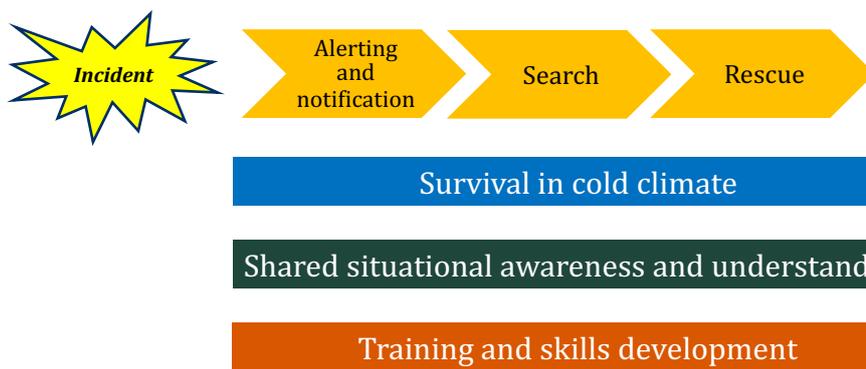
Risk = Probability x Consequence



- Examples of risk:
- Collision with other vessel
 - Fire/explosion
 - Structural failure
 - Grounding
 - Collision with installation
 - Collision ship-ship operations
 - Spill during loading/discharging



Events and main challenges



Main Findings of the SARiNOR Project



Main Finding 1:
Survival at
accident site,
(MF1)



Main Finding 2:
Emergency
Preparedness
(MF2)



Probability of survival =
ability to survive at accident site + emergency preparedness

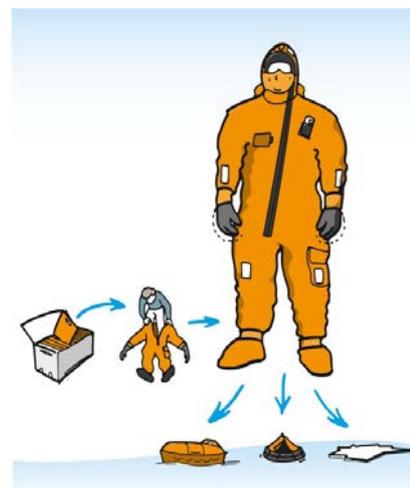


Main Finding 1: Survival at accident site with reference to the Polar Code

3 Factors decreasing the probability to survive at accident site:

Hypothermia, Dehydration, Fatigue

- Further development and implementation of equipment contributing to reduced probability for hypothermia
- The physical and physiological state as well as basic competence and training
- Availability of pre-hospital treatment
- The required equipment will depend on the actual situation
- Need to improve the requirements to Life Saving equipment to comply with IMO Polar Code's 5-day requirement

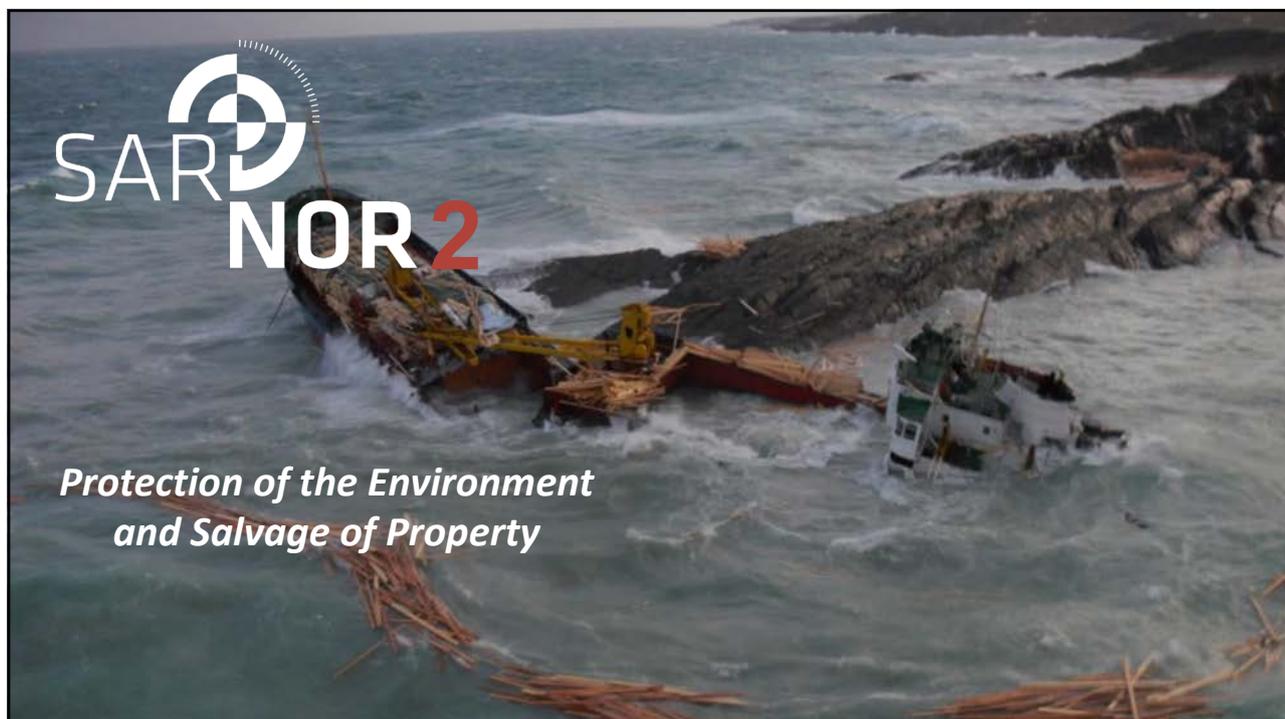
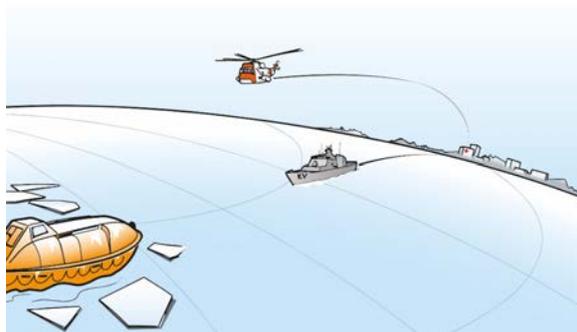


Main Finding 2: Rescue and Emergency preparedness

Response time is Crucial

Measures identified to reduce response time:

- Quick mobilisation of all actors
- Adapt equipment to polar challenges
- Establish equipment depots
- Presence in polar waters
- Immediate access to required resources



Project partners

eni norge

DNV GL

NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

Maritimt Forum Nord

Norsk Sjømannsforbund

The Norwegian Coastal Administration

The Norwegian Coast Guard

NOFO
The Norwegian Clean Seas Association for Operating Companies

Lundin Petroleum

Shell

NORWEGIAN HULL CLUB

Norges Rederiforbund Norwegian Shipowners' Association

RS(+)
Norwegian Society for Sea Rescue

Joint Rescue Coordination Centre

FHF
The Norwegian Seafood Research Fund

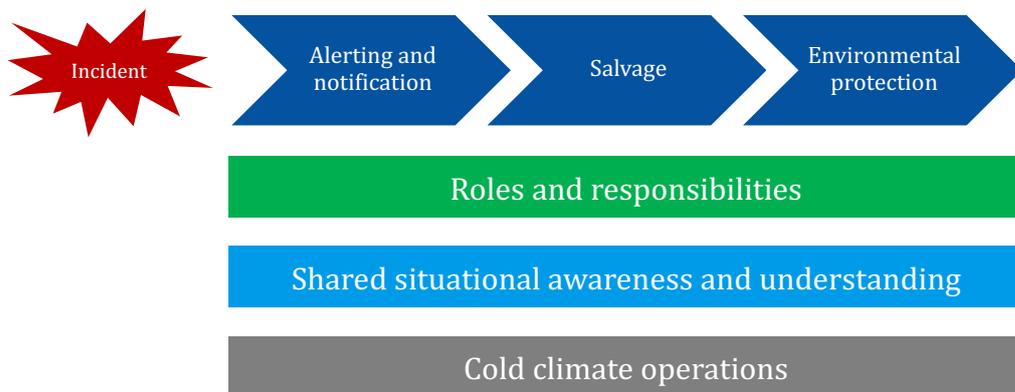
ConocoPhillips Norge

PETROLEUM SAFETY AUTHORITY NORWAY

DEN NORSKE KRIGSFORSIKRING FOR SKIB GJENSIDIG FORENING
The Norwegian Shipowners' Mutual War Risks Insurance Association

Maritimt Forum Nord

Work packages



Proposed measure packages

- MP 1: Arctic preparedness base on Svalbard - *Priority 1*
- MP 2: Coordinated vessel sailing program for preparedness in the High North - *Priority 4*
- MP 3: Command and control for surveillance and emergency operations in the High North - *Priority 3*
- MP 4: Increased competence, cooperation and interaction in Arctic preparedness - *Priority 2*



Implementation - from professional recommendations to practical policy

- SARiNOR has developed an action plan containing proposals for priorities with associated cost estimates.
- The action plan:
 - Sees SARiNOR phase 1 og 2 in context
 - Promotes suggestions for necessary policy decisions to implement recommendations

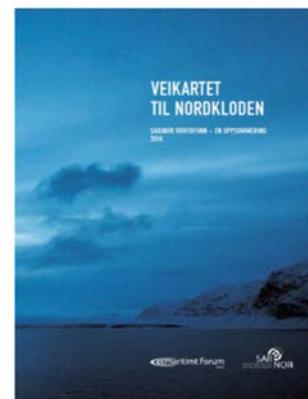


SARex 2016-2018 by the University of Stavanger

- SARex Spitzbergen April, 2016:
 - Survival in SOLAS approved life boat and life raft
- SARex, 2017:
 - Survival in modified SOLAS life boat and life raft
 - Rescue from a life boat to the rescue vessel by MOB-boat
 - Evacuation to an ice floe, test of equipment
- SARex3, 2018
 - On shore survival; Observations and measurements of heat loss, dehydration, training and fatigue
 - Evacuation from the shore to a rescue vessel
 - Test of Marine Broad Band Radio (MBR)

SARex Svalbard – building on the SARiNOR- and SARex 2016-2018 projects

- SARex Svalbard is building on the professional recommendations from SARiNOR and SARiNOR 2 and findings from SARex 2016-2018.
 - SARiNOR: Focus on the rescue of personnel in distress in the Arctic
 - SARiNOR 2: Focus on storage of material values and prevent environmental pollution



SARiNORs hovedfunn.



Success formula from SARiNOR to be applied to SARex Svalbard

- Good interaction between public and private stakeholders
- Combination of private and public competent capital, including fundings Ministry of Foreign Affairs
- Motivated and interested participants and partners
- Active use of management / partnership group
- Clear areas of responsibility and authority
- Good project management and communication



SARex Svalbard 2019-2020 Activities

- May 2019 CGV Svalbard Cruise in Isfjorden
- August/September 2019: Participation on research cruise with CGV Svalbard to the North Pole organized by The Nansen Environmental and Remote Sensing Center, Bergen
- October 2019: Oil Spill Recovery exercise at Svalbard, organized by the NCA (Norwegian Coastal Administration) and NOFO (The Norwegian Clean Seas Association for Operating Companies)
- February 2020: Mass Evacuation from the school-ship M/S GANN
- March 2020: Winter field exercise in the NW area of Spitsbergen with CGV Svalbard
- April-May 2020: Oil Spill Recovery exercise at Svalbard, organized by the NCA (Norwegian Coastal Administration) and NOFO (The Norwegian Clean Seas Association for Operating Companies)



07.10.2019

38

May 2019: SARex Activity Summary

1. Exercise with life rafts and test of different survival suits.
2. Field experiments on the shore, 20 pax in four groups
 - a) Leadership, Management and Organisation (HVL, Chalmers);
 - b) Nutrition - Blood sugar sampling. (UIT)
 - c) Sleeping and rest (HVL)
3. Maritime Broad Band experiments and testing. The Norwegian Coast administration (NCA) and Kongsberg Seatex.
4. Raptor: Tracking of vessels in case of hi-jacking. Provided by the Norwegian Shipowners' Mutual War Risk Insurance Association.
5. Test of electronic radar to detect personnel at the sea surface.



39

May 2019: Activity Summary II

5. Mass Rescue Operations (MRO) (AIR - LAND-SEA). Governor at Svalbard, Red Cross Longyearbyen, the Coast Guard, and SARex personnel
6. Observations of organization and management of a MRO



40

Thank you for your attention!



Tor.Husjord@
maritimt-forum.no

ANNEX C

Agenda Item 9 – An Introduction to Finnish Ship’s Officers’ Union

Presented by Captain Johan Ramsland, Managing Director of FSOU



See next page

The Finnish Ship's Officers' Union (est. 1905)



ESL Shipping newbuilding "M/S Viikki" & M/S Haaga
Worlds first LNG-fueled large bulkcarrier 25.000mt
with ice-class 1A.

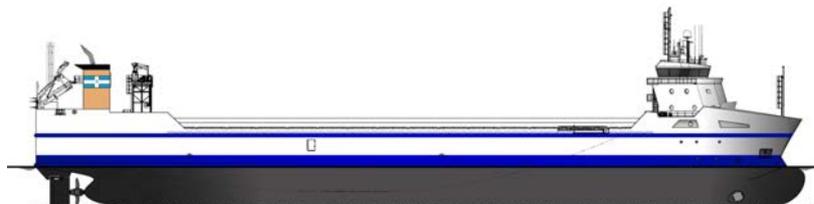


Suomen Laivanpäälystölitto -
Finlands Skeppsbefälsförbund r.y

IFSMA 45thAGA

26.-27.9.2019 Helsinki, Finland

Bore (Spliethoffgroup) has signed a new-
building contract with Wuhu Shipyard Co.Ltd
in China for three (3) new LNG-powered
RoLo vessels to be built during 2020-2021,
122m x 21m, 15kn, 7000dwt, Ice Class A.



The unions office

- ▶ Managing director Johan Ramsland
- ▶ Vice Managing director Pipsa Mörn
- ▶ Secretary/membership Marjo Peurala



THE UNIONS ADMINISTRATION

- ▶ Board of directors, 12 members (2017–2021)
- ▶ The Boards Executive Committee 6 members
- ▶ Charman of the board: Kristian Heiskanen (OSM)
- ▶ Vice Chairman: Heidi Tauriainen (Viking Line)
- ▶ Highest decision-making body: Annual meeting
- ▶ 9 Non registered circuits:
 - ▶ Helsingfors, Kotka,
 - ▶ Saimen, Tammerfors,
 - ▶ Uleåborg, Vasa, Raumo,
 - ▶ Åbo och Åland.



Suomen Laivanpäälystöllitto -
Finlands Skeppsbefälsförbund ry

INTERNATIONAL COOPERATION BODYS

- ▶ Nordisk Fartygsbefälskongress NFBK
- ▶ Nordiska Transportarbetarfederationen NTF
- ▶ International Federation of Shipmasters' Association IFSMA
- ▶ European Transport Workers' Federation ETF
- ▶ International Transport Workers' Federation ITF
- ▶ International Maritime Organisation IMO
- ▶ Nautilus Federation



Suomen Laivanpäälystölaitos -
Finlands Skeppsbefälsförbund ry

MEMBERS

- | | | | | |
|------------|----------|---------|---------|---------|
| ▶ Members | 8-2019, | 1-2019, | 8-2018, | 1-2018, |
| Totalt | 1643 st, | 1639st, | 1669st, | 1727st, |
| Active | 1101st, | 1092st, | 1103st, | 1132st, |
| Supporting | 540 st, | 547st, | 566st, | 595st, |

- ▶ Membership fee:
 - Active 1,4% of brutto salary,
 - Supporting member
90€/year



Suomen Laivanpäälystölaitos -
Finlands Skeppsbefälsförbund ry

OUR SITUATION 8-2019

- ▶ Unemployment rate FSBF members
- ▶ Period 1.1.-31.7.2016 is 7,4 %.
- ▶ Period 1.1.-31.7.2017 is 6,0 %.
- ▶ Period 1.1.-31.7.2018 is 5,5 %.
- ▶ Period 1.1.-31.7.2019 is 3,5 %.
- ▶ Singel month 7-2019 is 1.7% record low.

Finland UPR 6-2019 6.0 %
Inflation rate 8-2019 1.0 %



Suomen Laivanpäälystölaitos -
Finlands Skeppsbefälsförbund r.y

Maritime politics i Finland

- ▶ The last government was very passive regarding seafaring. New government spring 2019.
- ▶ Prime minister Antti Rinne (SocialDemocrat)
- ▶ Finland is an "island".
- ▶ Alot of negative wibes about all goverment based subsidies to maritime trade.

MARA (Turism- Och Restaurangförbund rf)



Focus on netto wage system.

News ang progress on the Officerkadett system

- ▶ New name **Juniorofficer**.
- ▶ The system is in use on foreign trade ships. For the moment on 7 companies small scale. There are now about 25 vacancies in use.
- ▶ It could be in use on about 100+ vacancies
- ▶ Can only be used on vacancies which are agreed on for NON EU sailors.
- ▶ CBA as NON EU MTS/TEA except for salary



Suomen Laivanpäälystöliitto -
Finlands Skeppsbefälsförbund r.y

JUNIOROFFICER CBA

- ▶ Salary 19.6.2018 / 1.3.2019 (follows NonEu)

2nd off 3258€ brutto

3rd off 3112€ brutto

–after 1 year a career planning has to be done to receive a EU spot. +5% salary



Suomen Laivanpäälystöliitto -
Finlands Skeppsbefälsförbund r.y

ANNEX D

Agenda Item 10 –

1/ Commemorating 500 years of Magellan's trail of 1519-1522

2/ Corral Bay, Chile.

Author Captain Pedro J. Espinoza.



Both Presented by Captain Juan Gamper, of Nautilus, Chile.



Commemorating 500 years of Magellan's trail of 1519-1522

As our colleagues probably know, we can look back over five centuries to one of the biggest enterprises of the time, sponsored and supported by the Spanish crown, which was the new alternative but unknown sea passage to the East Indies.

Hernando de Magallanes

On 10 August 1519, Hernando de Magallanes, a hydrographer, soldier, explorer and Portuguese seaman, and the Spanish Captain El Cano, sailed from Seville, Spain with five wooden vessels of 47m loa. Magallanes took this enterprise as a personal revenge as the Portuguese crown did not believe in his theory and did not support him with vessels or materials.

But only one caravel, the *Victoria*, completed the global round voyage of three years.

On 21 October 1520, the expedition reached the Eastern entrance of the narrow channel, dividing a big island from the southern end of South America, with two vessels less, one sunk on Patagonia coast and one other had returned to Spain.

After exploring the waters of the latter named Magellan Strait, the small fleet took five weeks to transit to the Pacific Ocean and made course to the North, along the coast line, up to the bay of Corral (Valdivia) and later to the North West, believing that they were in the Indian Ocean and in a few days they would arrive to the Moluccas islands.

By passing the waters of the strait, from East to West, they saw fires and smoke inside of the dense woods, which were tended by Indians of this territory and so Magallanes named this land as "Tierra de Humos" (Land of Smokes). After some time the name transformed into Tierra del Fuego which became the name of the big island at the south of the American continent.

Captain James Cook

A few more expeditions were launched from Europe, as by Narborough, Lord Byron, Wallis and in 1768, the Royal Society of London with support of the British Crown armed the expedition of James Cook, a very intelligent seaman, with the task to study islands, plants, animals and doing cartography work at Tierra del Fuego and adjacent islands.

The excellent results of this expedition, promoted a new enterprise with astronomers and scientists, again under the command of Cook.

The voyage of the *Beagle*

Later, after the Chilean independence of 1810, which opened the national ports to international trade, the British government armed two vessels; one named *Beagle*; later commanded by Captain Fitz-Roy and returned to Britain in 1830.

Along the southern part of the Chilean coast, we find many rivers, coming from inland lakes, with good depth to provide safe passage for smaller vessels or barks, which nowadays is not common or commercial anymore.

Also, good and safe bays can be found, mostly protected from the strong South-Westerly winds but open to the North-West quadrant, which in the southern hemisphere represents stormy weather danger.

The bay of Corral is not an exception, where a lot of agricultural products, produced many miles inland, were transported through the rivers by boats, barges and tugs and loaded alongside at anchorage.

A Dutch expedition

This special part of the coast was in dispute, between Spanish and Dutch troops when, in August 1643, on command of Prince of Orange and Nassau a fleet landed at Valdivia and had apparent support from local natives which later reversed. Due to this fact Commander Hendrick Brouwer aborted the short Dutch expedition on October of the same year, after only two months but remained the first urban planning of Valdivia (original name Baldivia).

Corral Bay

Later, Spanish troops built many forts at strategic points in Corral bay entrance to protect the river transit.

Finally, the Spanish forces, by that time ruling also in the northern territory of Chile, settled down and consolidated their power.

Risk of earthquake and *tsunami*

The Corral area, 40° South, on 22 May 1960, was hit by the most powerful mega earthquake ever registered worldwide, with magnitude 9.5 on the Richter Scale, for almost seven minutes, with heavy and frequent aftershocks.

The sea retired and come back as a *tsunami* a few times, the anchored vessels grounded on the river bed, some refloated again, but most of them were taken by the waves and sunk. Many houses at the seaside were flooded with their inhabitants waiving from the rooftops for help, which was impossible to give.

The earthquake affected over 1,000 km of the coast, flooding many smaller ports between 37° and 46° South, destroying about 80% of inland cities and killing around 20,000 persons mostly in the coastal towns.

After years of effort the cities, ports and people recovered but always lived under the threat of another earthquake not far ahead.

As the last big earthquake in February 2010, magnitude 8.8, the second most intense in Chilean history, hit just south of the port of San Antonio, which affected the coast line and created a big sequence of *tsunamis*, many hours after the first quake.

So, we have to live with this at Chile, in most ports and coastal cities we have a few times a year tsunami drills and people have to evacuate homes, offices and other places, to walk fast to high ground or hills, ideally over 30m above sea-level, which will offer protection from *tsunami* waves.

See next page for Corral Bay paper.

Corral Bay, Chile.



Marine currents in favour of manoeuvres in berthing and Undocking

May 2019

Developed by:

1) Name and profession:

Pedro J. Espinoza León
Master Mariner
Port Pilot (1989-2014)
Arica- Iquique-Talcahuano-Valdivia
Corral-Puerto Montt - Patagonia Channels
pjespinozal@gmail.com

2) E-mail:

Table of Contents

1.- Chapter 1: Background of analysis and ships	4
a.- About Analysis:	4
1) Analysis's objective:	4-5
2) Geographic Location:	5
3) General map of the port location:	5
4) General characteristics of the dock and docking:	6-7
b.- About ships	8
2.- Chapter 2: Description of the physical conditions of the area ...	9
a.- Winds:	9
b.- Currents:	9
3.- Chapter 3:	9-11
Reduced use of tugs and positions during manoeuvre development	11
2) Description of the anchoring manoeuvre	11-12
3) Description of the docking manoeuvre	13-14
4) Description of the undocking manoeuvre, with current use	15

Chapter 1: Analysis and ship background.

1) Analysis objective:

The purpose of this analysis is the reasonable use of the environment maintaining the security

This numbness phenomenon has increase the demands in terms of capability and potency required to tugboats to maneuver. This is the case of Corral port in Chile.

To improve the maneuver security in ports is a priority to the Captains of ships, and also to authorities to stablish valid requirements for this effect, this implies the security of life and the protection of the sea environment. This analysis was done for Corral bay in specific.

For this analysis three main points will be considered.

The first one refers to the natural characteristics of this port, which are described on the SHOA N°3001 publication, track record of the Chilean seashore. In this publication the tide and currents regime are clearly mention, which is characterized for being reversible with North to south orientation, following the topographic configuration of the shore. The flow or rising of the tide establishes Corral bay in a current that pushes to its proximity. The direction of this water mass is towards south and on the contrary the flow and draining will be towards north. This natural characteristic of Corral bay must be take into account at the time of defining the actions resulting safe and proper in terms of maneuver.

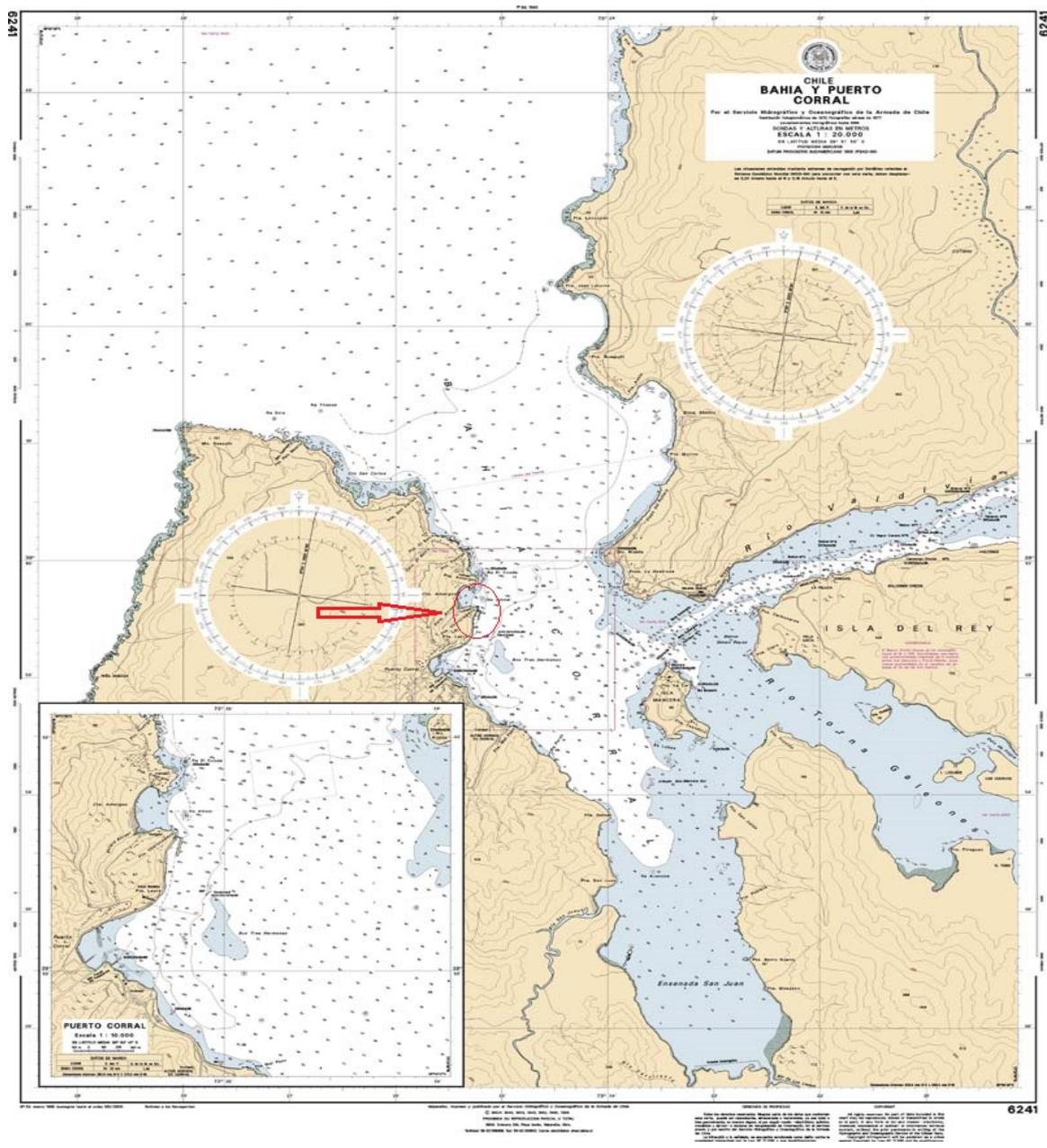
The second main point is related to what various important publications set about maneuver, ship and tugboat behaviour under circumstances observed here at this port. It is important to be mention that the weight of this recommendations is internationally recognized and has involved on its development, from a while now, a big group of captains, trainees and field professionals and also from different countries. Beside other publications mentioned on the ROM program started during 1987 in Spain, this sets the essential maritime security requisites and its pretention to guarantee the minimum sailing and maneuverability conditions. To grant the limiting conditions of the operation that would be stablish to different vessels maneuvers in port waters. The Rom 3.1-99, is configured as an opened instrument where advanced coherent calculation lines are proposed together with the general provisions from main international organisms (OMI, AISM, etc.).

The third point is related to the maneuver mentioned here, that was proven and tested during long ten years, from the port inauguration, without incidents or accidents related to the execution of this dock and berth maneuvers, having had during this time an important spectrum of situations with tide, currents, waves and bad weather. This is an antecedent that must be evaluated and it's in consistent with the previous paragraphs.

2) Geographic location

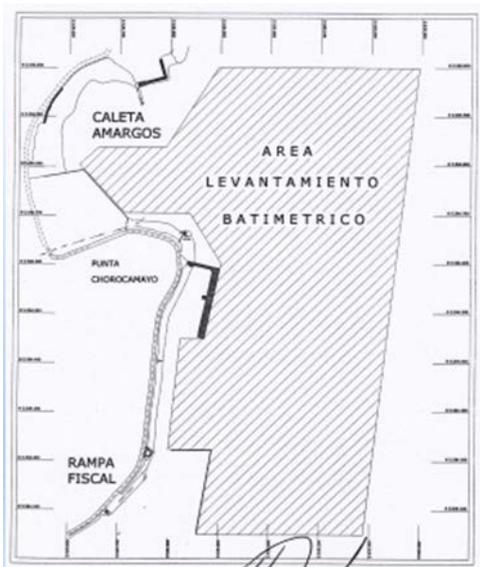
The Corral Bay, which is denominated Commercial dock of Corral, is located Latitude 39° 25' 28" south and 073° 25' 12" West. This chart can be found at Shoa Letter 6241 Corral port and bay.

3) General plan of the port location



4) General characteristics of the port and the docking pier

a) General description of the pier.



The installations of this port are consisted of the commercial Corral pier, which operators are Portuaria Corral S. A. is projected from Punta Chorocamayo towards south, and located at 2.6 miles south east of Morro Gonzalo lighthouse, this sets the entrance to the bay. It is constituted by a 56 meters long access bridge, measured from the ground, with 6 meters in with up to a berthing facility that has a using length of 146 meters and 13.5 in with. Its mooring system has four 100 tons mooring posts, each continuously numbered from North to south as 1-4-6 and nine 50 tons mourning posts, with the numbers 3-5-7 y 8. There are also three riding bitts on the ground, the south riding bitt located on the same direction.

The terminal also possess three mooring buoys:

North Buoy: Latitude 39° 52' 22" south and Longitude 073° 25' 10" West at 170 meters from the north edge from the dock. Compose of two hooks of 75 tons each.

South Buoy: Latitude 39°52'35" and Longitude 073° 25' 12" West at 225 meters from the south dock of the berthing facility, composed of two hooks of 75 tons each.

East Buoy: Latitude 39° 52' 32" south and longitude 073°25'04" West also at 225 meters from the south spring of the dock. Near de north edge of "The Three sister's bank ", compose of two hooks of 75 tons each.

b.- About the ships

To ships of similar characteristics will be put as example for this analysis.

SHIP	Shipping	Shipping
Name	BATAVIA EXPRESS	HACHINOE MARU
N° IMO	9539987	9242687
Beam	37	35,4
Depth (deck to keel)	23,95	21,6
Total Length	215,4	228,93

Length between pp	210,64	218
Maximum dead weight	70.089	62.806
Draught op. displacement	76.256	74.707
Ballast' draught	6,00	5,8
Maximum Ballast	12,30	11,60
Operational Draught	9,9	9,1
Area	720	660

BATAVIA EXPRESS



HACHINOE MARU



Chapter 2: Description of the physical conditions of the area.

a.- Wind Conditions:

We can add to this, as a valid information to consider that the track maps of the Chilean Coast , SHOA publication N°3001, (VI-4-8) points that “ The port is well protected from the 3rd quadrant winds and the NW; just the North gale gets through port...”

b.- Currents:

The same track map as above, pub. 3001 (VI-4-1) about the maximum currents intensities and the stools of high and low tide, says: “the maximum flow and ebb hour can be interfered from the Corral tide forecast according to the following chart”:

Situation	Average difference
Slack tide before de flow	Low tide + 00h 39m
Slack tide before the ebb	High tide + 01h 42m
Flow's maximum intensity	High tide - 02h 41m
Ebb's maximum intensity	Low tide – 00h 48m

The flow currents achieve more than 2 knots and in winter season , reinforce for increased river waters, the ebb acquires the intensity of 3 o 4 knots.

Chapter 3:

1) Description of the docking area approximation.

For the approximation and the ship's entry to the docking area, we must wait the filling tide, with current in favour. Under this tide condition, which goes river up, in general south direction from the landfall to the docking area.

The advice is, to start this manoeuvre with half tide rising. To start in these conditions obeys to two fundamental aspects to the characteristics of this port.

The first one refers to the characteristics of this current, which is one relatively constant tide and it is used to approximate the docking site, however the publication "Harbour Pilotage" from Captain R.A.B Ardley mentions about ship control under the title VII, Sea currents and constants currents: "when the vessel and the current have the same course, because even when the propeller turns few revolutions, its speed on the bottom may be twice the one the machine communicates. The navigation conditions are the same as under low speed, because the currents from the propeller are not on this case of any (little) help to the navigation and the starting of the vessel regarding the water. The turn ratio of the first 45° gets mainly bigger. The manoeuvre of a vessel that goes with this type of current demands special care and safeguard of the crew".

In this case, sailing among the current, keeping the control of the vessel, with low effort from the tugboats that support this manoeuvre or with rudder and machine bumps. This same current will be used to turn the ship, causing the ship to be pushed by its starboard side once anchored the anchor of the same band cooperating these two anchor and current elements, to complete its turn.

In other words, the current is used. The forces of the wind or current can be used in favor of the manoeuvre, these being the "hidden tugboat" that brings strength and tons of shot to the assembly and in favor of the maneuver.

On the contrary, when the effect of empty tide or ebb occurs, the effects of this "terrify the navigator" that is to say, bring it down towards the coast, which prevents trying a manoeuvre in the same way mentioned above. Since the mentioned "hidden tugboat" with this condition would not occur.

The second reason why the rising tide is used as in a marine and preventive sense, which says that given the possibility of suffering an involuntary grounding, the ship can leave the remaining tide going up by its own means.

For the above, it would be high risk to carry out the bow entry manoeuvre near the high tide, at which time the current is probably of less intensity, but with a high probability that it will change direction producing the aforementioned difficulties and risks.

Currently there are maritime signals to keep the ship in the entrance track that consists of routings for both the approach, as well as for anchoring.

Reduced use of tugs and positions during the development of the maneuver.

For both the approach maneuver and the docking maneuver two tugs are used. These tugboats are firm bow and stern working on an arrow or on a cape, taking two ends of the ship through the Panama chock.

This is one of the three methods suggested by ROM 3.1-99 (part 5 tugs: 5.5 Way of tugging) that says that:

In this procedure, the tugboat works separately from the vessel it assists, pulling it from the end of a rope "pointing that" this procedure avoids direct contact between both ships and also ensures that all tugboat power is exerted In the direction of the cape". There is no problem here regarding to the maneuvering space, since this port has only one place and enough maneuvering area.

In this way of using tugs, in this case, it is the most efficient, also mentioned in Captain Henk Hensen's "Tug use in port" manual (Chapter three, assisting Methods, tugs towing on a line during transit towards a berth and while mooring) which states that mainly this system is used in Europe by conventional tugs, although it does not rule out other types of tugs. So, in this case, maneuvers in the port of Corral can be performed with conventional tugs with one or two propellers whose capacity is according to the required "bollard pull".

2) Description of the anchoring manoeuvre.

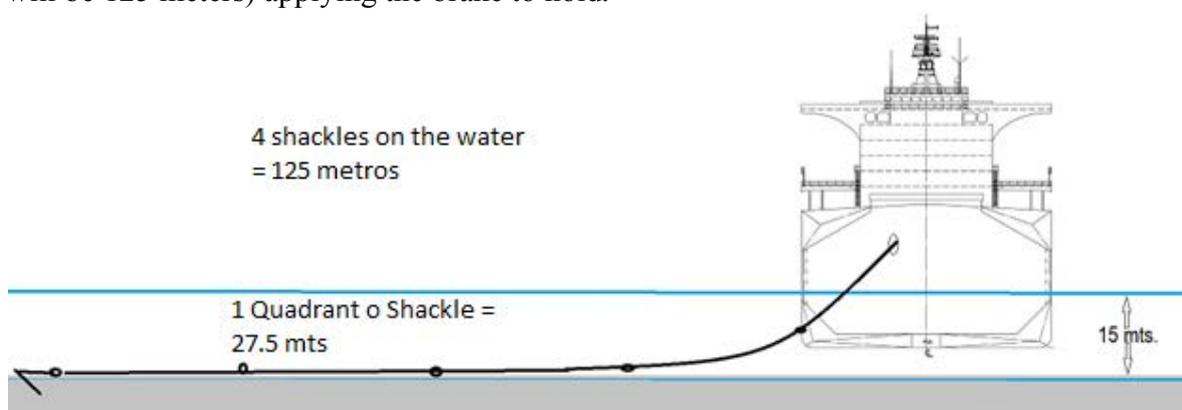
Moments before reaching this point, the ship will put reverse gear and will indicate to the stern tugboat that it begins to separate or open from the side of the ship. The effect of reverse gear on these ships that have a fixed propeller on the right, make the bow fall to starboard, (ROM 3.1-99, table 3.3 Fall of the bow when maneuvering single-propelled ships, step to the right, page 98) so that the tugboat will slightly tighten its ends putting its bow in the direction of Mancera Island initially rather to accompany the natural fall of the ship and then to Niebla gradually alternating its course.

Table 3.3 Fall of the bow when maneuvering ships from a right-hand propeller

Ship Ahead		Machine back			Vessel with forward start and machine back	Vessel with snatch back and avante machine
Rudder	Vessel at rest	Vessel with a head start	Vessel at Rest	ship with snatch back		
The Road	First it falls slightly to port: when taking off that effect disappears	stay on course or fall too little to port	Frankly falls to starboard	Slowly falls to starboard	Hold the course and then fall to starboard slowly	Indeterminate, it cannot be foreseen if it falls to port or starboard
To port	Falls frankly to port	Falls rapidly to port	Rapidly falls into starboard	Rapidly falls into starboard	Falls into Port very slowly and then to starboard more quickly	Falls slowly into port.

To Starboard	Falls slowly into starboard	Falls rapidly into starboard	Falls into starboard very slowly	first it falls to starboard, if it has little started, then to the track and when acquiring speed it can fall to port	Falls a little into starboard, very slowly. After indeterminate. May stay on the track or port slowly	Falls slowly into starboard
Rudder Effectively	Large	Very Large	Very little	Little, gets better with a stopped propeller	See observation n°1	Large
Observations. (1) The moment the rudder is put on the band is very important. The table includes the typical behavior of the ship when the shovel is inserted at the same moment of inverting the propeller.						

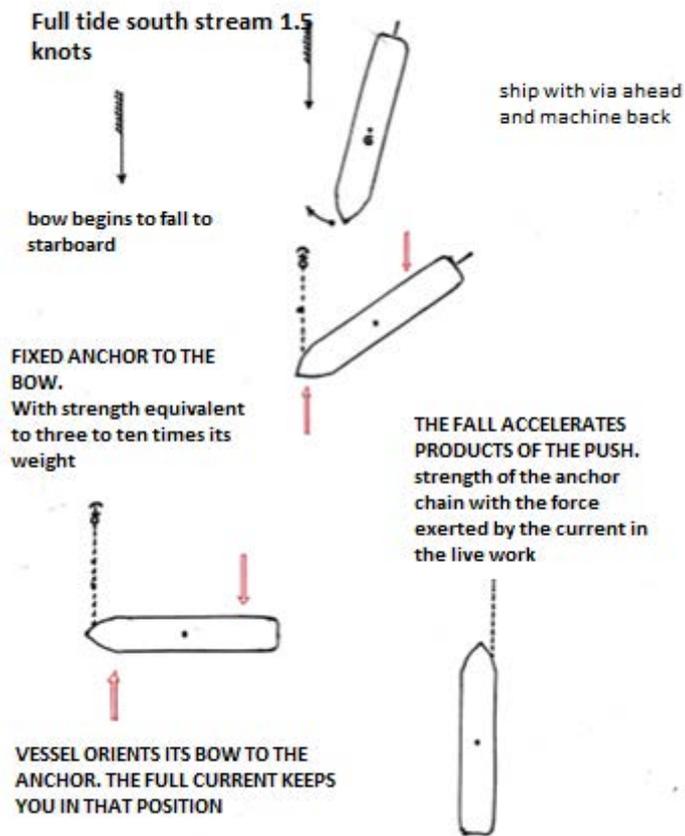
Dropping the anchor, this will be fixed until leaving the shackle N°. 4, either in the water, (with this the maximum distance that the bow will separate from the anchoring point of the anchor, will be 125 meters) applying the brake to hold.



At the time of anchoring, the chain will start at the required length until the start is extinguished without abruptly stopping the winch to avoid excessive stress on the chain. In any case, the bow tug may cooperate to reduce this tension effect.

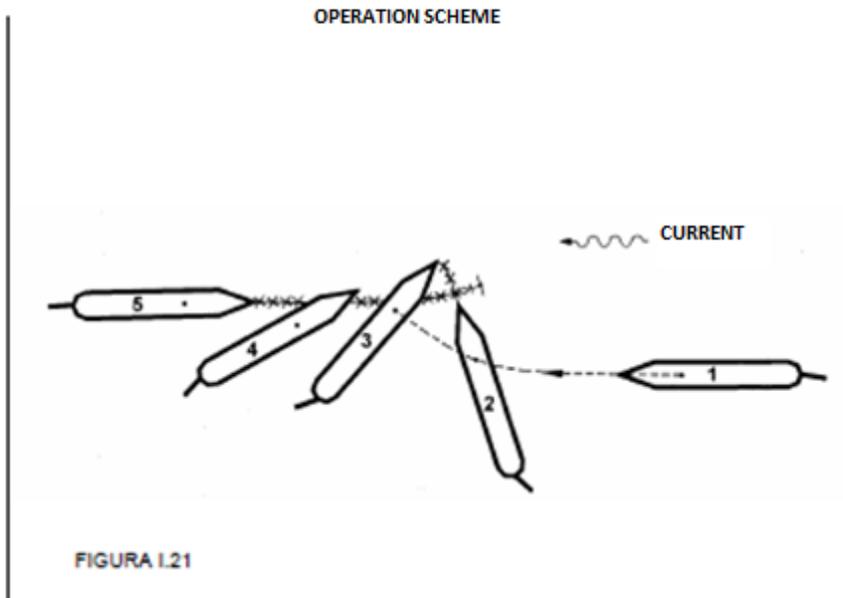
There is a triple natural spin effect here. First the mentioned one, machine back starboard bow, second the anchor, whose force can be equivalent to up to 10 times the weight of the anchor, (anchor weight = 8.0 tons) There is here a "moment" (force x distance) that is the distance from the bow, where the anchor works at the center of gravity, further accelerating the starboard fall, by pushing the full tidal current through its starboard band. This is a starting push.

At this point the tugs will only accelerate the work that the anchor and the current begin to do and will be accommodated to finally in which the bow being in the north direction and the stern in the south direction, the ship with this process begins to turn the 180 ° required. The "safe turning" routing will be used at this stage to keep the ship within this area, giving machine forward or backwards depending on the case, in any case, the turning area exceeds 350 meters with sufficient water under keel, not this being considered a small area. The ship is now here in front of the docking dock with minimal use of the tugs, about 100 meters from the docking front. The tugs at this stage have contributed only 25% of their total power.



What ROM 3.1 -99 mentions regarding anchoring a vessel with a single anchor with strong current (Annex 1.1.21, page 405)

FUND A VESSEL WITH A SINGLE ANCHOR
CONDITIONS IN WHICH THE MANEUVER IS DONE:
Strong current



BRIEF DESCRIPTION OF THE MANEUVER

When there is a strong current, it is desirable if feasible, to carry out the approach with the bow to avoid drifting and use the method of anchoring with a back-pull, in a similar manner to that developed in Figure 1.19, with the advantage in addition to the fact that the ship will be able to maintain its control capacity while remaining practically stopped with respect to the bottom.

If the conditions require anchoring with the current in favor and they are single-propelled vessels, it can proceed as indicated in the scheme where it has been used starboard anchor to anchoring, taking advantage of the effect of the lateral force of the propeller when turning back and chain tension to accelerate the fall and facilitate the work of the anchor. Shortly before reaching the anchoring point, the entire starboard rudder is placed and the machine is given back, bringing the ship to that band and anchoring (2) in the turn. If the vessel is pulled back, it will move forward slowly by changing the rudder to starboard (4) to reach the bow with the vessel moving slowly backwards, to avoid excessive traction on the chain when the vessel is passing through the current, this could make the anchor clawed. If there is wind and strong currents, the criteria for anchoring will generally be followed depending on the current since their effects are usually much more pronounced.

Observations

The maneuver of anchoring in small areas with strong currents is usually difficult and unsafe, so it is recommended to avoid it if feasible.

3) Description of the docking maneuver to the berth

The current that runs parallel to the coast, keep the vessel in that position, and the tugs keep their spies out of the water with machine very slowly. To continue maintaining the position, it will usually be necessary to ask them to take a small angle towards the ground, in order to counteract the effect of the filler that will tend to move it away from the dock. This same task is used to approach the ship to the dock and dock it, the arrow tugs take angles towards the ground for docking or open outwards to reduce the docking speed.

The ship's bow and stern winches system reach more than 30 tons of traction, more than enough force to approach and dock the ship to the dock with the first lines that go to dock such as mooring and spring line.

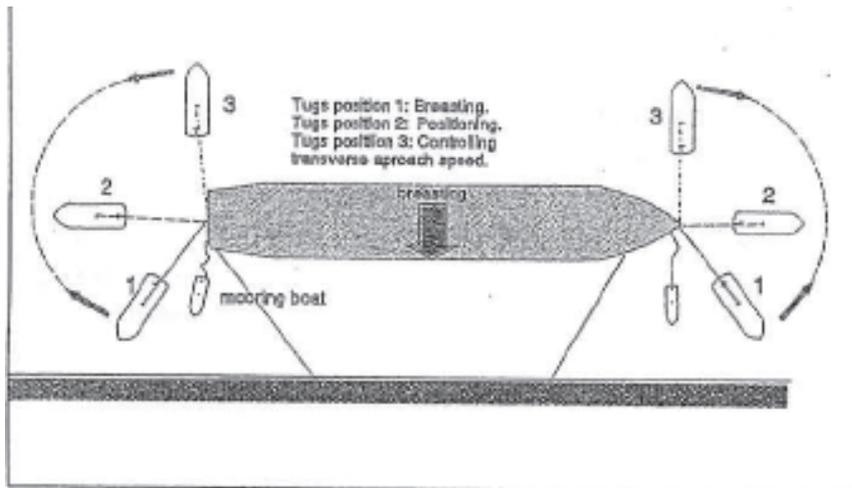


Figure 3.10 Towing on a line at the approach and while mooring

"The action of each of the tugs acting on a ship can be simplified in a resulting horizontal force of varying intensity and that can be applied with an important eccentricity with respect to the center of gravity of the ship to achieve the best evolutionary effects" (Rom 3.1-99 part 5 tugboat action)

The current in this case is attraction, so once the springs have been passed, those will only be ship sine turned, preventing them from working. Both tugs always outside, will gradually loosen to allow the ship to approach the dock. The order of the ends of the strands is the same, only before leaving the bow tugboat, the ship must already be supported by the spring's defenses, and have passed a second bow spring to reinforce the position. Tighten the spring and the crossings, this tugboat is set, leaning in a position of fleece to the center of the ship at the tug support point, securing the position to proceed to pass the bow lengths. The tugboat is then moved, the boats proceeding to pass the missing ends, starting with the stern lengths.

5) Description of the undocking manoeuvre, use of the current.

In consideration of the fact that the current is unberthing , coming by the bow and port tack, one of the tugs is placed in a position of grazing to the center, only initially supported. With the ship still moored, the captain is requested to fix and turn the chain until it is working slowly. Then, it begins to ease, starting the with the stern lengths first. With the stern spies on deck, the stern tugboat is firm by the "Panamanian" taking two ends of the ship "in arrow". Once Set the tugboat it continues with the bow lengths. The tug of the center increases its half-strength fleece. With the lengths on deck the crossings are released and the center tug increases its machine to 3/4 of its power. The springs are also relieved, leaving only two ends, bow springs and stern springs. The Captain of the ship is requested to begin to turn the chain and at the same time the stern tugboat tenses the ends, ready to separate the ship from the dock. When the chain begins to work more than half strength, everything is launched (the two missing springs) are ordered to stop the tugboat from the center and the ship parallel to the pier is separated with the work of the anchor and with the tugboat stern. Depending on the conditions, the tug that was in the center can be requested to change from port to port (for example, with east wind) otherwise it can be maintained by the same band and will cooperate with the instructions of the practitioner if it is necessary that mooring lines for some band and in what position.

Pedro J. Espinoza León, High Sea Captain, CHILE

ANNEX E

Agenda Item 11 – Captain Returns to his Alma Mata

Presented by Captain Kazuki Inoue, Japan Captains' Association

Annex E-1 Written paper

Annex E-2 Presentation Slides



See next page

Captain Returns to his alma mater

Japan Captain's Association

Vice President Captain Kazuki INOUE

The Japan Captains' Association (JCA) started its activities in 2000, and one of the programs we conducted is called "Captain returns to his alma mater." In this program, our association members provide knowledge to children of elementary and junior high schools on how and why they took up sea jobs and became captains, and they introduce the contribution of the ocean shipping industry to the Japanese economy and the Japanese people.

Until 2019, we had visited 190 schools, reaching a total of 26,515 children.

Today, we receive requests from other maritime organizations to assign our captains to present lectures all around Japan. Herein, we report the outline of this program.

1. Captain returns to his alma mater

JCA offers courses to children in an easy-to-understand manner in topics including types of ship, seafarers' work, environmental problems around the sea, and the importance of shipping.

2. Lectures and visit to marine container terminal

On October 18 and 19, 2018, with the cooperation of the Japanese Shipowners' Association (JSA) and Bureau of Port and Harbor, Tokyo Metropolitan Government (Port Bureau), a tour of the Marine Container Terminal and Port in Tokyo was conducted for approximately 170 elementary school children (fifth grade; aged 10 years).

At the container terminal, the captain conducted a lecture by presenting a video regarding a seafarer's job and onboard life. After the children completed the tour of the container terminal yard, the manager of terminal operations introduced to them the marine container's loading and discharging operation with the help of a video. Next, the Port Bureau arranged a boat tour of the port for the children.

The children asked several questions such as "How many containers are there in the terminal?" "How do you decide the order of containers to be loaded on container ships?" and "What is the most common type of cargo in containers?"

3. Lectures and visit to shipbuilding yard

On November 1, 2018, JSA and Shimonoseki Port Authority with the cooperation of an

international ferry company conducted an onboard tour of the International Logistics Container Terminal, shipyard, and a newly built ferry boat for 120 elementary school children (aged 10 years) of Shimonoseki; a presentation was given to the children regarding ocean shipping.

4. What are the most interesting aspects for children?

4.1 Lectures and tour visits

Lectures given by active and retired captains are of interest to children as they gain preliminary knowledge of topics such as types of vessels and cargoes to be visited, the activities of seafarers, and an overview of international trade. Moreover, promotional videos deepen the diversity and understanding of the lectures already conducted. Pre-projects are highly effective for shipyard and ship tours.

Children ask many questions about onboard life, although we rarely discuss the matter of salaries.

Recently, we emphasized ~~on~~ one of the interesting aspects of the working life of a seafarer, that is, the fact that the seafarer takes several months shore leave after completing a long assignment at sea.

4.2 Exciting features for children

The children were first surprised by the size of the merchant ship; when they moved to the bridge, they were excited to view through the window of the ship and by the sight of modern navigational instruments on the bridge. They eagerly used a professional binocular and viewed distant targets in the landscape through the window.

For example, when they visited a newly built ship in a shipyard, they were allowed to press the “AIR Horn” button on the bridge, and they were impressed by the loud whistle.

During the container terminal tour, they were impressed by the loading and unloading of containers on the ship, the container storage on the land, and the movement of the container on a truck, and so forth. Clearly, the basic understanding they received during the tours encouraged them further to take interest in maritime affairs and shipping. Given the current complex and efficient transportation of goods and fresh food as well as the convenience of purchasing, this basic education is expected to be crucial in order to understand the underlying process.

5. Conclusion

As a step toward broadening children’s interest in the maritime industry, the captains enlighten children about the function of ship in carrying important goods such as wheat, oil, and gasoline.

By striving to raise children's interest in the maritime industry, a wider understanding of the field of logistics will gradually advance. In addition, as the captains talk about the life of seafarers, children will develop a close connection with ships and seafarers, and they will understand the importance of preserving the natural environment of the sea.

Reference:

Advances in Ship Operation and Related Support System, "The Mariners' Digest". The Japan Shipping Exchange, Inc., Vol. 48, 2018, pages 8–13

"Kaiun", The Japan Shipping Exchange, Inc., Vol. 1095, December 2018, page 45–46 and 56–57



Fig.1 Captain's lecture (May, 2018)

Report on “Captain Returns to his alma mater”

Japanese Captains' Association
Vice president
Captain Kazuki Inoue Ph.D.
26 September 2019

Speaker

- Name : Kazuki Inoue Ph.D.
- Company :Vice president of Japan Captains' Association
- Career:
Previous Professor Tokyo University of Marine Science and
Technology
Working NYK LINE 32 years
On board around 17years (includes experienced
Shipmaster job around 5 years)



Copyright © YUUKI

Shipmaster

Container ship
 NYK Castor (6000TEU)
 LOA 299.9m
 B 42.0m
 D 23.9m
 Draft 14.0m
 DWT 82,275
 GT 76,847
 ME 72,000PS
 SPD 26.0kts



LNG (Membrane Tanks type)
 S.S. Aman Binturu
 LOA:130m
 B:25.7m
 Draft 6.8m
 GT16,366
 18,800M3(8200ton)



LNG Dream (MOS Type)
 LOA 289.5m
 B 49.0m
 D 27.0m
 Draft 11.4m
 GT 118,876
 DWT 71,845



Cape size bulker
 M.S. Kenryu maru
 LOA 297m
 B 50.0m
 D 26.7m
 Draft 19.0m
 DWT 108,000
 M Eng 19,200PS
 SPD 13.6kts



Tokyo University of Marine Science and Technology (TUMSAT)



Ship handling and maneuvering study and training by Ship Maneuvering Simulator



VTS operator education



IALA Recommendation
V-103 on Standards for
Training



MATRAIN at Klang city , Malaysia



Batam, Indonesia

5

Abstract

- The Japan Captains' Association (JCA) started its activities in 2000, and one of the programs we conducted is called "Captain returns to his alma mater."
- Until 2019, we had visited 190 schools, reaching a total of 26,515 children.
- Today, we report the outline of this program.

JCA offers courses to children in an easy-to-understand manner in topics including types of ship, seafarers' work, environmental problems around the sea, and importance of shipping.



At Simonoseki, JAPAN
(平成30年5月17日(木)第193回 下関市 梅光学院中学校)

Maritime day 2018

- Maritime education for kids



Hirosima, Japan at 8th July 2018



Rope works

Boat tour



Hirosima, Japan at 8th July 2018

As the captain talks about the life of the seafarers, the ships and seafarers will be close to life of children, and they will feel the importance of preserving the natural environment of the sea, through ship operation by captain's lectures.

JCA will use its assets to actively educate children and raise their interest in and concern about the oceans and marine industry.



Include 34 Girls

愛媛県今治市立朝倉中学校 at Imabari 18th July, 2018

From Children

●感想、講師への質問

私は、船の中でも英語をしゃべっていることを知らなかったため、英語やほかの教科の勉強もがんばろうと思いましたが、石油や石炭を船で運んでいたのだから、船に乗っている乗組員さんの日本語がよかったです。船での仕事は大変そうだけれど、とても楽しそうだなと思いました。船では時間ごとにやることが決まっているので、決められていることをほいほい知りました。日本は99.7%輸入に頼っていたので、もっと自国の産物が増えるといいなと思いました。石油や石炭がないと、生活していけないので、船で仕事をしたいとすごく頑張ります。

From Children

<p>おどろきの事実</p> <p>小林 七海</p> <p>私は、海事講演会に参加してびっくりしたことがたくさんあります。</p> <p>一つ目は、航海士の人が一週間に働くと長くて、外航の人は、一度船に乗ると6ヶ月間、ずっと仕事をしているということを知りました。アザトクに入社したなと思いました。でも、その分すごくやりがいを感じる仕事だと思いました。</p> <p>二つ目は、日本の国の面積と海の面積の割合です。国の面積は世界で六十二位なのに、対して海の面積は六位ということを知り、日本は世界の国々に比べて、海が国の面積よりとて広いんだなと思いました。</p> <p>三つ目は、船の種類です。コンテナ船やLPG船など私が見たことがなかった船を多く見たり運ばれたりしていることが分かりました。私は、今回教えてもらったことがいろいろな船があるのだからたくさん調べたいです。</p> <p>そして、今回の海事講演会で一番心に残ったことです。</p> <p>ロープワークでは、色々な結びなぞを教わって見ました。最初は、一つ一つが難しく、全然できなかった。たけと周りの方々に教えてもらって覚えて自分で結べるようになりました。とてもうれしかったです。</p> <p>私は、海事講演会に参加して船についてのたくさん知ることができました。今まで船のことは全く知らなかった。なので教えてもらったことは本当に良かったです。教えてもらったことは友達などに教えてあげたいと思います。また、参加したいと思います。</p>	<p>ルージングとロープワークです。船の上から見た風景はとて素晴らしいです。風を感じさせてくれます。また、またする機会があればいいです。</p>
--	--

Marine day event

At PCC with JSA



自動車を固定するラッシング作業を体験する子どもたち



積み付け見学では多くの参加者がカメラを構えた



ブリッジでは船長や航海士が航海機器について説明



From: Kaiun Aug,2019 No1103

Marine day event



Tour of a Ship's Bridge

From: KAIUN No.1104 Sep.2019

Container terminal

At the container terminal, the captain conducted a lecture by presenting a video regarding a seafarer's job and onboard life. After the children completed the tour of the container terminal yard, the manager of terminal operations introduced to them the marine container's loading and discharging operation with the help of a video.



下船後、岸壁の「ONE」リーファーコンテナで涼を取る
見学会の参加者

From: Kaiun Aug,2019 No1103



Shipyard

JSA and Shimonoseki Port Authority with the cooperation of a shipyard company, 120 elementary school children (aged 10 years) visited shipyard .



船台を滑り降りる様子。奥には地元幼稚園児や家族連れ、阪夙フェリーの見学ツアー参加者らが盛だ

From: KAIUN No.1104 Sep.2019



END

- Thank you very much for your cooperation
- Do you have any further questions?
- Have we met your expectations?



©yuuki

19

IMO sea line monitor



Virtual BOUY
(AIS buoy)

IZU-
OSHIMA

Sept.18, 2019 at Tokyo MARTIS (VTS)

ANNEX F

Agenda Item12 – Human Element Industry Group (HEIG)

Presented by Mr. David Appleton, Nautilus International, UK



See next page

HUMAN ELEMENT INDUSTRY GROUP

WELCOME – WHO WE ARE



WELCOME – WHO WE ARE

Non-Governmental Organisations at IMO holding
a special interest in people, including:

- International Chamber of Shipping
- Oil Companies International Marine Forum
- International Marine Pilots Association
- International Federation of Ship Masters' Associations
- Institute of Marine Engineering Science and Technology
- InterManager
- International Christian Missions Association
- International Transport Workers Federation
- The Nautical Institute

HUMAN ERROR OR HUMAN ELEMENT?

HUMAN ERROR

1. Human Error

- a. Skill Based Errors
 - i. Slips of Action
 - ii. Lapses of Memory
- b. Mistakes
 - i. Rule Based Mistakes
 - ii. Knowledge Based Mistakes

2. Violations

- a. Routine
- b. Situational
- c. Exceptional

Human error is an *unintentional* action or decision.

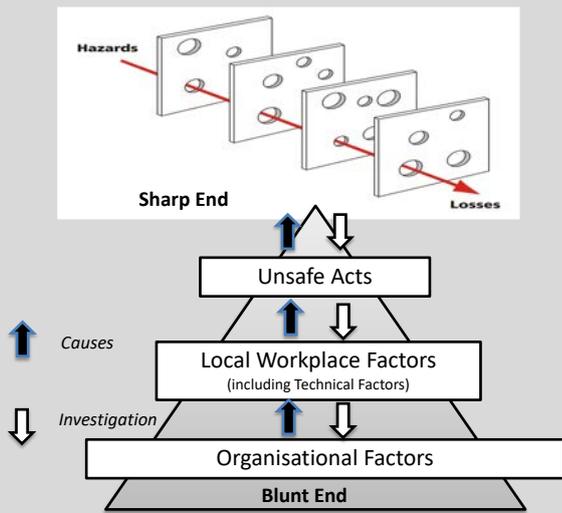
Violations are *intentional* failures – *deliberately* doing the wrong thing

(Source James Reason and UK HSE)

Do we now treat all human errors as malevolent violations?

ACCIDENT MODEL

WHAT'S BEHIND HUMAN ERROR?



‘Rather than being the main instigators of an accident, operators tend to be the inheritors of system defects created by poor design, incorrect installation and bad management decisions. Their part is usually that of adding the final garnish to a lethal brew whose ingredients have been long in the cooking’

Human Error by James Reason (1990)

After James Reasons Swiss Cheese Model

SO WHO IS PRONE TO HUMAN ERROR?

a) the human element is a complex multi-dimensional issue that affects maritime safety and marine environmental protection. It involves the entire spectrum of human activities performed by

shore based management, regulatory bodies, recognized organizations, shipyards, legislators,

.....and other relevant parties, all of whom need to cooperate to address human element issues effectively

IMO Resolution A 850 (20) Human Element Vision Principles and Goals for the Organisation

*other relevant parties.... **equipment designers, system designers, programmers, port operators, terminal operators, charterers, vetting organisations, industry bodies etc etc.....ME***

WHAT ELSE DOES A850 (20) SAY?

(b) the Organization, when developing regulations, should honour the seafarer by seeking and respecting the opinions of those that do the work at sea;

(c) effective remedial action following maritime casualties requires a sound understanding of human element involvement in accident causation. This is gained by a thorough investigation and systematic analysis of casualties for contributory factors and the causal chain of events;

(d) in the process of developing regulations, it should be recognized that adequate safeguards must be in place to ensure that a "single person error" will not cause an accident through the application of these regulations;

(e) rules and regulations addressing the seafarers directly should be simple, clear and comprehensive;

(f) crew performance is a function of individual capabilities, management policies, cultural factors, experience, training, job skills, work environment and countless other factors;

(g) dissemination of information through effective communication is essential to sound management and operational decisions; and

(h) consideration of human element matters should aim at decreasing the possibility of human error as far as possible.

SEAFARER HAZARD OR HERO?

Hazard

- *Ships are correctly designed, reliable and with minimal flaws*
- *Management systems reflect the operating environment perfectly*
- *The only problem is people not following the procedures or making other egregious errors*
- *Focusing on those errors will prevent incidents*
- *Work as imagined .. Safety 1*
(references Safety I and Safety II Erik Hollnagel)

Hero

- *Ships contain errors and compromises in specification, design, construction, system integration, build, testing and classification.*
- *Management systems contain errors and compromises in procedures, resource allocation, maintenance planning.*
- *The only way ships operate is because of those onboard who 'join the dots'*
- *Focus on what goes right*
- *Work as actually done ..Safety 2*

'After studying human unsafe acts within hazardous enterprises for more than three decades, I have to confess that I find the heroic recoveries of much greater interest and in the long run, I believe potentially more to the pursuit of improved safety in dangerous operations'

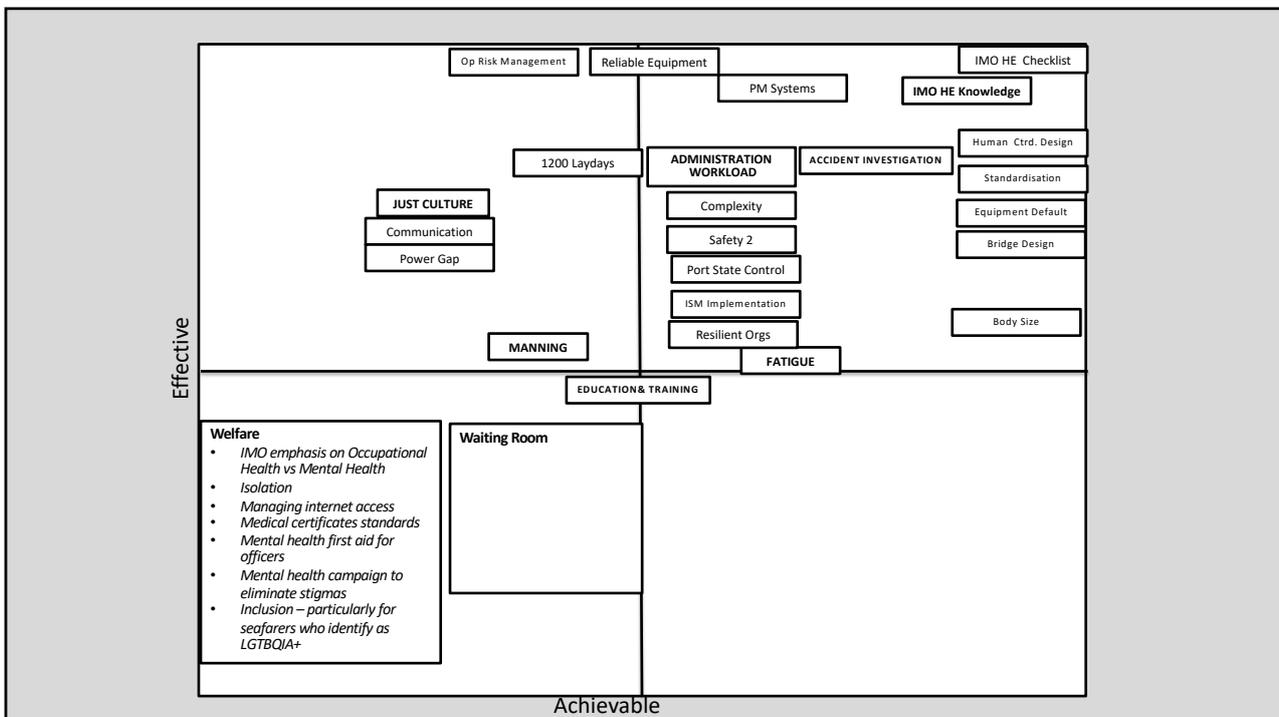
The Human Contribution, Unsafe acts, accidents and heroic recoveries James Reason 2008.

TERMS OF REFERENCE

1. Promote consideration of the wider scope of the Human Element as reflected in IMO Resolution A974 (23) 'Human Element Vision, Principles and Goals for the Organization'.
2. Encourage appropriate use of the standing agenda item on the "Human Element" at HTW.
3. Promote understanding of the Human Element through training and education.
4. Promote understanding of fatigue and the factors that influence fatigue.
5. Consider organisational factors that may affect safety and lead to incidents.
6. Consider the Human Element in the context of increasing levels of automation of ship systems, equipment and operations.
7. Liaise with IMO on the HE Project.

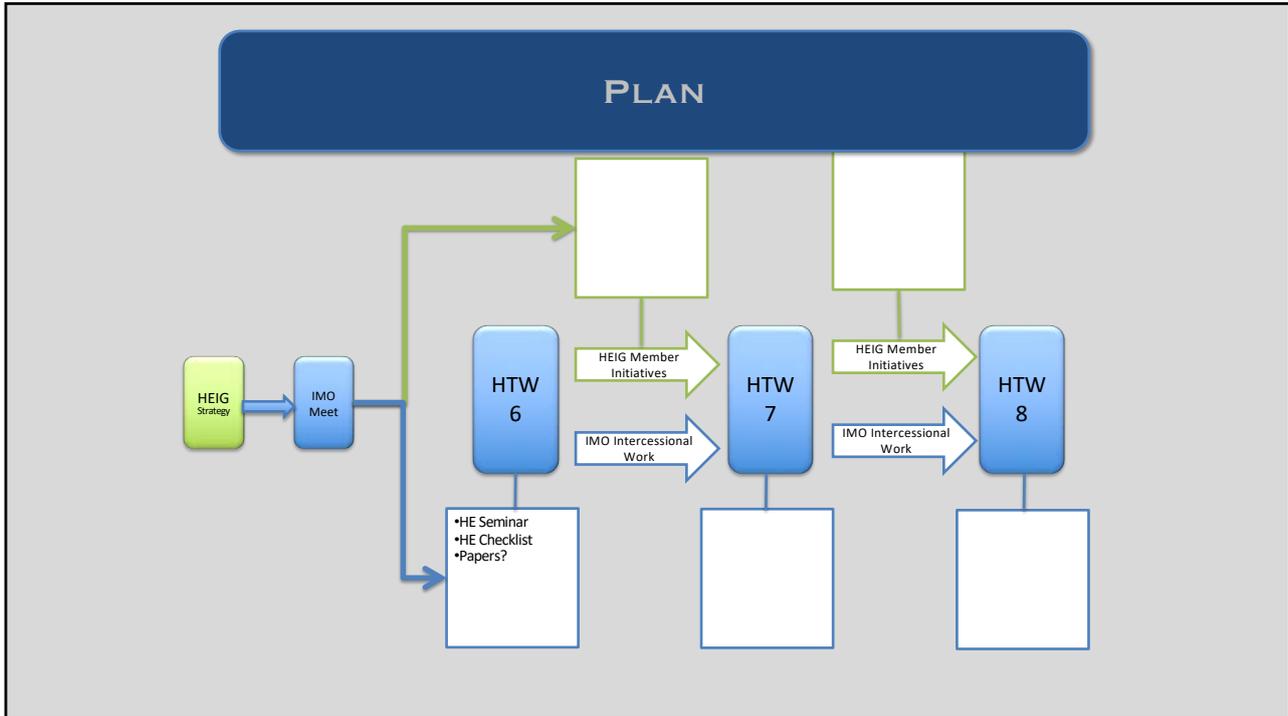
GOALS

- a) To have in place a structured approach for the proper consideration of human element issues for use in the development of regulations and guidelines by all committees and sub-committees.
- b) To conduct a comprehensive review of selected existing IMO instruments from the human element perspective.
- c) To promote and communicate, through human element principles, a maritime safety culture, security consciousness and heightened marine environment awareness.
- d) To provide a framework to encourage the development of non-regulatory solutions and their assessment, on the basis of human element principles.
- e) To have in place a system for identifying and disseminating maritime interests studies, research and other relevant information on the human element, including the findings of marine and non-marine incident investigations.
- f) To provide educational material for seafarers designed to increase their knowledge and awareness of the impact of human element issues on safe ship operations, and help them do the right thing.
- g) To provide a framework for understanding the very complex system of interrelated human element factors, incorporating operational objectives, personal endurance concerns, organizational policies and practices, and environmental factors, in order to facilitate the identification and management of risk factors in a holistic and systematic manner.



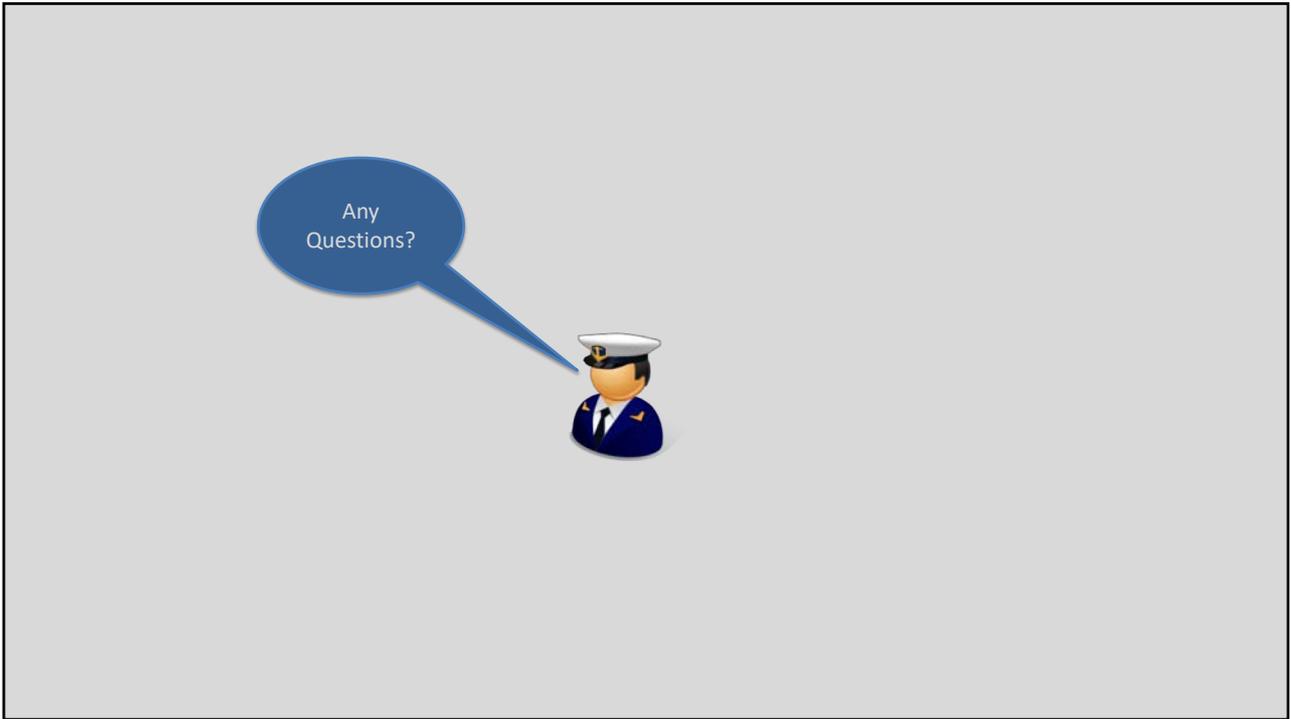
TOR 1 HE Promotion	TOR 2 HTW Agenda	TOR 3 Training & Education	TOR 4 Fatigue	TOR 5 Organisation	TOR 6 Technology	TOR 7 IMO Project
<ul style="list-style-type: none"> • IMO Human Element Knowledge • IMO Human Element Checklist • Just Culture 		<ul style="list-style-type: none"> • Accident Investigation • Education & Training • Power Distance 	<ul style="list-style-type: none"> • Fatigue • 1200 Laydays • Manning 	<ul style="list-style-type: none"> • Admin Burden • PM Systems • Business Model • Coms. • Op Risk Management • ISM Implement. • Resilient Organisations • Complexity • Safety 2 	<ul style="list-style-type: none"> • Human Centred Design • Reliable Equipment • Body Size • Bridge Design • Equipment Default • Standardistn. 	

CURRENT/FUTURE WORK



THE HUMAN ELEMENT CHECKLIST

- 65 proposals analysed.
- 1,240 responses
- 62% N/A
- 33% provided explanation for a “No” response
- 19% provided supporting details for a “Yes” answer
- 27% indicated that HE experts were consulted



ANNEX G

Agenda Item 13 – Regulatory Scoping Exercise for Maritime Autonomous Surface Ships (MASS)

Presented by Commodore Jim Scorer, Secretary General



See next page

THE IMO REGULATORY SCOPING EXERCISE ON MASS

By Commodore Jim Scorer, IFSMA Secretary General

The IMO in 2017 adopted Strategic Directions for the Organization, including one on the integration of new and advancing technologies in the regulatory framework - balancing the benefits derived from new and advancing technologies against safety and security concerns, the impact on the environment and on international trade facilitation, the potential costs to the industry, and their impact on personnel, both on board and ashore. With this in mind, the IMO has commenced work to look into how safe, secure and environmentally sound Maritime Autonomous Surface Ships (MASS) operations may be addressed in IMO instruments.

The Organization's senior technical body, the Maritime Safety Committee (MSC), endorsed a framework for a Regulatory Scoping Exercise, its work is now in progress, including preliminary definitions of MASS and degrees of autonomy, as well as a methodology for conducting the exercise and a plan of work.

As a first step, the scoping exercise will identify current provisions in an agreed list of IMO instruments and assess how they may or may not be applicable to ships with varying degrees of autonomy and/or whether they may preclude MASS operations.

As a second step, an analysis will be conducted to determine the most appropriate way of addressing MASS operations, taking into account, *inter alia*, the human element, technology and operational factors.

At the meeting for its 99th session of the MSC in May 2018 it established a correspondence group on MASS to test the framework of the regulatory scoping exercise agreed at the session and, in particular, the methodology, and report back to its next session, MSC 100 in December 2018. The Correspondence Group tested the methodology by conducting an initial assessment of SOLAS regulation III/17-1 (Recovery of persons from the water), which requires all ships to have ship-specific plans and procedures for recovery of persons from the water; SOLAS regulation V/19.2 (Carriage requirements for carriage of shipborne navigational equipment and systems); and Load Lines regulation 10 (Information to be supplied to the master). The Committee further invited interested Member States and international organizations to submit proposals related to the development of interim guidelines for MASS trials to its next session, MSC 100.

Speaking at the opening of the 100th MSC meeting, IMO Secretary-General Kitack Lim highlighted the importance of remaining flexible to accommodate new technologies, and so improve the efficiency of shipping, "while at the same time keeping in mind the role of the human element and the need to maintain safe navigation, further reducing the number of marine casualties and incidents". Following testing of the methodology by the correspondence group, the MSC approved the framework and methodology for the regulatory scoping

A Working Group was established for the first time to take the RSE forward at its landmark 100th session of MSC. At its completion, and having taken into account the views of the Correspondence Group a way ahead was found and it was finally agreed that the objective of the regulatory scoping exercise is to assess the degree to which the existing regulatory framework under its purview may be affected in order to address MASS operations. For the

purpose of the regulatory scoping exercise, " MASS" is defined as a ship which, to a varying degree, can operate independent of human interaction. To facilitate the process of the regulatory scoping exercise, the degrees of autonomy are organized as follows:

Degree one: *Ship with automated processes and decision support:* Seafarers are on board to operate and control shipboard systems and functions. Some operations may be automated and at times be unsupervised but with seafarers on board ready to take control.

Degree two: *Remotely controlled ship with seafarers on board:* The ship is controlled and operated from another location. Seafarers are available on board to take control and to operate the shipboard systems and functions.

Degree three: *Remotely controlled ship without seafarers on board:* The ship is controlled and operated from another location. There are no seafarers on board.

Degree four: *Fully autonomous ship:* The operating system of the ship is able to make decisions and determine actions by itself.

The list does not represent a hierarchical order and it should be noted that MASS could be operating at one or more degrees of autonomy for the duration of a single voyage.

I think it is worth stating at this stage that while technology has been a central focus of the autonomous Ships discussion, IFSMA and ITF have continually cautioned against neglecting one of the other key parts of the equation – people. “The human element plays a large part in the safety and viability of autonomous Ship operations and a key requirement is that any human presence should be sustainable.”

A number have also tried to rein in expectations regarding the development of regulations for autonomous vessels. Technological change can happen rapidly. Regulatory change, on the other hand, typically doesn't, and it is important that the marine industry work together ahead of regulation. This is the key to getting regulations right and fit for purpose, so with the process we are currently going through you should not expect a 'result' from the IMO in the short-term. The IMO has commenced working but this initial remit is not to amend regulations but to understand the impact the introduction of MASS will make to the current regulations. MASS operators should expect to work closely with local regulators, most of whom are taking a proactive approach.

The application of the regulatory scoping exercise is restricted to the applicability of the instruments under consideration and, as a first step, will identify provisions in IMO instruments which, as currently drafted:

1. apply to MASS and prevent MASS operations; or
2. apply to MASS and do not prevent MASS operations and require no actions; or
3. apply to MASS and do not prevent MASS operations but may need to be amended or clarified, and/or may contain gaps; or
4. have no application to MASS operations.

Once the first step is completed, a second step will be conducted to analyse and determine the most appropriate way of addressing MASS operations, taking into account, inter alia, human element,* technology and operational factors by:

1. equivalences as provided for by the instruments or developing interpretations; and/or
2. amending existing instruments; and/or
3. developing new instruments; or
4. none of the above as a result of the analysis.

The list of mandatory instruments related to maritime safety and security to be considered as part of the regulatory scoping exercise is set out here. It includes those covering safety (SOLAS); collision regulations (COLREG); loading and stability (Load Lines); training of seafarers and fishers (STCW, STCW-F); search and rescue (SAR); tonnage measurement (Tonnage Convention); Safe Containers (CSC); and special trade passenger ship instruments (SPACE STP, STP). These instruments will be reviewed on a regulation or rule level. Subsidiary mandatory instruments established under each parent instrument will also be considered to the level necessary to establish how they will be affected. The review of mandatory instruments was prioritized. In instruments containing both mandatory and non-mandatory parts, non-mandatory parts may be considered as part of the regulatory scoping exercise, when deemed necessary, to obtain a complete understanding of how the mandatory provisions are affected in order to address MASS operations (e.g. STCW Convention and Code). The initial review of instruments under the purview was conducted during the first half of 2019 by a number of volunteering Member States, with the support of interested international organizations. Stage one of the Exercise culminated at the beginning of September with an intersessional working group to examine the process with the aim of completing the regulatory scoping exercise in 2020 as planned.

With Stage one complete the Working Group agreed to move onto Stage 2 and it agreed the final report of Stage one would be presented MSC 101 in May this year and contain at least the following:

1. a list of IMO instruments included in the work;
2. a description of MASS and concepts of autonomy, automation, operations and manning;
3. a vocabulary for use in connection with further work on MASS;
4. a description of IMO instruments that:
 - are currently in force, but may preclude the operation of MASS;
 - would have no application to the operation of MASS if the ship is unmanned, as they relate to human presence on board;
 - do not preclude the operation of MASS, for example, by establishing equivalences or interpretations, and/or which may contain gaps and/or pose barriers, but may need to be amended in order to ensure safe, secure and environmentally sound MASS operations; and
 - recommendations for the future scope of work on MASS at IMO.

I very much regret that I am not at liberty to present the findings of Stage one to date as this is not allowed until agreed by the Maritime Safety Committee when the findings are agreed. However, I will keep you up to date from time to time as the work progresses in our Newsletter. Notwithstanding, generally speaking those of us at IFSMA who are representing you on this issue are content with how the exercise is going. But we continue to push one issue. The way in which the Exercise is being undertaken is very much from a large ship perspective. As you are aware that as well as the MSC doing the exercise, work is also being undertaken in the

Legal Committee based on exactly the same criteria as that being undertaken by MSC. It is from a legal perspective that we do have an issue.

The current framework of maritime law, including national legislation and international treaties, was developed before MASS was envisaged. “The legal regime is decades, if not a century-and-a-half out of date....As unmanned ships were never contemplated until recently, legislation says manning is essential for having a ship that is seaworthy, classified, and authorised to operate in national“. Therefore, significant changes and updates, accompanied by a very different approach to standard shipping safety and security issues, will be necessary if the revised framework and related instruments are to address adequately all likely associated and often integrated risks, threats, hazards and vulnerabilities.

There are higher level legal issues under **Article 94 of UNCLOS (Duties of a flag State)** so far as both the “*seaworthiness*” of MASS are concerned (Article 94 (3)(a) including the manning of unmanned MASS, under Article 94 (2)(b), (3)(b) and (4)(b) & (c), also where “*good seamanship*” is required, as is also made clear in **COLREGs Rule 8 (Action to avoid Collision)**. It is unclear to IFSMA how any algorithm can properly address *good seamanship*, where there has to be a sentient human being in the loop of “Command and Control” of a MASS; like any other ship. What I mean by sentient is a person who is able to perceive, feel or see things.

IFSMA has suggested that these “high level” important public International legal issues are raised by the IMO Secretariat with the Division for Ocean Affairs and the Law of the Sea, DUALOS, at the United Nations in NYC, since these key issues will , in our opinion, concern not only all flag States @IMO, but also:-

- *All Seafarers, on All Voyages, on All Ships and on All Seas....*

That is, not only large Merchant Ships, on International voyages, under **SOLAS Chapter 1**, but also All Ships, on All Voyages, on All Seas under **SOLAS Chapter V (Safety of Navigation)**.

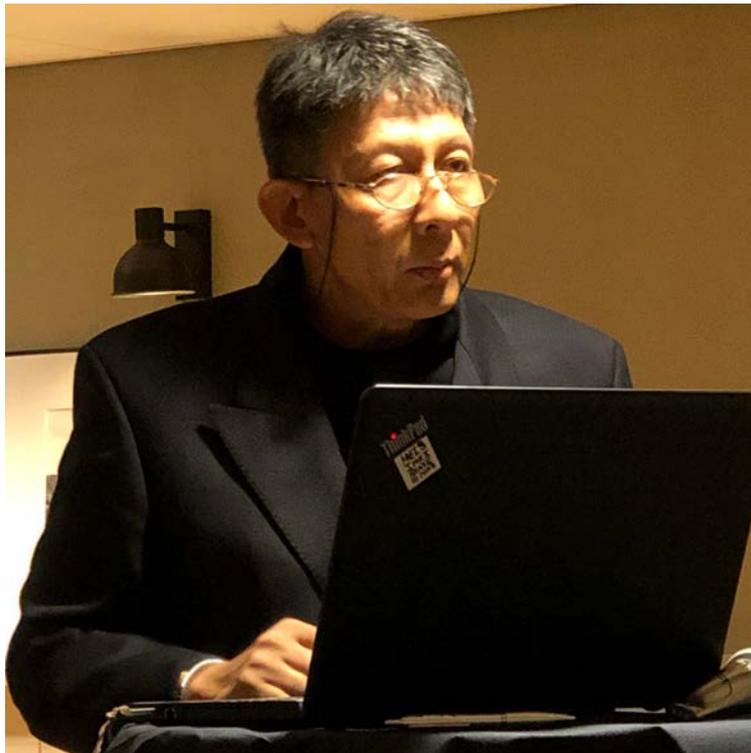
In other words, *All Seafarers....* This is an issue we will continue to pursue.

Finally, the initial Working Group set up for the Exercise by MSC took note of the significant number of trials involving MASS around the world and proposed that there needs to be some provisional principles for the development of Guidelines on MASS Trials.. The principles include ensuring that such guidelines should be generic and goal-based and taking a precautionary approach to ensuring the safe, secure and environmentally sound operation of MASS. The Committee therefore invited interested parties to submit proposals to the next session of the Committee, taking into account these principles. The results will be published when completed.

ANNEX H

Agenda Item 14 – Safety of Navigation Management in Malacca Strait

Presented by Captain Dwiyono Soeyono, President, Indonesian Seafarers Federation.



See next page

SAFETY NAVIGATION MANAGEMENT AT MALACCA STRAIT

IMPROVEMENT AND ENHANCEMENT VESSEL's SAFETY NAVIGATION MANAGEMENT at MALACCA STRAIT as an OBLIGATION
(BY INDONESIAN VOLUNTARY DEEP SEA PILOTAGE ASSISTANCE)

45th IFSMA AGA
26-27 SEPTEMBER 2019
RADISSON BLU SEASIDE HOTEL – HELSINKI, FINLAND



Capt. Dwiyono Soeyono
Expert of Merchant Maritime Safety Management
Indonesian - Merchant Marine Academy



IFSMA MOTTO: UNITY FOR SAFETY AT SEA



ADDRESS MARITIME SAFETY MESSAGE AS MARITIME PROFESSIONAL MORAL OBLIGATION FROM INDONESIA

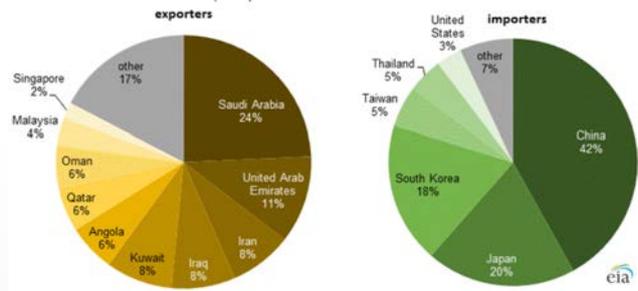
IN THE GREAT MOMENT OF INTERNATIONAL MARITIME DAY CELEBRATION
26th September 2019

STRAIT OF MALACCA IS HEART OF TRADE ROUTE

Major crude oil trade flows in the South China Sea (2016)
total 15.0 million barrels per day



South China Sea crude oil trade flows (2016)
total trade: 15 million barrels per day



- More than 90 percent of crude oil volumes flowing through the South China Sea in 2016 transited the Strait of Malacca, the shortest sea route between suppliers in Africa and the Persian Gulf and markets in Asia, making it one of the world's primary oil transit chokepoints.
- In addition, a significant amount of crude oil (about 1.4 million b/d) passes through the strait on its way to Singapore and the west coast of Peninsular Malaysia, where it is refined before transiting the South China Sea in the form of petroleum products.

Source: <https://www.maritime-executive.com/article/strait-of-malacca-key-chokepoint-for-oil-trade>

SHIPPING TRAFFIC, STRAIT OF MALACCA

Shipping traffic at Malacca Strait increased year by year, dominated by container vessel, **tanker vessel** and bulk carrier.

INTRODUCTION

- Annually more than 100,000 ships passed through the Straits of Malacca and Singapore (SOMS);
- In the Strait of Malacca, more than 80,000 ships passing through reported to the Port Klang VTS Centre and on average, 4947 (2010-2017) are deep draft vessels and carrying oil and chemical cargoes;

	2007	2017
Total	70718	84456
Tanker	14931	20629
DDVs	3753	6711

MARINE DEPARTMENT
188-1728
www.marine.gov.my

Type of Vessel / Year	2009	2010	2011	2012	2013	*2014
VLCC / Deep Draft	4221	4333	4539	4732	4825	5225
Tanker Vessel	16398	16247	16233	17345	18296	19335
LNG Carrier	3330	3579	3830	4014	4248	4658
Cargo Vessel	8560	8445	7996	7950	7613	7126
Container Vessel	22310	24806	25552	24639	24658	24615
Bulk Carrier	11186	11642	10851	11678	12658	12695
Ro-Ro	2394	2624	2545	2980	2998	3194
Passenger Vessel	1250	1071	877	861	1063	1169
Livestock Carrier	43	45	47	38	55	31
Tug / Tow	598	545	414	529	563	855
Government Vessel	67	37	57	50	58	25
Fishing Vessel	61	20	20	52	27	135
Others	941	739	577	609	911	991
TOTAL	71359	74133	73538	75477	77973	80055

Data from STRAITREP records, Marine Department of Malaysia, Jan 2014

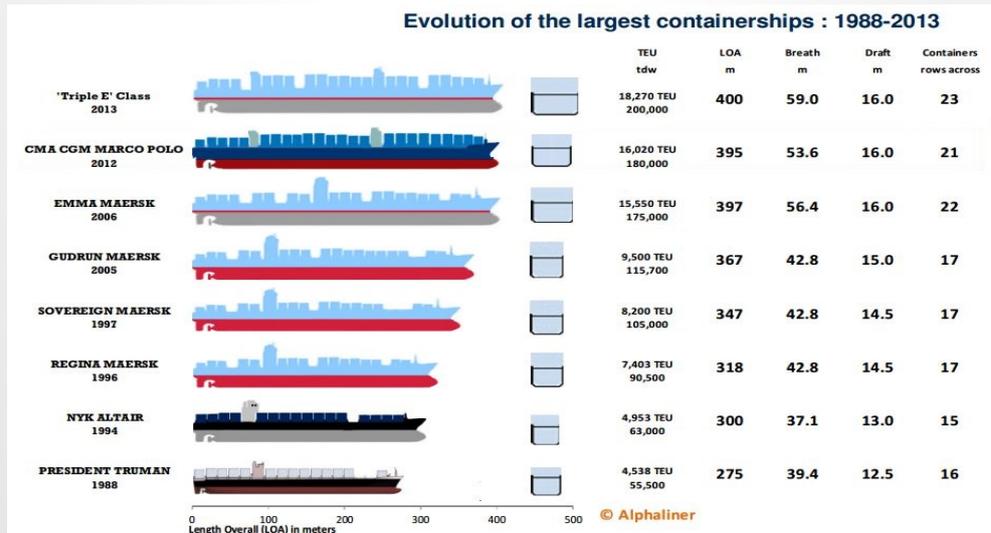
SHIPPING TRAFFIC, STRAIT OF MALACCA

SOURCE: [HTTPS://WWW.MARINEVESSELTRAFFIC.COM](https://www.marinevesseltraffic.com) AUGUSTUS, 21 2019 AT 14.33 WIB



FLEET SIZE INCREASE SIGNIFICANTLY

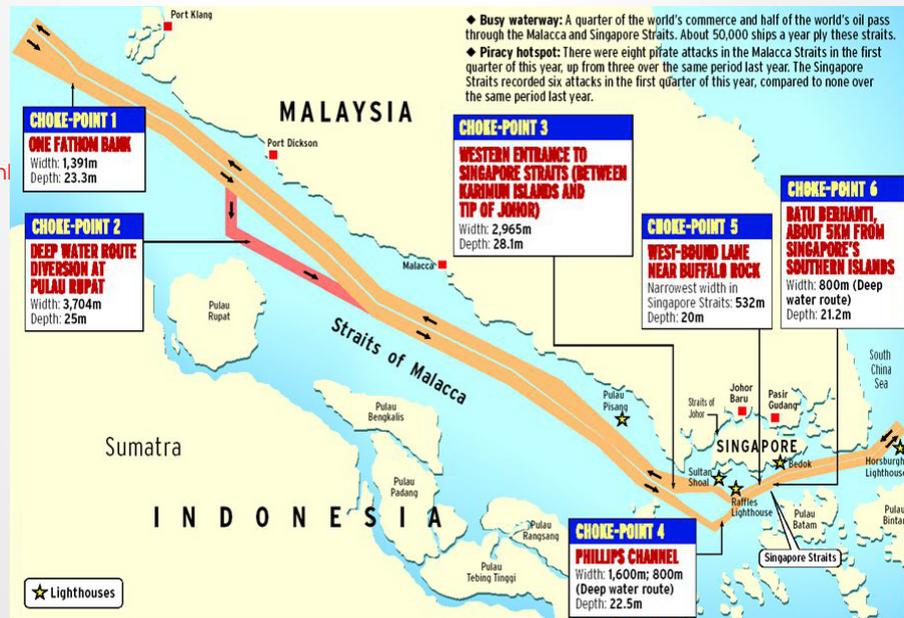
**Bigger fleet,
greater risk**



Source: <https://uiscbu.com/2014/10/15/the-evolution-of-container-ship-size/>

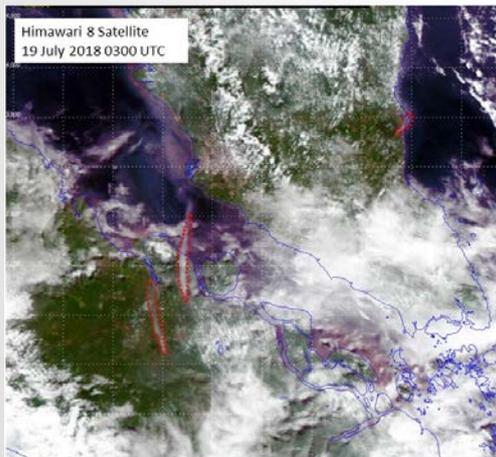
STRAIT OF MALACCA CHOKE POINTS - AS NAVIGATIONAL CHALLENGES

- ✓ **Natural hazards:**
narrow passage, shallow sand bank, numerous shipwrecks
- ✓ **Density of the traffic navigation aids**
- ✓ **Competing maritime economy activities**
- ✓ **Threats to maritime security**
(not significant issue anymore)

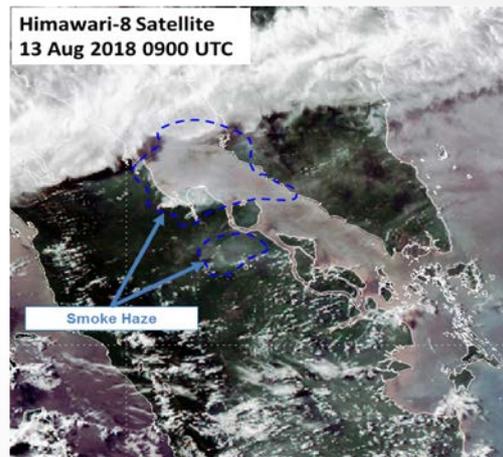


Source: <https://cil.nus.edu.sg/wp-content/uploads/2017/10/SOMS-Sun-Zhen.pdf>

SMOKE HAZE SATELLITE MONITORING



Smoke plumes from hotspot in northern Riau (marked by red dotted lines) that were blown across the Strait of Malacca



Smoke plumes (marked by blue dotted lines) observed around hotspot clusters detected in northern Riau

Source: <http://osmc.asean.org>

OIL SPILL — RISK INCREASED FOR EAST BOUND VESSELS

SATELLITE REMOTE SENSING



Ocean oil pollution is a major environmental concern that affects many countries in the world.

- ✓ It has been reported that operational tanker oil discharges (i.e. dumping of oil during tanker cleaning operations) form about 45% of the total ocean oil pollution in the world while ship accidents and oil platform accidents contribute only 5% and 2% respectively.
- ✓ Hence, deliberate oil emissions from ships impose a much greater long-term threat to the ocean environment than those from big ship accidents.
- ✓ Monitoring illegal ship discharges is thus an important component in ensuring compliance with the marine protection legislation and the general protection of the coastal environment.

Source: <https://crisp.nus.edu.sg/~research/oilspills/oilspills.htm>

MANDATED BY UNCLOS ARTICLES

UNCLOS ARTICLE 43

User States and States bordering a strait should by agreement cooperate:

- a) In the establishment and maintenance in a strait of necessary navigational and safety aids or other improvements in aid of international navigation;**
- b) For the prevention, reduction and control of pollution from ships**

PART XII

PROTECTION AND PRESERVATION OF THE MARINE ENVIRONMENT

SECTION 1. GENERAL PROVISIONS

Article 192 *General obligation*

States have the obligation to protect and preserve the marine environment.

PILOTAGE SERVICE ON THE STRAIT OF MALACCA AND SINGAPORE

(WHERE ALL OF THE PILOTS ARE IMMOA MEMBERS AS PROFESSIONAL ORGANIZATION FOR SEAFARERS OFFICERS)



Indonesian Maritime Pilot (INAMPA) as member of International Maritime Pilot Association (IMPA)

Reasons and Justifications for Deep Sea Pilotage on Straits of Malacca-Singapore (SOMS)

PT. Pelabuhan Indonesia I (Indonesia Port Corporations-I) as state-owned enterprises of Republic Indonesia designated by Decision of Director General Of Marine Transportation concerning Issuance of Permit To Conduct Pilotage and Towage Service On Malacca & Singapore Strait Since 2015.

Since 2008 we have started Pilotage Service at VPS SOMS.



MANDATED BY UNCLOS ARTICLES

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



OUR MISSION:
TO BE NUMBER ONE IN MARITIME MANAGEMENT AND MARITIME BUSSINESS IN INDONESIA

OUR VISION:
PROVIDING INTEGRATED, QUALITY AND VALUE ADDED MARITIME SERVICES TO SPUR THE REGION'S ECONOMIC GROWTH

**AFFORDABLE PORT SERVICES TO MAKE LOGISTIC COSTS CAN BE REDUCED,
MARINE SERVICE BY PELINDO 1 IS THE BEST CHOICE**

WE PROVIDE A GUARANTEE:
1. SERVICE LEVEL AGREEMENT,
2. SERVICE LEVEL GUARANTEE

MARINE ADVISORY / SHIP-TO-SHIP TRANSFER / NAVIGATIONAL AUDIT

Marine Advisory

The Straits of Malacca and Singapore (SOMS) is one of the world's busiest shipping lanes. Indonesia, Malaysia and Singapore recognize the importance of the SOMS for international navigation and are committed to ensure navigational safety, protecting its marine environment and facilitating safe transit of vessels through the SOMS.

At the 43rd session of the Tripartite Technical Experts Group of Indonesia, Malaysia and Singapore on safety of navigation in the SOMS in Sep 2018, it was agreed amongst the littoral states that the Voluntary Pilotage Services (VPS) in the SOMS will take effect on 1 Jan 2019. The Guidelines state that VPS in the SOMS are to be provided by Straits Pilots certified by the relevant Authority in each littoral state for its own candidates. In Singapore, the relevant Authority is the Maritime and Port Authority of Singapore (MPA). Please click here for [details](#).

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



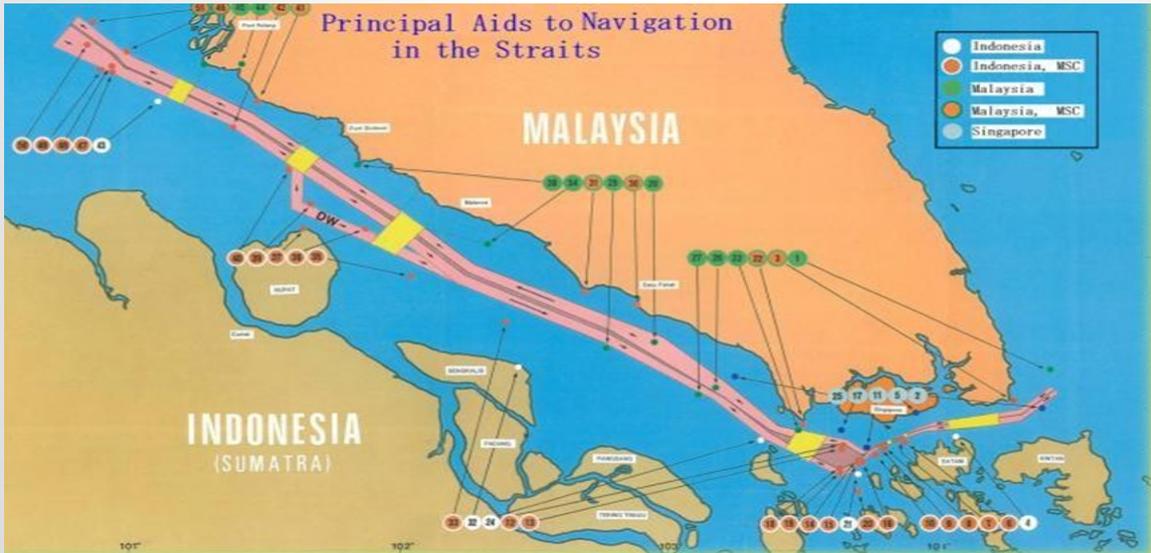
STRAIT OF MALACCA AND SINGAPORE



Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



PRINCIPAL AIDS TO NAVIGATION IN THE STRAITS OF MALACCA



Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



COOPERATION AGREEMENT

Cooperation Agreement
 between
PT. Pelindo 1 (Persero)
 with
Indonesian National Navy Army
 concerning
Security Support in Pilotage Implementation in the Strait of Malacca – Singapore Strait

The Scope of Cooperation Agreement:

1. Empowerment Western Fleet Quick Response (WFQR) to ships that use pilotage services of PT. Pelindo 1 (Persero) from the possibility of danger of Piracy, Theft, Sabotage and Terrorism during sailing across the waters of Malacca Strait-Singapore Strait.
2. The security support provide by the Indonesian Navy national Army was commenced during the scouting process, since the waveguide on board until the waveguide boarded the ship.
3. Empowering all bases and or posts and facilities belonging to the Indonesian Navy National Army located in the Malacca Strait-Singapore Strait as a security monitoring base.

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



Senior Marine Advisory / Pilotage Service on the Straits of Malacca and Singapore

The straits narrow pathway and shallow areas poses, we are fully **care to avoid a potential all fail navigation (collision, grounding or oil spill to occur)**, including addition piracy or hijack and the most happening in area on the Straits of Malacca The service are :

1. Pilotage Service for the ship passing the Straits of Malacca and Singapore (east bound) POB at Northern Part of Berhala Island 03° 54' 35" N / 099° 32' 77" E (before of One Fathom Bank) and the Pilot disembarking point are :
 - a. Karimun STS Transfer area. or return way
 - b. Nipa Transif Anchorage Area (NTAA). or return way
 - c. Nongsa / Batam island.
 - d. Horsburgh Lh (01° 35' 00" N / 104° 35' 00" E). or return way
 - e. Port of Kuala Tanjung, Port of Dumai and Sungai Pakning (Bengkalis Strait). or return way
2. Pilotage Service for the ship passing the Straits of Malacca and Singapore (west bound) POB at Horsburgh Lh (01° 35' 00" N / 104° 35' 00" E) to Northern Part of Berhala Island 03° 54' 35" N / 099° 32' 77" E (before of One Fathom Bank), Karimun STS Transfer area, STS Nipa (NTAA), Durian Strait, Batam Port, Kuala Tanjung, Port of Belawan, Port of Lhokseumawe, Port of Dumai and Sungai Pakning (Bengkalis Strait). or return way

OFFICE & ORDER-1 :

PIC : Capt. Satriya
Phone : +6281261711190
Email : marineservice@pelindo1.co.id
dspsons@pelindo1.co.id

OFFICE & ORDER-2 :

PIC : Capt. DWIYONO SOEYONO
Phone : +628111663324
Email : suyowtyo@gmail.com

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>

PELINDO 1
INDONESIA GATEWAY

SUPPORTING FACILITIES

Our Facilities

All our pilot building equipped with electronic navigation aid : Marine VHF, Electronic Chart System (ECS)
 Radar, AIS Receiver, SSB, etc
 Radio Operator Active and update for all of information in 24 hours

Our own 6 charterer assist tug
 3x unit with total 33,300 HP
 Last build 2013
 All equipped with active FP Monitor (Foam & Co2 Material)
 1x 2000 HP, 1x 2000 HP, 1x 2000 HP

6 unit our assist tug standby for
 Piloted by The Coast of
 Malacca and Singapore
 2 unit = 6000 HP on Belawan
 Near to One Fathom Bank,
 2 unit = 7500 HP on STS Kalimantan
 2 unit = 8000 HP on STS Nias

Our Facilities

We are in field with
 Vessel Traffic Service (VTS) Batam and VTS Belawan
 VTS is a marine traffic monitoring, who integrated ship traffic from one lathum bank until harbours

Our Facilities

Oil Boom

Oil Skimmer

Marine Police

Navy

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>

PELINDO 1
INDONESIA GATEWAY

SUPPORTING FACILITIES

Our Facilities

deep sea pilot

All our pilot building equipped with electronic navigation aid : Marine VHF, Electronic Chart System (ECS)
 Radar, AIS Receiver, SSB, etc
 Radio Operator Active and update for all of information in 24 Hours

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



SUPPORTING FACILITIES



**Our own & charterer assist tug
19 unit with total 53.100 HP
Last build 2012
All equipped with active FP Monitor
(Foam & Co2 Material)
Oil Boom, Oil Skimmer, Oil Dispersant
(Absorbents & Sodium Silicate)**



**6 unit our assist tug standby for
Pilotage In The Straits Of
Malacca and Singapore
2 unit = 6400 HP on Belawan
near to One Fathom Bank,
2 unit = 7500 HP on STS Karimun
2 unit = 8000 HP on STS Nipa**



Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



SUPPORTING FACILITIES

**Our own Pilot Boat & Mooring Boat
30 unit steel plate and fibre material with Maximum Speed 25 knots
Last build 2011
All equipped with GPS, Radar & Arpa
All Pilot equipped with safety equipment
(Life Jacket, Handy Talky, Pilot Portable Unit & GPS Portable)
Pilot Service Car complete with Portable VHF**

Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



SUPPORTING FACILITIES

Oil Boom



Oil Skimmer



Marine Police



Navy



Source: <https://www.pelindo1.co.id/en/deep-sea-pilot/Pages/About.aspx>



THANK YOU!

UNITY FOR SAFETY AT SEA



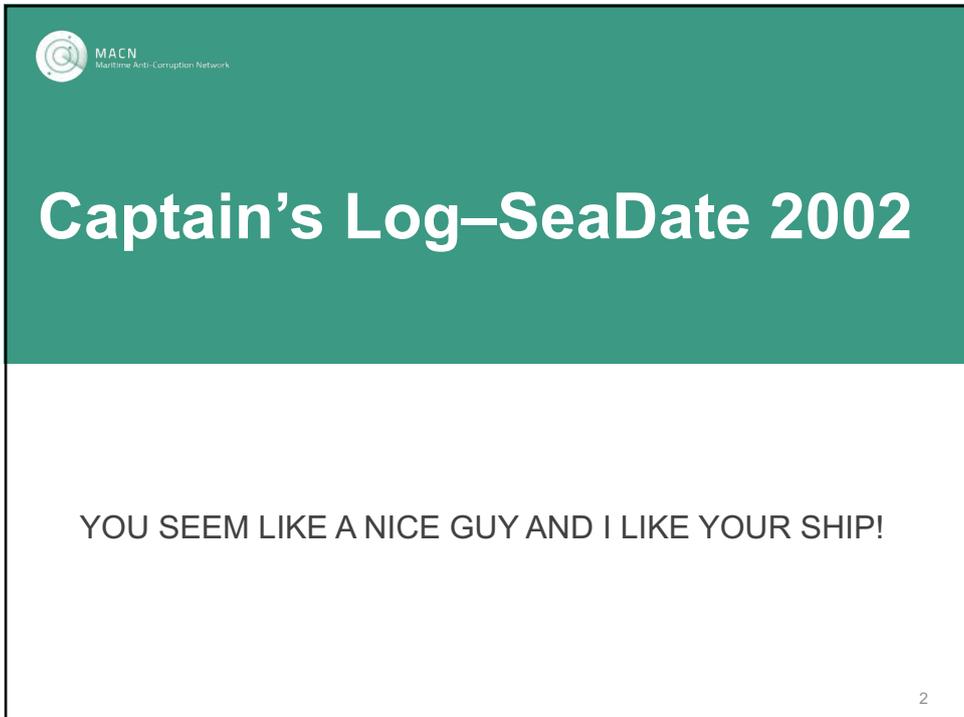
ANNEX I

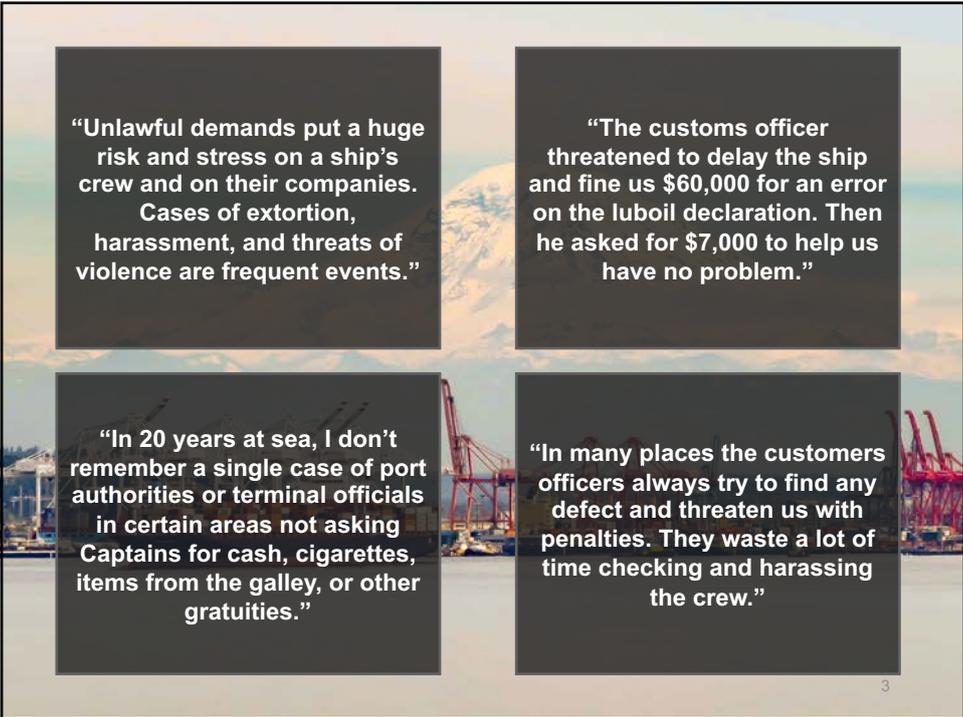
Agenda Item 17 – Maritime Anti-Corruption Network (MACN)

Presented by Captain Vivek Menon. Guest speaker from Denmark.



See next page





“Unlawful demands put a huge risk and stress on a ship’s crew and on their companies. Cases of extortion, harassment, and threats of violence are frequent events.”

“The customs officer threatened to delay the ship and fine us \$60,000 for an error on the luboil declaration. Then he asked for \$7,000 to help us have no problem.”

“In 20 years at sea, I don’t remember a single case of port authorities or terminal officials in certain areas not asking Captains for cash, cigarettes, items from the galley, or other gratuities.”

“In many places the customers officers always try to find any defect and threaten us with penalties. They waste a lot of time checking and harassing the crew.”

3



Corruption – a global issue

10%

5%

4

MACN
Maritime Anti-Corruption Network

Shipping: A Key Part of Global Trade

- **Shipping makes a positive contribution to countries' economic development:**
 - 90% of all cargo is transported on ships
 - Shipping is the safest and most environmentally-responsible way to transport goods
- **Shipping is a complex part of the trade chain:**
 - Dispersed operation
 - Highly regulated
 - Operates in many different jurisdictions
- **Shipping is also a risky business:**
 - Frequent and multiple contacts with government officials makes it prone to corruption risks
 - Risks of delays, safety for the crew and ship, and commercial pressure leave shipping vulnerable to corrupt demands





5

MACN
Maritime Anti-Corruption Network

Corruption – a working environment issue

- Seafarers are **more stressed** when calling countries prone to corruption
- In many parts of the world, the requests for **petty corruption are common**, and the consequences for not providing anything can be **severe**
- The risk for an **unsafe working environment** increases significantly if the company does nothing.
- Many Masters first get support from the company, but if something happens the Masters get blamed for not **"giving them what they want"**
- It is mostly stressful when the port officials demand cash or when there is a **genuine error onboard** and if the Master is expected to solve the situation

A crew member says:

"Port officials coming onboard act as they almost go shopping onboard. It is not theirs and it is the ship's property! "

6

 **MACN**
Maritime Anti-Corruption Network

Safety comes first!

Definition of duress: *Circumstances in which individuals are left with no alternative but to make payments in order to protect against loss of life, limb or liberty.*

- E.g. The Captain is the ultimate decision-maker and that he/she is responsible for the vessel and the crew. The Captain may feel under duress without being at gunpoint.

Duress can take many forms:

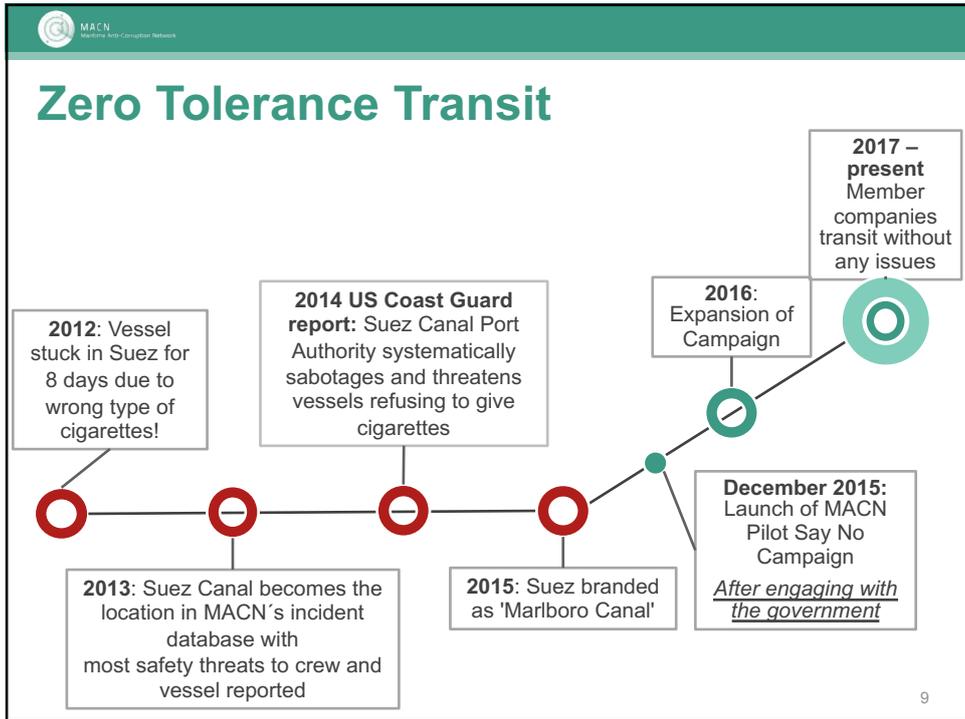
- Ex: Physical threats in relation to inspections
- Ex: A Pilot requests a payment and the Captain is left with no alternative but to make payments in order to protect him-herself and others, he/she can make the payment – safety always comes first.
- OBS! Economic duress or "commercial pressure" - i.e. delays in ports are excluded and there is no legal protection for these situations.

7

 **MACN**
Maritime Anti-Corruption Network

MACN's journey

8



MACN
Maritime Anti-Corruption Network

MACN governance

MACN Secretariat

- MACN is a member-led initiative and BSR provides the Secretariat function
- The MACN Secretariat is responsible for progressing with MACN's strategic workplans and managing MACN's day-to-day work, including with its members, third parties, and funders.



MACN Steering Committee

- The Steering Committee consists of MACN members.
- The Steering Committee reflects the diversity of MACN members, taking into account factors such as industry segment, company size and country of origin.



11

MACN
Maritime Anti-Corruption Network

MACN 2019: 122 Participating Members

90 Regular Members



32 Associate Members





MACN's Strategy: the Three Cs

We achieve our ambition through goals and objectives divided into three pillars: Collective Action, Capability Building and Culture of Integrity

Through this strategy, MACN aims at becoming a **game changing initiative**.

- **Capability Building**
Providing industry-leading innovative solutions to our members
- **Collective Action**
Driving and leading sustainable change in the operating environment
- **Culture of Integrity**
A recognized contributor to integrity standards in the industry and society



MACN's workstreams

MACN
Maritime Anti-Corruption Network

Capability Building

- MACN members created the **MACN Anti-Corruption Principles**, which guide their activities internally and should be implemented as part of each member's compliance program.



- MACN members **submit annual self assessments**
- MACN supports the membership with tools** e.g. integrity training toolkit, risk assessments, guidance on incentives, and frequent webinars
- Industry segment working groups** addressing industry specific issues



15

MACN
Maritime Anti-Corruption Network

Collective action

- MACN believes sustainable changes in the operating environment will only take effect if they are **enabled and supported by key stakeholders**
- MACN collective action programs include **root cause analyses** and implementation of **recommended actions** that tackle corruption in ports and across the maritime supply chain.



ARGENTINA
New regulatory framework, entered into force on November 2017

NIGERIA
Implementation of new procedures and in-port integrity training for over 570 government officials

SUEZ CANAL
Collective 'Say No' Campaign implemented

INDONESIA
New container tracking IT system implementation and education

***INDIA**
Next project in the pipeline

Implementation Partners

Recognition from



Empowered lives. Resilient nations.

16

 MACN
Maritime Anti-Corruption Network

Collective Action Argentina 90



17

 MACN
Maritime Anti-Corruption Network

Collective actions – results

Argentina	<ul style="list-style-type: none">• 90% reduction of corrupt demands• More efficient and transparent port clearance system <p>Result: More efficient trade and good efforts are spreading</p>
Egypt	<ul style="list-style-type: none">• Strategically important hot spot for the industry• The campaign has decreased the frequency of demands and made it easier for Captains to say No <p>Result: Collective power works!</p>
Nigeria	<ul style="list-style-type: none">• Concrete tools to improve practices in multiple ports• Transparent dialogue with top leaders in Nigeria• Periodic improvements <p>Result: MACN companies successfully reject corrupt demands</p>
Indonesia	<ul style="list-style-type: none">• Knowledge sharing between government stakeholders and the private sector, though multi stakeholder dialogue and awareness raising Integrity training conducted for port officials and local business - leading to raising integrity awareness during port operations <p>Result: Improved Governance - Upgraded container tracking system leading to less paperwork, better transparency, and improved efficiency</p>

18



Culture of Integrity

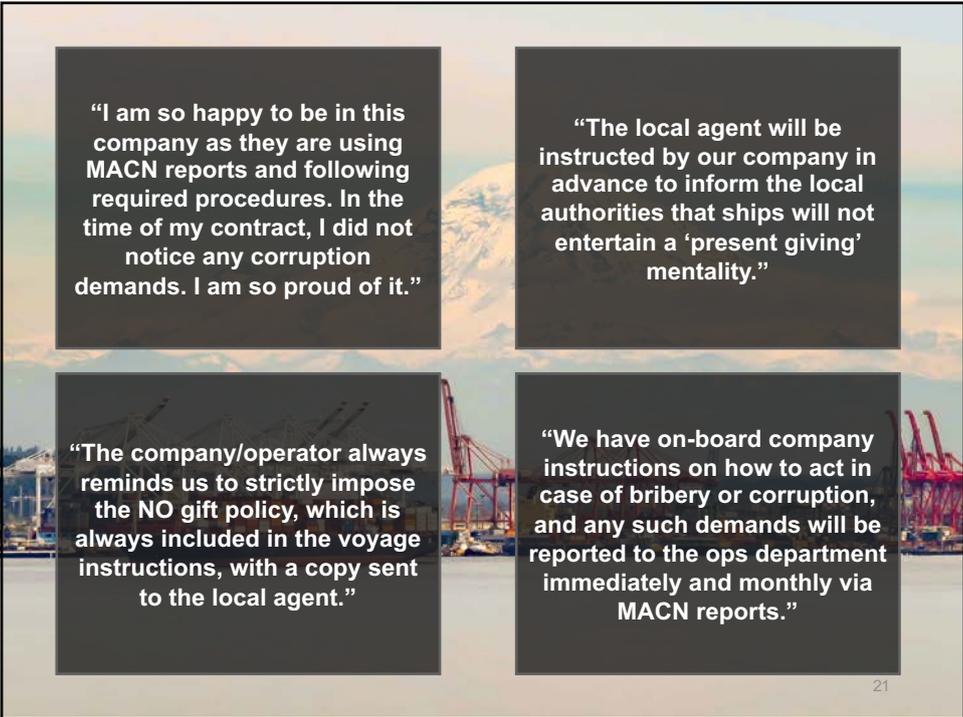
MACN recognized as a contributor to integrity standards in the industry and society



- In 2017, MACN formed a cross industry working group with **prominent maritime associations**. The group has submitted two papers to the International Maritime Organization (IMO)
- 2019's submission was supported by member states and the issue of maritime corruption has been **formally put on IMOs agenda**.
- **It has been an important milestone to get this form of institutional support and an international platform to work from.**
- MACN launched its **MACN Integrity Champion Training** in 2016 – a tailor-made training for **port officials** that has been rolled-out in Nigeria and Indonesia. Over 1400 officials have been trained.



Impact of MACNs work



“I am so happy to be in this company as they are using MACN reports and following required procedures. In the time of my contract, I did not notice any corruption demands. I am so proud of it.”

“The local agent will be instructed by our company in advance to inform the local authorities that ships will not entertain a ‘present giving’ mentality.”

“The company/operator always reminds us to strictly impose the NO gift policy, which is always included in the voyage instructions, with a copy sent to the local agent.”

“We have on-board company instructions on how to act in case of bribery or corruption, and any such demands will be reported to the ops department immediately and monthly via MACN reports.”

21



www.maritime-acn.org



Thank you!

ANNEX J

Agenda Item 19 – Action & Control, Physical & Mental Action, Regulation of Activity or Freedom of Actions

Presented by Dimitar Dimitrov, Bulgarian Shipmasters' Association



See next page

Action and Control, Physical and Mental Action, Regulation of Activity or Freedom of Actions

**By Dimitar Dimitrov
Bulgarian Shipmasters' Association**

All human activities have a dual nature. The physical one is the primary with which we usually bind our everyday life. People see the physical side of activities of others surrounding them. This physical consequence is always preceded by mental activity which in general is planning, acting and evaluating. There are physical actions which are the result of instant reaction, again created on a mental level that is to say the physical is secondary to primary mental action.

The main purpose of carriage of goods at sea is the physical movement of cargo from one place in the world to another. Ships are navigated by humans through their physical actions preceded by their mental work in planning, execution and analysis of the carriage. Core activity of the ship master at sea is to manage the ship principally in navigation but today in other aspects. The other participants in the process of carriage usually see the physical actions of the captain, movement of the ship and loading, carriage and discharging of goods. That activity is based on theoretical qualification, experience and a many other factors directly or indirectly connected with the whole process.

One of the critical moments during maritime transport is the manoeuvring of ships to come alongside in a port or to depart from there as well as passing in narrow waters with heavy traffic.

Manoeuvres of ships are physically achieved by captains after preliminary preparation and passage planning and using special advisors as such maritime pilots. Again the visible part is the physical approach of the vessel to the port, manoeuvring and coming alongside.

Behind that objective reality there are complicated connections and relations most of them developed uniquely for every single situation, notwithstanding how identical are manoeuvres and the participants in them.

A well-established practice is that whereby maritime pilots provide advice for manoeuvres and that advice is executed by mariners navigating their vessels. In some cases this advice is confirmed by the shipmasters while in most of circumstances captains only control the actions without physically giving confirmation because of the intensesness of the task in hand. They interject only where they disagree with the pilot's advice and decide to act in a different way. One way or another the method referred to here is challenging the responsibility of the shipmaster but there is no better system available at the moment.

The captain of the ship knows better than the pilot of his ship, her manoeuvring characteristics and physical behaviour in different situations. The pilot knows better the local conditions, the potential of other participants in the manoeuvres such as tugs and tug masters, mooring gangs, stevedores, and so forth. The pilot also is usually a professional with experience in manoeuvring in confined waters which shipmasters in general may have not.

These days are busy with the many tasks that make up the administrative burden and they cannot pay sufficient attention to the vessel's manoeuvring as they are often fatigued during the approach to the port and shipping the pilot. To a great extent they over-rely on pilots simply

because they have no more mental capacity to enable them to concentrate on port arrival. How then should the captain be saved from incidents due to the pilot's fault when he (the master) is bearing the responsibility? In practice the only possible way is experience which the shipmaster practically cannot gain except before achieving command if he has gained experience as pilot. In general, such a situation is more the exception than the rule.

Although all preparations are completed by shipmasters before arrival in port as expected with the International Safety Management Code (ISM Code) very often preparations are too general and they are undertaken mechanically in an effort to tick boxes.

It is common for the captain of the ship to receive the berth number from the pilot after the pilot's boarding and so he cannot practically complete berth planning.

Preparation after the pilot's boarding depends upon the time available, which is usually short, and the captain has nothing to do but follow the pilot's advice. In most cases the mental activity for the manoeuvre is left with the pilot. The shipmaster, taking advantage of his own experience and knowledge of his ship's characteristics, controls the actions and the result, only commenting when necessary.

Notwithstanding new technologies, means of exchange of information, the manoeuvring for berthing and unberthing and passing in confined waters is subject to decisions and actions taken on an *ad hoc* basis with regard to the situation rather than to any standard action.

In such circumstances time for reaction by the pilot doing the manoeuvre and the captain, bearing the responsibility, is very short. During that restricted period personal perception or intuition, is more valuable than the information coming from the variety of electronic navigation and control systems.

At the same time such systems could assist the pilot's and the captain's task. Up-to-date modern portable pilot units and other electronic devices for control of a ship's movement provide updated and reliable information and support the mental activity of the pilot. As in all human activities in close quarter situations excessive attention to electronic systems could shorten the time for evaluation of the situation or delay the awareness of the bridge team.

Monitoring of the information on different electronic systems diverts attention of the pilot/shipmaster from his mental activity, decreases time for its assimilation and then the time for evaluation, decision and real action. Proper distribution of time for gathering the information, processing it and following it with action is vital for the entire process of the manoeuvre.

Every successful manoeuvre is the result of provision of enough information for a ship's movement and unencumbered human senses for the brain to process information and to act in time. All those arguments are true in the case of proper theoretical and practical training. Human senses and the brain have unlimited possibilities when they are properly trained.

Nevertheless, of those unlimited possibilities there are restrictions to the extent of any particular situation and it is possible in the best circumstances for improperly timed action to lead to an incident and, *vice versa*, for a successful manoeuvre to come at the end of an extremely bad chain of events. Both scenarios depended upon the bridge team's mental strengths to deliver the best result.

The problem is similar when analysing the balance in regulating different activities in shipping and freedom of action during their execution.

In 1997 the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) was adopted and implemented during the following years for different types of ship.

ISM Code adoption had been driven by certain objective trends in international shipping. Among them are the internationalization of the maritime profession, gathering together on board one ship or in one shipping company mariners from several nationalities being with different behaviour, mentality, temperament, training and qualification and safety culture. It was necessary for the adoption and implementation of common minimum standards to be valid and acceptable for all participants in the carriage of goods by sea.

At the very beginning the ISM Code was of great assistance to mariners as the information for the main duties of each seaman and his actions and responsibilities in emergencies were strictly written into the ISM system of the company and the ship.

Each seaman has constant access to the rules and procedures as to how any activity on board the ship should be carried out. At the same time the ISM Code ensures enough freedom and flexibility to the shipmaster to break at any time any rules and regulations in order to save human life at sea, the ship or the marine environment. For example, from one side we have physical actions and rules for their execution, and from the other side we have mental activity of the key person on board the ship, the captain, who could waive any orders and rules. The following point had been generated by a particular case of a near miss situation at sea linked to the improper understanding and implementation of the safety rules.

Passage plans of every ship have to be prepared quay-to-quay. Bearing in mind the ship's organization on board modern vessels in recent years the navigating officers have to implement the passage plan punctually and if they need to change something they have to advise the captain and to state and document the reason for the change.

During passage of two ships in congested waters International Regulations for Preventing Collisions at Sea (The Colregs 1972) are quite clear which ship is give-way ship and which ship is the stand-on ship and what are the actions of both captains.

In this example the master of container ship had been alarmed by his watch keeping officer that the tanker on his port side who had been the give-a-way ship did not take any actions to keep a safe distance and to avoid collision.

The stand-on ship had to take actions to avoid a collision.

All that happened during the night. The reason for the dangerous situation which was apparent later was quite simple. The officer on watch on board the tanker, the give-way ship, did not make any course alterations because he had to divert from the ship's passage plan and had to advise his captain during the night when the master was sleeping.

Many rules are broken as well as night order book requirements. The watch keeping officer simply underestimated the situation and decided that the stand-on ship would take action to avoid collision and he will not do any extra administrative job such as amending the passage

plan and stating the reason for that action. In recent decades there are enough cases of collisions at sea recorded for the same reason.

A research by the Danish Shipowners' Association and the Danish Maritime Administration during 2012-2013 found out that 80% of the working time of the shipmaster is occupied by administrative tasks and only 20% is pure navigation.

Requirements of shipping companies further press captains and they try to additionally reduce their working hours usually doing some of the administrative duties during the navigation and that is completely unacceptable and dangerous and could lead to accidents with fatal consequences.

Whether in the modern regulatory documents in shipping the reasonable limit of regulation is passed over and that overregulation leads to reasons for accidents is a matter for discussion. It could be theoretical education and safety culture not trained on an acceptable level. Maybe the reality is somewhere in between. Some of the rules and regulations are suitable for some companies, nations and nationalities while they are completely unsuitable for others. ISM Code is minimum standard for safe operation of ships.

There are companies with much better than the minimum standard safety management systems. Mariners implementing and applying these are also very important. A system with a certain level of regulation is proper for mariners from one nationality while the same system creates problems to others. And again the balance between theoretical education and training, physical and mental actions is very important. Mental activity could be restricted by too much regulations and it could become less effective as a result.

So expressed considerations require careful analysis when proposing and changing the regulatory documents in shipping if we look for the most efficient result.

The leading role of a human's mental activity in ship manning, ship navigation and ship management has to be respected.

Currently the existing regulatory framework of shipping, basic maritime conventions and codes and instruments for their application are quite complicated, with too much detail required and resources exhaustive in documenting the processes. At the same time the crew on board modern ships are getting smaller and smaller.

Navigational and management equipment, education and training with a regulatory framework should be bound together to create conditions to enable mariners to take the right decisions and to think and solve the existing cases without going in detail which is taking them far away from the main purpose of their job.

Amendment to conventions, codes and other IMO instruments has to be achieved with the inclusion in working groups of practising maritime professionals who are active sailors. Such professionals are facing problems at sea daily and they could be a valuable corrective to the more complicated and binding regulation of the maritime professions and the actions of maritime professionals on board ships.

ANNEX K

Agenda Item 16 – Overriding Authority And How to Defend It

Presented by Erik Kraverts, Attorney at Law, Kraverts and Kraverts (Germany)



See next page

Overriding Authority – And How to Defend It **by Erik Kravets**

On the bridge, the captain has overriding authority over all issues relating to safety and security on board his or her ship. Aside from it being part of maritime tradition to give a captain this kind of power, it's also enshrined in the law, e.g. in ISM Code Sec. 5.2¹ and SOLAS Ch. 5 Reg. 34-1².

Those rules both say the same thing: the master has overriding authority and responsibility to make decisions regarding safety and security and/or to protect the marine environment. What does it mean, though, to have “overriding authority”? It means that neither the company who employs the captain nor the owner of the ship nor the charterer of the same have any right to interference in the captain's decision-making. They must back off and let the captain run his ship in the way that he or she believes is proper – this is the reverse side of the coin. After all, if the captain has full responsibility for what happens on board, he must have full authority, too.

Since the captain is responsible, the captain is also liable if anything goes wrong. If there are any breaches of labor regulations, any harm to the crew, any loss of cargo, any pollution of the marine environment, then invariably the captain is first drawn to account. But when people other than the captain are calling the shots, this can turn into an unfair scapegoat situation.

Indeed, the relationship between the captain's overriding authority as the master of the vessel is fraught with complexity vis-à-vis the commercial and/or managerial concerns of the shipowner. These often exist in a state of tension. The safety and security of the vessel, its crew and its cargo, which take legal priority over other considerations, are in fact forced to take the “back seat” to saving costs, making a schedule or keeping a customer happy.

When the captain is subject to “desk-jockeying” by the shore office or other interests, it can complicate the already difficult task of keeping the ship, the crew and the cargo safe and secure. Beyond such immediate meddling, there is also the overarching problem of bureaucracy. “The vast amount of administrative requirements,” noted the International Maritime Organization (IMO) in a 2013 white paper, “seen as a whole, together represents a huge administrative burden for the company and the crew on board.” The IMO correctly identified this as not just a harmless time-wasting exercise, but also as a safety risk, since crews “spend considerable time on bureaucratic tasks, rather than actually manning and operating the ship[...].”

It goes without saying that the combination of intrusive shore office employees, the tug of war between the charterer, cargo interests and the shipowner and the hassle of paperwork are a serious burden on the captain. After all, good seamanship is still more art than science. Even with today's technology, to paraphrase Samuel Clemens, it's about knowing where the “good water” is and keeping her there. On top of that, with how complex modern ships are, and how challenging it can be to command multi-ethnic crews, it's also about ensuring that all of the crew on board are doing their jobs properly, efficiently and with due diligence.

¹ “The Company should establish in the SMS that the master has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary.”

² “The owner, the charterer, the company operating the ship as defined in regulation IX/1, or any other person shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safety of life at sea and protection of the marine environment.”

These problems, naturally, will be broadly known to today's captains. The bigger question is what can be done to mitigate some of the harm from over-bureaucratization and intrusion into the captain's overriding authority. In other words, how can the captain remain the ship's master?

To start with, remember that not all rules are bad or even the enemy. When there is a conflict, reference to rules can often be used to overcome differences of opinion. This applies both vis-à-vis crew conflicts and also to potential issues encountered in port or with customs. Knowing the rules that can play in your favor, and being able to present them articulately and persuasively, is an important part of being a captain today – along with technical knowledge, such legal knowledge, at least in cursory terms, is an essential part of running a ship well. Rules can help enforce discipline, identify needed paperwork and make operational processes consistent.

Additionally, some shore offices are open to input from captains. By staying engaged with the shore office and making helpful suggestions, policies and procedures can be steered. Usually, the lawyer is the “smartest guy in the room” – and draws the ire of everybody else who just wants to “keep it simple!” But captains can bear this burden sometimes, as well. After all, more so than lawyers, it's captains who have the experience to create good policies and procedures. They are the ones who know how the ships, crews and cargo work and interact. They know where the weak points are and where better procedures could help or, alternatively, hurt. By getting involved, bad policies can be prevented and good policies can be encouraged.

As always, though, paperwork is no substitute for “doing the job right”, even over the objections of the owner, the charterer, the cargo interests or even the crew. And in the end, it's the captain's duty and responsibility to get the job done right, even when it's hard.

In this spirit, captains should always have a masterclass in evidence gathering and presentation under their belt. When a tough call is at hand, it's impossible to make everybody happy. Whether it's the owner, other crewmembers, the cargo interests or the charterer, when the captain is called to account for his decision, he or she will need an airtight, compelling case.

As generally practical people who are on site during critical moments, captains need to make split-second choices and can't always go through the trouble of documenting, photographing, logging, recording or finding witnesses to support what they regard as just doing their job. But when their decisions are under scrutiny later, it's not the captain's in-the-moment seamanship that will persuade potentially aggrieved parties. It's hard, objective evidence. While the good news is that, being on site, the captain can record the facts underlying his or her decision, and these are typically very solid, there's also bad news: there is often no time to do so.

In other words, captains must both do their jobs and be prepared for the additional hardship of having to defend how their job was ultimately done. This is tough to swallow for most sailors whose chief goal and main desire is to get out on the water and run a tight ship. But it's vital that captains assume every decision will be challenged. They should anticipate such challenges. Because of captains' great responsibility, their decisions often affect millions of dollars. Whether it's expensive cargo claims or large sums owed for demurrage, someone will inevitably challenge the captain's decisions – it would be idealistic to assume that everybody will give the captain the benefit of the doubt rather than using the legal system to vigorously look after their own interests. Insurance companies, consignors and consignees, terminal operations, freight forwarders and ocean and land freight carriers all have a financial stake in the outcome.

And remember: the captain is the only individual on board who has both the authority, the strategic overview and the experience and knowledge required to make the call. Even other crew members will only have a partial understanding of the captain's decision, since in all likelihood, information is disseminated on a

“need to know” basis. The buck stops with the captain, and as a result of that, it’s the captain whose decisions will be attacked.

Even assuming complete honesty and integrity on the part of the captain, third parties are to some extent entitled to their skepticism. On top of that, it’s simply good practice to keep comprehensive, accurate and well-organized records – as irritating as it may be to have to go through the motions on a day by day basis, when few of the many risks ever materialize, for the one time the risk turns into a loss, it will have been worth all of the extra effort.

But then again, even the best effort can be undone. Written records can be accused of inaccuracy; photos can be blurry, grainy or mis-timed; witnesses can be confused, have gaps in their memory or can even be tampered with or bribed. If that’s the case, why bother? Just like locking a house at night, there are different levels of security. A simple lock, the most basic precaution, can be easily picked. A lock and bolt system may be harder to overcome. More sophisticated, smart alarm systems or even systems using live security guards provide another level of comfort. The point is that precautions can overlap, and that the more precautions overlap the better, overall, the protection will be at keeping out unwanted guests.

The same is true of evidence. It’s most persuasive when deployed together, e.g. photos supported by detailed, time-stamped protocols and third-party reports signed by witnesses. The more evidence is assembled into a phalanx, the more believable it will be and the more countervailing evidence will need to be found to challenge or call into question a story.

Modern merchant vessels typically offer internet access and a range of computer equipment on board. As such, it’s possible to compile valuable information even before arriving in port. Rough seas can be photographed and corroborated with weather station reports or marine forecasts; mechanical failures can be photographed, associated with maintenance records and maybe even captured in built-in error correction or maintenance software from the manufacturer; damage to the vessel or cargo can be recorded and sealed in protocols and then later cross-checked by a surveyor, who will ideally substantiate what is already known.

In a perfect world, lawyers would want the policies and procedures mentioned earlier to be linked in directly to step-by-step processes for addressing all kinds of situations. After fixing a problem that has arisen and ensuring a safe and secure journey, in the next step, the crew and captain would work together to capture and assemble all of the available evidence. Then the same would be archived, copied and communicated to the shore office and to legal counsel. Only then would the information, after being given the “green light”, be sent on to other stakeholders. A thorough, well-thought-out process is the best way to ensuring that the captain’s overriding authority is permitted to manifest itself fully for the benefit of the ship, crew and cargo, even if it means more work for the captain and crew, talking to lawyers and some paperwork.

The lawyers are the ones who have to take the evidence presented in favor or against a decision made by a captain and, if all else fails, argue it in court. Captains can play their part by making sure that all of the pieces are in place for the lawyer and that a complete picture is presented. If a sailor has a history of drunkenness, it needs to be fully supported and documented that the sailor was sober on the day of an accident; if there was a mechanical failure caused by a junior mechanic, show that he or she got the right, specific training prior to the issue; if cargo was issued a clean B/L, ensure that the genesis of any damage is plausibly, fully recorded.

It’s about ensuring that the company, the captain and the legal team work together to promote a good result. In times of economic hardship, like now, it’s important for everybody to do their best to try to make the inevitably arising problems go away just a little more quickly – even when problems are often made unnecessarily contentious in a try to “squeeze” a contract partner. A little bit of preparation, good policies

and procedures and taking a deep breath before making strategic choices all go a long way toward keeping a shipping company viable.

But this is also essential for defending the right of the captain to use his or her overriding authority. When a captain makes a good call but takes bad evidence, it creates unnecessary exposure and also makes it seem like overriding authority should be subjected to more restraints. A tree is judged by the fruit, even if the fruit is already weeks old. It's important to show the people who weren't on board that captains know what they're doing and should be left alone to do it – even when it's unpopular or goes against the owner's or customer's wishes. The shipping industry relies on professionals to make the right call time after time. Integrity and a sense of duty should be respected as valuable aspects of our global industry.

In the end, the owner, shipper and charterer may complain, but they all rely on the captain to get the crew, the ship and the cargo to its destination safely – and in spite of second-guessing, the captain shouldn't just be able to tell why his call was the right one, he must show it.