

M.V.Hope drama in real life: 40 hours lost at Sea



Ordered to abandon ship in heavy weather, a badly injured second officer survives for nearly 40 hours in churning seas off Thailand.

At first, only Mohammad Mobarak Hossain sensed the change—a subtle shift in the bulk freighter's motion. It was past midnight on July 4, 2013, and the MV Hope had seen bad weather since arriving in the Andaman Sea hours before. The ship rolled right, swung back to the centre line and then heaved to the starboard side again. It was a small thing, but after five years working commercial ships in the Persian Gulf and across Asia, it was enough to convince the 25-year-old second mate that he and his 16 crewmates were in danger.

Hossain called the 54-year-old captain, rousing him from sleep. Minutes later, when Rajib Chandra Karmaker arrived on the bridge, the 97-metre vessel was already listing 15 degrees. Karmaker knew at once his shipment of mud-like ball clay, used in ceramic and tile manufacturing, had shifted in the hold. The rough seas had shaken up the cargo, liquefying it and causing the tilt. It was a situation difficult to reverse in gale-force winds.

Hossain adjusted course, pointing the vessel toward Phuket, Thailand, 90 kilometres away. He then punched a series of red buttons on the Global Maritime Distress and Safety System, and the machine emitted a chorus of high-pitched alarms. The chief officer, Mahbub Morshed—who had rushed to the bridge when he felt the ship lurch starboard—was sent down to the deck to prepare to abandon ship: assemble the men, gather life jackets, lower the lifeboat. The Hope continued to lean and was already at 30 degrees.

It was now 1 a.m., and 23-year-old deck cadet Raeq Fairouz, anxious to help, mounted the topsy-turvy stairs to find Karmaker and Hossain manning a

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wrecked bridge. A laptop, books and reams of paper lay scattered across the slanted floor. Blown rain and spray whipped through doors that no longer shut. Fairouz briefly took the wheel while Hossain plotted their position on the chart and Karmaker exchanged coordinates with the captain of the MV Buxmoon, a container ship 1.5 kilometres away and steaming to their aid.

The Hope now listed at 40 degrees, a house turned on its side. When the engine failed, its rumble replaced by the sound of waves smashing against the hull, there was little reason to stay on the bridge. Hossain, Karmaker and Fairouz climbed down to the deck to find that the crisis had left the other 14 men panicked and in disarray. They had not even lowered a lifeboat. The ship was grotesquely askew; doing so now would be impossible.

Two hours had passed since Hossain first felt the ship lean its shoulder into the waves. The sky was overcast and starless. Looking down from where he clung to a bulkhead, Hossain could see the starboard deck vanish into the sea. Around him, his crewmates were crying, praying and calling the Buxmoon over walkie-talkies, begging for rescue.

The previous day, the crew had left Lumut, Malaysia, in a festive mood. The Muslim holiday of Eid, marking the end of Ramadan, was just weeks away, and the men were returning to Chittagong, in southeast Bangladesh, after three months at sea. Many had purchased gifts-LED TVs, chocolates-in anticipation of the homecoming.

Those gifts now seemed destined for the sea floor. Hossain asked a deck cadet to help him haul a life raft, stored in capsule form, over the railing. With the boat inflating in the water, Hossain scrambled to the bridge to retrieve a nautical map. He returned to find all his crewmates had already leaped into the sea. Only second engineer Nazam Uddin, 30, remained on deck, surveying the scene below.

The captain was in the life raft, shouting for the two men to jump. Twelve crew members had made it to the inflatable boat, now bucking in high swells 20 metres away. But Hossain and Uddin also saw that three had not: the currents were pulling these men away, scattering them across the dark, roiling sea, the red lights of their life jackets blinking.

Hossain had no choice. He pulled on a head-to-toe immersion suit-used to regulate body temperature and promote buoyancy-and a life jacket. Before scrambling over the side, he looked at Uddin; he would never see him again. He plunged into the water. Three-metre waves threw him up, then dropped him into the gullies between them. He could barely breathe.

Through the heaving swell, he glimpsed the raft. Hossain saw the captain calling. He swam, battling the current. Karmaker reached for him. "Hold my hand," he yelled. Hossain strained, his arm raised. He was within a metre of the raft. Moklechor Rahman, a cadet, tossed a lifebuoy. Hossain grabbed it. In a panic, the cadet dropped the line, casting Hossain adrift, helpless, out of reach.

As the lights of the raft dimmed, new ones flickered all around him-the four other men who, like Hossain, were



drifting on the warm waters of the Andaman. His light was blinking also, and it was this glow that drew the Buxmoon to him.

The 164-metre container ship was coming fast. On its final voyage before dismantling at a ship-breaking yard in Chittagong, it held no cargo and was riding high, making it unwieldy. Its bulbous bow, a nose-like protuberance, was above the water. It struck Hossain.

The Buxmoon doubled back for a second try at retrieving him. Hossain was now bleeding from his right hand and leg. The ship rushed at what seemed like full speed. Hossain aimed to catch hold of a lifebuoy the crew lowered. He felt the immense propeller's pull. Missing the buoy would mean getting sucked into those churning blades. He stopped swimming.

The ship was preparing for a third pass. Hossain resolved to catch the buoy, whatever happened. He might lose a limb, but he'd survive. It was coming now. "I maintained my position," he says. "I wanted to survive, to go home."

The ship hit him in the head and swept him under. His life jacket and the lifebuoy he'd received from the cadet on the raft raised him up, dragging him against the sharp marine growth of the hull. The barnacled surface tore at his scalp. He raised his left arm, letting the ship run over it instead.

He was bleeding badly when he surfaced. He kicked off the immersion suit, now in shreds, his white uniform bloodied beneath. For the fourth time he saw the Buxmoon coming at him. He covered his light and hid.

Surrendering to the drift, he watched the ship slip away in search of other survivors. Hossain began to vomit, sick from his injuries, the violent motion of the swell and swallowed sea water. Rain fell. Here and there, the lights appeared again, his crewmates shouting. They were too distant for Hossain to reach.

At 4 a.m., Hossain saw a light travelling parallel to his, ensnared in the same current. "Talk to me!" he cried. A voice replied, a silhouette against the darkness. Raeq Fairouz, the young deck cadet. They held hands and

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From the Editor's Desk



Teaching might even be the greatest of the arts, since the medium is the human mind and spirit.

—JOHN STEINBECK

There is no shortcut to the truth --- no way to gain knowledge of the universe except through the gateway of scientific method. — KARL PEARSON

[T]he scholars --- must announce that their needs for legal research arise from a determination to do something new - to look at the world with unbiased eyes, to try to find out how and why the law ticks, to see whether the law is in fact serving the needs of society today.

The touchstone of researcher is the open, inquiring mind. Legal research will get somewhere only if legal scholars abandon any thought that there is something sacred about the law as it is. Even if we accept certain values in our society as sacred, this does not make any particular legal proposition sacred. — GEORGE D BRADEN

During this most auspicious Indian citizen's 66th REPUBLIC DAY, pleased to say that " Ultimately, all the pillars of people's governance" is for the SERVICE TO THE PEOPLE 'S common interest, which should not be forgotten while working and when we breathe normally. "WORK is Worship." View the neglected welfare of the Indian Seafarers on global- throttling (foreign-going service conditions) living away from their near and dear ones of their lives, working out on the deep high seas, leading a sacrificial life with risks of occupational and living hazards BUT bringing substantial foreign-exchange to their nation of origin, since paid in U.S. Dollars. INDIAN GOVERNMENT neglecting their welfare is a grave crime, by itself. As many Indian seafarers are trapped in foreign-ports, looting their hard-earned money and materials (personal wearing valuables, laptops, smart-phones, I pads etc) On looting, secretly arrested with concocted stories and kept in prisons without trials, black-mailing their families and when not yielding to their high demands, they get convicted and remain in a shabby life which they are not worth. Same neglected, as these Indian seafarers who do not have political contacts suffer. Obviously, being out of the country almost all the time, being their family's bread-winner. "Out of sight is out of mind". Diplomats of M.E.A., who find their posting in dark continent as punishment-posting and worried for themselves, hence not serving sincerely/honestly for their existence. While, INDIAN SEAFARERS are also Indian Citizens "NEVER NEGLECT THEM" just because they can't vote, which is not their mistake, but ' majboori ' since out on the deep seas. DO NOT CONSIDER ONLY VOTE BANKS. The purity-test of human civilization, reflects upon the respect they have for the arrived laws. JUSTICE NEED TO BE DONE: SHOULD BE THE PRIME CONCERN OF THE JUDICIARY or else why do they exist. ? There should be no compromise to professionalism in LAW, as known in practice from our Late Justice. V.R. Krishna Iyer / Justice Markandey Katju, is concerned. "Marine Waves" monthly online There is an imperative need for "Personal Financial Planning" For Seafarers. Lack of employer's official support in taking care of employees future, whether men or women, and retirement needs leaves a large gap in seafarer's requirements. Despite the handsome salary, that is assumed to be earned, invariably paid for the high risks and sacrifices, which are assumed to be earned. With the available tools and plans found world over, it is possible for a seafarer to plan the financial freedom at one's own pace and means, with a good foresight and meticulous planning. The challenges for a seafarer in the complex and baffling network of information paths that come in various aspects of training towards onboard work-process, new legislations to suit to the changing times. With that as a prime and utmost priority to bring in him/her self, also of the foresight into the finance needs of the future with the required foresight. Individual Cadet or trainee who are drawn into Shipping by the advertisements/publicity by the Maritime Institutions other than from the Marine family, finds a disappointing situation from what said before joining and making a career out at sea. Finds difficulty, in the initial placement, after passing-out from the D G Approved Colleges/Academies. Those who are influenced, or pay heavily to the demands of the middle-men get their placement onboard early. There is no general pool for "First in, First out" to take to sea. As those who are fortunate, to enter into Shipping Companies, who have their own Training Institutions/Academies join faster for continuity in service? Otherwise, these passed-out boys and girls waste their precious time of their life, with uncertainty waiting. Pressures build-up within their families in paying back for the educational loans availed, which are much higher as against other professional courses. We need, D.G. Shipping to address the realistic needs of the hour, where some section of the common people are neglected, discriminated with injustice. This is a violation to equity, justice and fundamental rights, enshrined in the Indian Constitution. Some Indian and Foreign Shipping Companies have P.F. and Gratuity system, but no after service benefits that of old age pension, hospitalization etc. as in shore-based jobs. The attractive salary also is no more these days, after many lucrative jobs sprang up after the influx of MNC's into the country, while we seafarers work with occupational hazards of the highest order, while living and working out on the deep seas and the oceans away from our near and dear ones. Unlike the earlier days the medical facilities to see doctor ashore is very rare and tough, owing to the squeezing of man-power with skeleton staff, finding days very difficult when some- one meets an accident or sick onboard. Hence shore-leave demand gets more difficult of getting marked to the company, for missing out re-employment onboard, when the Maritime Colleges/Institutions/Academies continue turning out seafarers with preparedness to the seas with the increasing seafarers for employment.

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Hossain grimaced, his face lit in the glow of the life jackets. "He was heavily injured," Fairouz says, noticing white subcutaneous flesh exposed on Hossain's hand. "Half-dead."

The men decided to remain together and locked arms. Dawn arrived at 5:30. In the distance, the Buxmoon shuttled to and fro, attending to the men in the raft. Then it slipped from view.

Likely because he wore a canvas backpack beneath it, Fairouz's life jacket came loose. A wave tore it from him. "I saw it floating on top of the swell," Hossain says. Fairouz moved to retrieve it, but Hossain stopped him. "You will be lost also," he said. Fairouz wept, still retaining the formal language of maritime hierarchy: "What will become of me? I will die, sir." Only Hossain's injured hands sustained him at the water's surface. "Don't worry. I have a lifebuoy and a life jacket," Hossain said. "Please climb up on my back."

Thin and compactly built, the two men fit inside a single lifebuoy. Their dark heads were specks of black against a dark sea. Back to back, they kept watch. At 9 a.m., they spotted a blue-hulled ship 10 kilometres away. A helicopter hovered nearby. They shouted, whistled. Fairouz raised the life jacket, waving it around. The swell hid it all. Soon these rescuers, too, vanished.

Hossain noted the sun's position and saw they were chasing it west, away from the coast and the traffic of the commercial route. His best estimate is that they'd drifted 10 kilometres from where they had abandoned the Hope. The chances of rescue were waning. A small black bird circled them. Sharksuckers, silver fish under a metre in length, took turns nibbling at their extremities-especially, Hossain says, "in the injured places."

Hossain asked Fairouz to jettison his backpack. It was nearly empty-why not turn it over to the swell? "All the time I was asking, 'What is inside?'" Hossain says. Fairouz wouldn't say. "Let's see how long I can hold it," he'd reply. Hossain left him alone. "I thought there might be something special to keep for his last moments," he says. "A girl's picture, a letter."

For his part, Hossain embraced stoicism. "I knew I'd die. By sinking, by the Buxmoon, losing my energy, eaten by sharks. No problem. I accepted it." Fairouz, holding fast to his bag, was less philosophical. "When you lose every hope you have, that's death," he says. "To live, you have to have an inch of feeling for this world."

Despair continued to afflict Hossain. He thought of his widowed mother. She'd never know for certain how he died. How would she cope? "Ammu," he wept. Mother. "Forgive me!" The waves slapped him in the face. He could take no more and wanted to remove his life jacket and sink. "Wait," Fairouz said. "After sunset maybe they'll come. Just wait."

They heard screaming at sunset and peered into the waves. Hossain illuminated his life jacket light. It was a man, too distant to identify. He would dip behind a swell and vanish, rise and reappear again. He gripped a lifeless body. A fishing boat cut through the rolling sea, unaware of the drifting men. The sun set: it was 6:50 p.m., 17 hours since they had abandoned the Hope. Hossain's life jacket light blinked

unsteadily, then died. "We spent the night in darkness," he says. Chilled, Fairouz asked if he could hold Hossain for warmth. Hossain agreed. Fairouz rested his head on Hossain's back, shielding it there from the pounding swell, his legs around Hossain's waist. He slept. Before midnight he started awake, crying. Now it was Fairouz who wanted to sink beneath the sea's surface. "If you go, I will go," Hossain said. "Don't." Fairouz slept again. Despite his injuries, Hossain was able to stay alert. The lights of fishing nets shimmered ahead. He envisioned men at daybreak hauling them in. He woke Fairouz, encouraging him to swim with him to that constellation of lights.

They swam, slept, swam again. For Hossain, the world took on an otherworldly hue. The fog of hypothermia was setting in, a danger even in the Andaman, where, in July, water temperatures hover in the high 20s. Hossain suddenly found himself at home, talking to his mother. He gave instructions on how to resolve the loose ends of his short life. As he dreamt, the waves lapped at his eyes. The sea calmed, the sky cleared, the sun came into view. Hossain felt a lightness. The bag. Where was the bag? Fairouz had surrendered it to the waters. The two men were silent, drifting in and out of reverie.

The mayday Hossain had sent some 30 hours before arrived at a receiving station in Toulouse, France, which relayed it to authorities in Thailand and ultimately to the Royal Thai Navy's Third Area Command, on Phuket. It was an unusually serious call. Although Phuket is a busy tourist destination with a high-traffic commercial maritime route nearby, large-scale incidents take place here only once every three or four years.

Rear Admiral Prayuth Phutien got word of the accident at 6 a.m. on July 4, dispatching the 95-metre HTMS Pattani, a navy search-and-rescue vessel. Two navy helicopters joined it, and a small turboprop reconnaissance aircraft began combing a 40-kilometre-radius search area. More than 200 navy personnel contributed to the operation, as did a network of nearby fishing and other commercial ships.

It was the MV Buxlagoon-a sister ship to the Buxmoon-that spotted Hossain and Fairouz drifting off the Thai mainland at 3:30 p.m. on the second day of their ordeal. When Hossain regained consciousness, he saw the 163-metre ship towering above them. Men on deck were shouting.

Fairooz grabbed one lifebuoy lowered from above, Hossain another. Crewmen towed Fairouz to midship, where he clambered up a dangling ladder. But Hossain was too weak. He floated below the curvature of the hull, and the current dragged him under the ship, aggravating his injuries. Hossain shut his eyes and let go of the line, casting himself adrift once more.

When he came to, the Pattani, notified by the Buxlagoon of his location, hovered in the sea before him. High above, men were asking him to approach the hull. Hossain was wary. No. He would not go near the rough surface of the ship. He couldn't quite raise his head. From each side of him, two navy divers surfaced and pulled him into their arms. It was 4:05 p.m.

When Phutien saw Hossain, he'd just arrived by helicopter and was poised for dispatch by ambulance to Vachira Phuket

Hospital. "He was half-conscious, badly sunburned, and his mouth was cracked and swollen," he says. Hossain had worried he might lose his left hand, where the Buxmoon's hull tore away the flesh. But doctors saved it, slicing off the infected tissue and grafting skin from his thigh over the wound. He spent a month in hospital.

Hossain was one of nine survivors of the disaster, and the last to be rescued-almost 40 hours after first plunging into the swell. (Of the 12 men in the raft, which capsized during a rescue attempt, the Buxmoon retrieved five; Karmaker was never found.)

W o r l d I n f o D e s k

Oil traders seen storing 25 Million barrels of crude at sea: LONDON, Jan 13 (Reuters) - Some of the world's biggest oil traders have booked supertankers to store at least 25 million barrels at sea in recent days,



seeking to take advantage of the crash in crude prices and make a profit down the line.

Floating storage levels are expected to increase further in coming weeks as trading companies adopt a strategy that was last used in 2009 when prices slumped and led to over 100 million barrels of oil being parked on tankers at sea before stocks were sold off.

The play is also driving up tanker hire rates, and shipping firms have seen their share prices surge in recent days.

In the past week, trading firms including Trafigura, Vitol, Gunvor, Koch and energy major Shell have started booking oil tankers for floating storage for up to 12 months, according to ship industry sources and freight bookings seen by Reuters.

At least 11 very large crude carriers (VLCCs) have been reported as booked with storage options, rising from around five vessels at the end of last week. Each VLCC can hold 2 million barrels.

Separately, the Ti Oceania - one of the world's biggest oil ships, known as an ultra-large crude carrier, with a 3 million barrel capacity - has been booked by trader Vitol to store oil, the data and market sources say.

That means at least 25 million barrels are currently estimated as being earmarked for floating storage. Some of the tankers could nonetheless still be used for conventional oil transportation.

Shell, Trafigura, Vitol and Gunvor all declined to comment. Koch could not be immediately reached for comment.

Two months after the accident, Hossain saw Fairouz again for the first time in Chittagong. They greeted each other with hugs. "We thanked the Almighty that He saved us both-we thanked each other," says Fairouz.

Today Hossain is second officer on a commercial vessel in the Persian Gulf. Fairouz spent a year trying to forget his time adrift on the waves. They have never discussed their ordeal together. Hossain still does not quite know what Fairouz kept for so long in that bag slung across his shoulders. Fairouz says it does not matter.

The strategy works because oil prices for delivery in the future are trading at a premium to those in the spot market - a market structure known in the industry as contango - with investors expecting prices to eventually recover from the near 60 percent slide in oil in the last seven months.

International benchmark Brent crude has fallen to just above \$45 a barrel, near a six-year low, having averaged \$110 between 2011 and 2013. Contracts for delivery in December are above \$56.

"Should this widening contango trend continue, we expect more charterer interest for hiring VLCCs as floating storage," said analyst Omar Nokta of Clarkson Capital Markets.

But despite the attraction, the costs involved prohibit all but the biggest players.

Taking into account vessel hire and other expenses including bunker fuel and insurance, overall monthly costs are estimated anywhere in the region of \$1.5 million per tanker.

Tanker Market Upside: After years in the doldrums, due to a glut of ships and soft demand, tanker rates have been strengthening in recent months helped by firmer bookings and slower fleet growth.

Rates have accelerated sharply this month as oil traders also eat up capacity.

Big shipping groups like Frontline, Tsakos Energy Navigation and DHT Holdings have seen their share prices surge this month, helped by the overall positive market momentum.

Average daily earnings for VLCCs have risen to over \$84,000 a day, from around \$63,000 at the beginning of the year - not far off levels of over \$100,000 a day seen before the tanker market slump in 2008.

Industry players say rates to hire vessels for longer periods - known as time charters - have risen by a few thousand dollars a day in the past week to over \$40,000 a day, and are almost double the level at the same time last year.

With the wave of time charter bookings in recent days, rates are likely to rise further, market sources say.

Many of the ships currently being deployed for floating storage are older and less fuel-efficient vessels, which oil companies are less keen on using to transport crude. At least three are over 15 years old. By using older vessels, oil traders have been able to hire VLCCs for less than \$40,000 a day.

Tanker owners have also preferred to trade their more modern ships rather than opt for floating storage as vessels normally deteriorate when kept stationary.

On top of rate rises, using older vessels for storage is seen as a boon for tanker owners.

"Every vessel that is removed from trading and tied up in floating storage would be positive for the crude tanker market balance - supporting earnings over the next months," said Arctic Securities analyst Erik Nikolai Stavseth.

Höegh Osaka List now 39 Degrees: Salvage work continues on Höegh Osaka and the list of the vessel has been reduced from 52 degrees to 39 degrees as of Monday evening.



The weather on scene continues to be favorable and the operation to remove clean water from the vessel's lower car decks continues.

The vessel will stay at its current anchorage until the list has been reduced to around 15 degrees, some ship's systems have been reinstated and weather conditions are suitable.

The long range weather forecast is now indicating that it is unlikely that the Höegh Osaka will be moved from Alpha Anchorage to a berth at Southampton Port on Wednesday (January 21).

An estimated 3,000 tons of excess water is expected to be pumped out during the operation which began on Saturday.

The vessel is currently secured by tugs off Lee-on-the-Solent. The Maritime and Coastguard Agency said divers have carried out a limited inspection of the ship's hull and found "no significant damage".

The 51,000-tonne ship was carrying 1,400 cars and 105 pieces of construction equipment when it was beached deliberately on Bramble Bank sandbank after it began listing on January 3. It floated free on January 7 and was towed to deeper waters.

World's Largest Container ship: The image shows 19 224 TEU MSC Oscar, the world's largest container ship.

The behemoth container ship was built at Daewoo Shipbuilding & Marine Engineering shipyard (South Korea) for Mediterranean Shipping Company and was delivered to the client on January 8, 2015.



MSC Oscar called at Slavyanka marine terminal of Posyet Seaport for bunkering on 12 January 2015, as informed by FSUE Rosmorport.

Ghana's Navy frees Oil Tanker from pirates: The Ghana Navy has arrested eight pirates, identified as Nigerians, who are suspected of hijacking a crude oil tanker MT Mariam off the coast of Nigeria.



The tanker was detected in Ghanaian waters on Saturday, Reuters reports, via the vessel's onboard tracking device.

The navy's patrol vessel GNS Blika was dispatched to the scene, some 26 nautical miles south east of Tema, where the tanker had drifted.

However, the pirates had already siphoned the vessel's cargo when the navy arrived on scene.

The owner of MT Mariam, Mr Nakase Sunday told journalists in Tema that the hijacking occurred in the early morning of January 11, at Warri in Nigeria, adding that the vessel was loaded with approximately 1,500 metric tones of crude oil when it was captured by the pirates, Ghana Web informed.

The oil tanker was heading to Togo when it was seized. The pirates are reported to had been armed with weapons including AK-47 rifles.

Colonel Aggrey Quarshie told Reuters that the pirates have been handed over to Ghana's Bureau of National Investigations.

The nine-member crew are said to be safe.

Search for the ship carrying the stolen cargo is underway and it includes military forces from Togo, Benin and Nigeria, as explained by Quarshie.

MT Mariam is currently docked at the Tema Port and is under armed guard.

India's East Coast to get First LNG Terminal:

India's Andhra Pradesh Gas Distribution Corporation (APGDC), GDF SUEZ, Shell and GAIL have signed two separate Memorandums of Understanding (MOUs) for a floating LNG terminal in Kakinada Deep Water Seaport in Kakinada, Andhra Pradesh.



The first MOU is between APGDC, GDF SUEZ and Shell and supports the development of the terminal. APGDC (a JV company between the Government of Andhra Pradesh and GAIL), GDF SUEZ and Shell will have 48%, 26% and 26% equity in the project respectively.

The second MOU is between GAIL, GDF SUEZ and Shell and covers both the sourcing of LNG and the marketing of the regasified LNG from the terminal. GAIL, GDF SUEZ and Shell will have 48%, 26% and 26% equity in the project respectively.

The Kakinada LNG terminal will use a Floating Storage and Regasification Unit (FSRU) with a peak capacity of 5 million tonnes per annum (mtpa) with the provision to double the capacity. The Kakinada port was found suitable for a project of this nature owing to its availability of a natural breakwater in the Hope Island - a barrier that protects against the impact of high seas.

Taiwan completes IMO-Compliant Voluntary Audit. Proactive move by a non-IMP Member State is believed to be a first:

The Republic of China (Taiwan) is a major maritime economy with a significant global network. Taiwan ports move in excess of 200 million tons of cargo and 700,000 passengers annually and rank high internationally in terms of tonnage and container throughput. Given this level of activity, the Taiwan Maritime Administration recognized the importance of international convention compliance even though it lacks formal recognition



by the United Nations and the International Maritime Organization (IMO).

The country, accordingly, prepared for an IMO-compliant voluntary audit of its Maritime Administration to assess compliance with IMO safety, security and environmental conventions. These conventions were developed by the IMO in response to criticism regarding a lack of international consistency in the implementation of maritime standards. The audit regime applies to IMO Member States willing to commit to a voluntary maritime administration audit.

The IMO on request by the Member State assembles a multinational team to undertake the work. As of 2012 only 48 of the 170 Member States had completed the voluntary audit. In order to expand the audit program, the IMO took the necessary steps to make the audit scheme mandatory as of 2016.

Conducting the Audit

A Memorandum of Understanding (MOU) on maritime training and technology executed between Canada and Taiwan is an important component of the country's IMO-compliant audit program. This MOU is administered by a Canadian company, COMART (Canadian Office of Maritime Technologies) International Corporation, and uses Canadian maritime experts who work together with Taiwan colleagues to develop and deliver important maritime programming.

These programs have included training and information on search and rescue, vessel traffic services, port state control, port navigational risk assessment, oil spill response, casualty investigations and other maritime topics.

Taiwan commenced preparations for an IMO-compliant voluntary audit with the assistance of COMART from 2011 to 2013. An internationally qualified audit team then assembled in Taiwan and completed the first stage of the audit from October 6 -14, 2014. To ensure its credibility, three qualified auditors were engaged by COMART through the maritime risk and safety company Admaris GmbH of Hamburg, Germany. All auditors had extensive prior experience assisting maritime administrations in audit preparation and execution and had also completed IMO-approved auditor training.

The auditors followed all principles and practices of a fully compliant IMO audit and, in recognition of the special status of Taiwan, it was assumed that the country was a signatory to all relevant conventions. As Taiwan cannot formally deposit reports with the IMO, the auditors recommended that Taiwan pursue other methods to ensure distribution of relevant and important maritime information to the global maritime community. This article is part of that effort.

Taiwan was under no obligation to undertake this audit process but did so to ensure high standards of compliance by the Taiwan Maritime Administration with all IMO conventions. This is important to Taiwan as a fully participating member of the global maritime community.

Training Coast Guards key to tackling Piracy. Coastal Nations need to better protect their Maritime Flank:

Training and mentoring of coastguards in Africa, Middle East, and South East Asia is essential if coastal nations are to have effective control over



their Territorial Waters and Economic Zones, says leading maritime security company Maritime Asset Security & Training Ltd (MAST).

Furthermore, if Western Governments continue to cut back on defense spending, these nations will be increasingly reliant on their own organic resources to provide security in international waters adjacent to their territorial limits.

Gerry Northwood OBE, COO of MAST, said: "While the UK Chamber of Shipping has recently reported that Indian Ocean piracy is under control, it should not be forgotten this is directly attributable to the success of international maritime military deployments to the Indian Ocean, and because commercial shipping has taken positive and decisive action to protect their vessels through Best Management Practices 4 (BMP4) and armed guards.

"However, the report rightly warned that there is still much to be done ashore if a resurgence of piracy in the Gulf of Aden and the Indian Ocean is to be prevented. Somalia remains a politically fragmented state and in places, the lack of governance, and law and order, means that the 'pirate breeding grounds' are still intact."

He added: "This is not just about Somalia. Coastal nations in other piracy prone areas such as West Africa and South East Asia are being encouraged to police their Territorial Waters and Exclusive Economic Zones, and will benefit from mentoring in how to do so more effectively."

Richard Battrick, Director of Training, Compliance and Ordnance Management at MAST, said: "There remains a paucity of multinational naval assets which will be further affected by defense budget cuts in 2015 as states continue to identify savings in the wake of the global recession."

"Non-military solutions such as national coastguard agencies require improved capabilities and capacities if they are to become a sustainable solution. An integrated approach, including international public-private cooperation to maintain border security and safeguard the maritime flank is the way forward."

He added: "While avoiding military levels of expenditure, to be effective, it is important that coastguards are able to implement a more sophisticated and layered application of maritime security. This requires that they can efficiently manage a range of capabilities, which include surface vessels, helicopters and fixed wing surveillance aircrafts. Networked operations centers should coordinate these assets and share critical information.

"Well trained and professionally proficient personnel are essential to achieving this."

Northwood added: "Coastal nations are becoming increasingly cognizant of the need to be able to exploit and protect their maritime flank. Some nations, such as Oman, Egypt, Indonesia and Malaysia, have been highly pro-active and have already made significant steps to improve their maritime capabilities.

"However, there remains much to be done to ensure coastal states improve their surveillance capabilities, and are able to efficiently co-ordinate assets. In particular, it is important that air and surface assets are regarded as essential yet complimentary capabilities."

Museum discovers century-old record of ship's sinking:

The Peary-MacMillan Arctic Museum has determined that a chart donated to the museum is the one on which ice captain Robert A. Bartlett recorded the disastrous 1914 Arctic expedition of the Karluk ship.



The Karluk was carrying scientists and explorers along the north coast of Alaska when it became trapped in pack ice and began to drift north and west. Several months later, the ship sank.

When the chart arrived at the museum, it was unidentified and came in a large envelope that had been unopened for many years. The document was donated - along with dozens of miscellaneous papers, photographs, and artifacts - to the museum in 2012 by the family of William James ("Jim") Dove, who was a nephew of Bartlett's.

The museum's curatorial staff examined the chart and noticed annotations of locations and dates. They realized that they corresponded with the drift and sinking of the Karluk, so they compared the document to a chart illustrated in Bartlett's published account of the disaster. Soiled areas, a major tear and fold patterns are all identical. They concluded that the document is the original chart that Bartlett marked up while on the Karluk and carried with him during his subsequent journey over the ice and down the east coast of Siberia.

The museum has received a grant from Kane Lodge Foundation, Inc. to conserve and display this historically significant piece of Arctic exploration history.

The Karluk's final journey: Vilhjamur Stefansson, head of the Canadian Arctic Expedition, leased the Karluk - a 247-ton, 126-foot long retired whaling ship - in 1913 to sail to the



Arctic and discover new islands to claim for Canada. He asked Bartlett to serve as captain of the vessel.

Bartlett was a Newfoundland ship captain famous for his ability to navigate through ice. In 1905-06 and 1908-09 he was captain of the SS Roosevelt, Robert E. Peary's North Pole expedition vessel.

On August 3, 1913, the *Karluk* became stuck in thick ice off the coast of northern Alaska. By September 18 it was evident that the vessel, now frozen in a massive ice floe, would not be free until the spring. Stefansson took a hunting party ashore, leaving Bartlett in charge of 24 scientists and crew, including five Alaskan Iñupiat. Within days of Stefansson's departure the ice surrounding the *Karluk* began to drift north into the Arctic Ocean and then west toward Siberia, carrying the vessel with it. Bartlett, realizing that the *Karluk* would inevitably be crushed by ice, urged his passengers to use food crates to make a shelter on the ice and to build sledges on which to haul food and supplies.

On December 26, after over three months of drifting, the *Karluk* began to shudder under the strain of ice pressing against its wooden hull. On January 10, 1914, ice pierced the ship's planking and water flooded the engine room; the *Karluk* could not be saved.

Bartlett ordered the passengers and crew off the ship and they moved 10,000 pounds of supplies onto the ice next to the crate house. The next day Bartlett gathered up his charts and stepped off the ship. A few hours later the *Karluk* sank.

After two months living on drifting ice Bartlett led the shipwrecked group to the uninhabited Wrangel Island, off the north coast of Siberia. Eight men were lost in the process. Then Bartlett and Kataktovick, an Iñupiat man, crossed over shifting ice to Cape North, Siberia. For the next six weeks they traveled southeast in search of a wireless station so they could launch a rescue mission. On May 29, Bartlett was finally able to send the message asking for help. The rescue of survivors from Wrangle Island took place on August 23, 1915. While the reunion was joyful, Bartlett was saddened to learn that three men had died during the nine months it took Bartlett to return to Wrangel Island with help.

Over the next three decades Bartlett continued to sail north, most often at the helm of his own vessel, the *Effie Morrissey*, now known as the *Ernestina*, based out of New Bedford,

Mass. In 1920, Bowdoin gave Bartlett an honorary degree for his involvement in Peary's North Pole expeditions.

The Kane Lodge Foundation, Inc. is named for Elisha Kent Kane, one of America's first Arctic explorers. Its membership is the same as Kane Lodge, No. 454, F.& A.M., a Masonic Lodge that counted Robert E. Peary and Donald B. MacMillan as members.

South African Port seeks Investors: South Africa's state-owned logistics group Transnet plans to name its preferred bidders for a new jetty and deep sea oil rig repair quay, valued at around 10 billion rand (\$871.42 million), at its Saldanha Port by September this year.



Situated along the West Coast about 120 km (72 miles) from Cape Town, Saldanha is South Africa's deepest natural port and its geographical proximity to a slew of new oil and gas finds on either side of the continent is seen giving it an edge over other repair hubs in Europe, Singapore and Dubai.

Transnet and government officials said the global crash of crude prices was a temporary setback and firms were still keen to build a new jetty and rig repair quay. The projects are due to be commissioned by 2018.

Laura Peinke, a senior official at the Saldanha Bay's special economic zone, said companies such as Keppel and Sembcorp Marine had placed their bids for the construction of the oil and gas development facilities.

Oil exploration firms could make significant savings by having their rigs repaired in South Africa, rather than towing them to Singapore, which could take up to 100 days for a rig that rents out for around \$500,000 a day, Peinke said.

South Africa is close to new oil and gas strikes offshore of Mozambique and Tanzania, as well as existing fields from Africa's top two oil producers Nigeria and Angola.

South Africa imports its crude oil through the Saldanha port and the terminal is also the country's main iron ore export outlet with just under 60 million tonnes leaving its shores each year, said the port manager.

Study: Increased Investment in U.S. Inland Waterways: The National Waterways Foundation (NWF) has commissioned and released a two-year, ground-breaking study by the University of Tennessee and the University of Kentucky, "Inland Navigation in the

United States: An Evaluation of Economic Impacts and the Potential Effects of Infrastructure Investment" (November 2014). The study examines the waterways' national economic return on investment and the need for and benefits of an accelerated program of waterways system improvements that sustain and create American jobs.

The study evaluates the inland navigation system as it is currently funded and configured, and as it might be through renewed infrastructure investment. The study begins with a basic analytical framework examining navigation's role as a productive input in various industrial processes and reflects actual, real-world economic interactions and consequences if the system were to suddenly shut down and then if proper infrastructure investments were made.



The study found:

- Investment in badly needed modernization improvements to our inland waterways' aging lock and dam infrastructure could lead to 350,000 job-years of new, full-time employment with a present value of more than \$14 billion over the 10-year period examined in the study.
- If we invest in our inland waterways, we can sustain 541,000 jobs and more than \$1 billion in new job income annually.
- If 21 priority navigation projects could be completed at an estimated cost of \$5.8 billion total, the 20-year sum of related economic output activity would exceed \$82 billion.
- Although not likely in the current fiscal environment, if the completion of those projects were accelerated to 10 years, between 10,000 and 15,000 new jobs with an annual economic value of \$800 million could become available. In the second decade, the completed navigation improvements could result in 10,000 new jobs throughout the economy each year with a total income of \$740 million in the first year to more than \$1 billion by year-20.
- New freight capacity could result in robust economic impact in the creation of some 12,000 new full-time, permanent jobs each year with annual incomes in excess of \$500 million.
- If commercial shipping on our waterways were to cease entirely, there would be immediate, devastating economic consequences with a total 10-year loss of \$1.063 trillion, when discounted to reflect that some of the loss is still several years away. Shipping costs would increase by \$12.5 billion, which would ultimately be passed onto

American consumers in the form of higher costs for goods. The Gulf Coast and Lower Mississippi River regions would be hardest hit by a potential complete waterways system closure. High-value petrochemical products dominate industrial production in that region and alternative transportation in the region is limited.

- With the loss of waterways' shipping, an estimated 75% of freight would be diverted to truck and/or rail, and there would be a 25% loss due to decreased production. Given that the capacity of just one standard river tow (15 barges) equals 1,050 trucks or 216 rail cars and six locomotives, the nation would face certain traffic gridlock.
- For more than half of Americans, there would be a 7.8% spike in the price of electricity, triple the average annual increase, if the waterways were not available to shippers.
- While Members of Congress debate the many needs of the nation with constrained funding, our inland waterways transportation system must not be overlooked. This study underscores the need for investment spending that directly results in efficiency and productivity gains across sectors, sustainment and creation of jobs, and curbs on traffic congestion from truck and rail.

The United States stands at the brink of a watershed era where transportation planning tools will be even more important. For example, as a direct result of large and unforeseen increases in available and affordable domestic energy resources and other areas of opportunity, there is a growing sense that the U.S. economy can capitalize on increased productivity. But realizing these opportunities requires the nation's transportation sector to adapt accordingly.

"The research in this important study sponsored by the National Waterways Foundation is an effort to help develop a more effective framework for policy-makers to understand and measure the current navigation system and look to future possibilities and job creation if proper infrastructure investments are made," said Mark Knoy, National Waterways Foundation Chairman.

Royal Caribbean Ship delayed by Pipe Burst: A Royal Caribbean cruise ship was cleared by United States Coast Guard investigators to leave the Port of New Orleans on Sunday afternoon after a broken water pipe forced delays and some cancellations.



Some passengers were stuck on board the Serenade of the Seas for nearly 24 hours this weekend following electrical damage caused by a broken water pipe. The incident caused

some minor flooding and outages, while also forcing the cancellation of several reservations after power was briefly lost to some parts of the ship.

On Saturday, Royal Caribbean officials said while at least 200 rooms were affected by the flooding or power outages, others were not, allowing several people to board the ship. Those people spent the afternoon and evening waiting as crews began repairs with expectation the ship would soon set sail. Rooms that had damage forced officials to cancel roughly 400 passengers' trips.

Royal Caribbean issued a statement saying: "We understand the anticipation and excitement leading up to their cruise, and we apologize for impacting their vacation. Royal Caribbean international will provide these guests with a full refund of the cruise fare paid."

Officials said the ship's critical systems are working, but some areas of the ship did not have power including the main theater, medical facility and the gym.

Serenade of the Seas was scheduled to depart on January 24th on a seven-night Bahamas cruise.

Container Insight: Reshuffled: The new carrier mega-alliances started in the East-West container trades this month. Now that the game of musical chairs has stopped, for the time being at least, Drewry reviews the competing



services in the big Asia-North Europe trade to see which carrier group has the edge.

Table 1

Alliance services in the Asia-North Europe trade, end-January 2015

Carrier group	No. services	Ave. ship size (teu)	Estimated weekly effective capacity (000 teu)	Market share
2M	6	14,000	67	31%
CKYHE Alliance	6	10,800	52	24%
G6 Alliance	5	12,300	52	24%
Ocean Three	4	11,400	47	21%
Total	21	12,600	219	100%

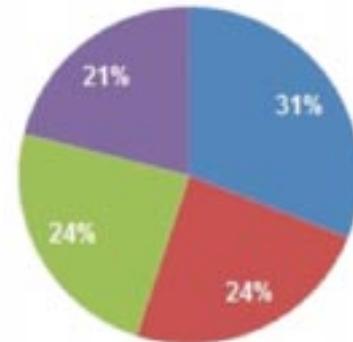
Note: Does not include slot charter agreements; effective capacity is nominal capacity minus deductions for deadweight and high-cube limitations, out-of-scope and wayport cargoes.

Source: Drewry Maritime Research

Figure 1

Estimated share of effective weekly Asia-North Europe capacity, end-January 2015

■ 2M ■ G6 Alliance ■ CKYHE Alliance ■ Ocean Three



Source: Drewry Maritime Research

Later than some carriers had hoped, the new mega-alliances have now started operations in the main East-West container trades. By interrogating the forward schedules of the various partners, Drewry has taken a close look at how things stand now in the key Asia-North Europe trade and how things might develop by the end of the year. What stands out immediately is the fact that *every service is now controlled by one of the four alliances.

Maersk and MSC's 2M is in the box seat, controlling 31% of the "effective" weekly capacity, following by the CKYHE and G6, both with 24%, and finally the Ocean Three on 21%. Our definition of effective capacity is nominal capacity (the average size of ships per service) minus deductions for deadweight and high-cube limitations and then again for out-of-scope cargoes, i.e. those relayed to areas outside the range. When relevant, operational capacities have also been adjusted for slots allocated to wayport cargoes, such as when a service also makes calls in say South Asia or the Mediterranean.

The total number of weekly Asia-North Europe services has been reduced from 22 to 21 compared with December 2014. The number of ships required to keep these services in a fixed-day weekly pattern has subsequently come down from 245 last month to 232 with smaller unwanted ships having been cascaded away from the trade. Despite these changes, the available capacity has largely been maintained with westbound slots of 218,500 teu per week, down just 1% on December. This has been achieved by the introduction of more new Ultra Large Container Vessels (ULCVs) - the average size of ship has increased from 12,400 teu to 12,600 - while the new schedules are more dedicated to North Europe with fewer wayport deductions.

Many feared that the formation of the mega-alliances would intensify the homogenization of the industry whereby carriers can only compete with one another on price as they all have the same services. However, closer inspection of the schedules reveals that the alliances are far from uniform and between them they have created a pretty well-balanced network with wide port coverage at both ends of the trade.

Table 2**Weekly departures from Asia to North Europe by country, region, end-January 2015**

Country	2M	CKYHE	G6	O3	Total	Share
Japan	3	0	4	0	7	8%
South Korea	4	2	2	1	9	7%
North Asia sub-total	7	2	6	1	16	11%
North China	4	4	2	4	14	11%
Central China	14	8	6	9	37	30%
South China	9	5	5	5	24	20%
Mainland China	27	17	12	18	74	61%
Hong Kong	2	2	2	2	8	7%
Taiwan	0	2	1	0	3	3%
PRC, HK, Taiwan sub-total	29	22	16	20	87	70%
Vietnam	0	0	2	0	2	1%
Singapore	0	4	4	0	8	7%
Malaysia	6	1	0	4	11	9%
Southeast Asia sub-total	6	5	5	4	20	16%
Total	42	29	27	24	122	100%

Source: Drewry Maritime Research

Inevitably, as befitting a country that is origin to around 70% of all the container traffic to North Europe, the main battle ground is China. Collectively, the alliances depart from 10 mainland China ports every week to North Europe, with a total of 74 weekly voyages. The 2M carriers have a clear advantage with 27 China to North Europe departures per week, well ahead of Ocean Three (18), CKYHE (17) and the lagging G6 (12).

The geographical spread of service calls naturally reflects the trade flows out of China as carriers essentially have to follow the cargo. Central China is the best served with a total of 37 weekly departures with Shanghai getting the most calls on 17, followed by Ningbo on 14 and Xiamen on 6. It is from this region that the 2M claims its dominance with 14 departures per week spread between the three ports, five more than its nearest rivals Ocean Three.

Ports in South China are also well served with 24 weekly departures, the majority from Yantian in the Shenzhen port complex, which has 16 loading calls. Again, 2M has the ascendancy with 9 weekly departures, compared with five each for the other alliances.

Perhaps surprisingly, North China ports are not better covered considering their rapid growth of late. Container traffic from the North has been outpacing the other Chinese regions as more manufacturing has moved there to take advantage of lower labor costs. Data from the Container Trades Statistics (CTS) shows that demand from North China to North Europe was up by 12% in the 11 months through November 2014, compared with 9% for the two other regions.

So far, the allure of North China is not reflected in the alliances' schedules, where there are currently only 13 weekly departures to North Europe. Strikingly, the G6 carriers only make one North China-North Europe call (Qingdao on Loop 7) while the other three groups each make four calls. The region's present coverage is commensurate with its volumes to North Europe, but carriers will need to find room for more North China calls in the future if they want to take advantage of the region's potential.

While China as a whole can be said to have broad coverage, the same is not true for Japan and South Korea, which only have 7 and 9 weekly departures to North Europe, respectively.

In Japan's case, the paucity of direct services seems to be a fair reflection of its declining volumes and contribution to the trade that saw no boost from the yen's depreciation. CTS had Japan to North Europe box traffic down by 1% after 11 months last year. With around 6% of the total Asia departures to North Europe, but only 5% of the volumes, it seems unlikely that carriers will want to add more Japanese calls in a rush.

2M and G6 (with its two Japanese members MOL and NYK) are the go-to alliances for Northeast Asia to North Europe with 7 and 6 weekly departures. In stark contrast, the Ocean Three and CKYHE groups have zero Japanese calls, which is particularly odd for the latter considering the inclusion of Tokyo-based K Line.

While the outlook for more traffic from Japan/South Korea is weaker than other parts of Asia, the benefit of weaker competition does mean that incumbent carriers can charge a freight rate premium. Drewry's Container Freight Rate Insight reports that 40ft spot rates ex Japan are currently around \$1,000 above those from South China.

Table 3**Weekly arrivals in North Europe from Asia, by country, end-January 2015**

Country	2M	CKYHE	O3	G6	Total	Share
Germany	9	6	4	5	24	29%
UK	5	5	4	5	19	23%
Netherlands	3	6	4	5	18	21%
Belgium	3	3	4	1	11	13%
France	2	2	3	2	9	11%
Denmark	1	0	0	0	1	1%
Poland	1	0	0	0	1	1%
Sweden	1	0	0	0	1	1%
Total	25	22	19	18	84	100%

Source: Drewry Maritime Research

At the other end of the trade, there are now 84 weekly arrivals in North Europe, spread between the obvious gateways with a handful of unique calls off the beaten track. Europe's largest container port Rotterdam has the highest number of arrivals from Asia at 18, followed by Hamburg on 17. Between them the two major European ports receive 41% of all the calls from Asia, which considering the congestion issues they have both faced recently is possibly on the high side.

The UK has 19 calls in total split between Felixstowe (11) and Southampton (8), giving it a second-best 23% share of all calls into North Europe. The UK's healthy coverage does dispel any lingering fears that the country would become a feeder-nation following the sale of Anglo-Dutch carrier P&O Nedlloyd in 2006.

All of the four alliances are well covered to the main markets of Germany, Netherland, UK, France and Belgium, but the 2M does offer a few specialist calls to Scandinavia (Aarhus and Gothenburg) and Poland (Gdansk).

Importers and exporters can have little complaint about the range of options available. For example, there are 14 weekly services from Shanghai to Rotterdam, the two busiest ports in the trade. That means shippers can call upon 16 carriers (not to mention non-alliance slot charterers) to get the most competitive freight rate.

For the more time-sensitive shippers, the alliances also provide a wide array of transit times to suit their needs. Looking at Shanghai to Rotterdam again, transit times range from a quickest of 28 days to a slowest of 36 days.

Table 4 shows a selection of the fastest transit times available to the market on some of the busiest port-to-port lanes. With each alliance having a slight geographical bias, often dictated by members' terminals interests, they all can boast some transit time supremacy somewhere, although the 2M partners have twice as many as the others from our selection of ports, giving them quite a substantial marketing lead.

Table 4: Fastest transit times for selected port pairs, Asia to North Europe, January 2015

Route	2M	CKYHE	Ocean Three	G6
Asia to Hamburg				
Rosari	36	34	34	34
Ningbo	36	32	32	36
Shanghai	31	36	32	27
Yantai	27	27	28	36
Hong Kong	27	29	29	36
Asia to Rotterdam				
Rosari	36	36	36	36
Ningbo	36	28	32	27
Shanghai	28	36	32	36
Taiwan	31	34	32	36
Hong Kong	36	36	36	36
Asia to London/Amsterdam				
Rosari	36	36	36	36
Ningbo	36	32	32	36
Shanghai	36	32	32	36
Taiwan	36	32	32	36
Hong Kong	36	32	32	36
Asia to Antwerp				
Rosari	36	36	36	36
Ningbo	36	32	32	36
Shanghai	36	32	32	36
Yantai	36	32	32	36
Hong Kong	36	32	32	36
Asia to LA Haven				
Rosari	36	36	36	36
Ningbo	36	32	32	36
Shanghai	36	32	32	36
Yantai	36	32	32	36
Hong Kong	36	32	32	36

Interestingly, the advent of the new alliances looks to have increased the average speeds of ships on the trade, which is probably a consequence of both dramatically lower bunker fuel costs and the desire of carriers to make their new services more attractive to customers. Drewry estimates that average westbound service speeds have sped up to 18.5 knots; versus 17.8kts as measured in December. The 2M again leads the way with an average speed of 19.8kts, while the G6 brings up the rear on 17.5kts.

This analysis was based on the pro-forma schedules as advertised on carriers' website rather than operational schedules. Therefore, they are not guaranteed to reflect the reality, and as shippers will be well aware carriers do not have a great track record of delivering cargo on-time. Drewry's Carrier Performance Insight reported that reliability in the Asia-Europe trade was only 64% in December.

Table 5
Estimated service speeds (knots), Asia-North Europe trade, end-January 2015

Carrier group	Headhaul Speed		
	Westbound	Eastbound	Premium
2M	19.8	17.1	2.7
Ocean Three	18.5	15.2	3.3
CKYHE Alliance	18.1	14.3	3.8
G6 Alliance	17.5	15.3	2.2
Average	18.5	15.5	3.0

Note: Last Load Port to First Discharge Port, transit time derived from carriers' pro-forma schedules as of January 2015

Source: Drewry Maritime Research

With the huge orderbook, many of the biggest ships will have to be squeezed into the Asia-North Europe trade. Looking exclusively at the 13,000 teu+ newbuilds that are the most obvious candidates to enter the trade this year, a few things become apparent. Firstly, the G6 has no such ships on order and will undoubtedly lose ground by the end of the year. Ocean Three has the most of said ships and will subsequently leap-frog the G6.

The 2M lines, which are already on the fringes of the EU's acceptable market -share threshold will also extend its market leading position, but not by so much to draw further scrutiny from regulators. The scheduled build completion dates of the 2015 ULCVs suggest that there will be as many as three new weekly services from the start of the second-half of the year, which will give shippers even more choice and likely suppress freight rates.

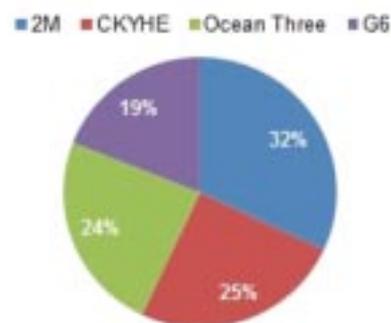
The G6 is definitely the alliance to watch. As this analysis reveals they have the weakest port coverage and transit times, while their shortfall of big ships will see them lose market share and lose ground on slot costs. Being in such an obviously weaker position risks them having to become price-takers in order to fill their assets. It is therefore unsurprising that the likes of MOL and OOCL have been heavily-linked with new orders for 20,000 teu ships. The six lines will hope they have not fallen too far behind by the time those ships are delivered.

Table 6
Scheduled deliveries of 13,000+ teu containerships in 2015

Carrier/group	No. ships	000 teu	Estimated next scheduled build completion
MSC	6	102	Jun-15
Maersk Line	5	91	Apr-15
2M sub-total	11	193	
UASC	8	138	Apr-15
CMA CGM	6	107	Unknown
CSCL	2	38	Jan-15
Ocean Three sub-total	16	282	
Yang Ming	10	141	Mar-15
K Line	5	69	Mar-15
CKYHE sub-total	15	210	
Total	42	686	

Note: Includes ships that have been delivered but have yet to be assigned to a service.

Figure 2: Potential share of effective weekly Asia-North Europe capacity, end-2015



This analysis has limited the alliance shares and coverage by examining own-tonnage services only, but individual carriers' port-pair options can be widened further through slot-charter exchanges. This is already evident with carriers from the Ocean Three and CKYHE swapping space. More inter-alliance cooperation can be expected as lines try to fine-tune their networks.

Not being part of an alliance is not a barrier to market entry either, as Hamburg Süd has recently shown by joining the trade via slots on some Ocean Three services. As Drewry has previously asserted this type of cooperation among rivals can be win-win for both carriers and shippers. While the trade might look like a closed-shop from the outside, the reality is much more nuanced.

*The only exception is the New NEMO loop of CMA CGM and Hapag-Lloyd that contributes only a trace amount of capacity to the trade as ships arrive at Tilbury from Southeast Asia only after first discharging in South Asia and the Mediterranean.

View: The Asia-North Europe trade post-alliance restructure is generally well-balanced in terms of geographical coverage with strong competition in the key lanes. The broad range of options made available to shippers means that accusations that the industry is completely homogenized are unfair.

South Asia still preferred dumping ground: Out of a total of 1026 ships dismantled globally in 2014, 641, representing 74% of the total gross tonnage (GT) scrapped, were sold to substandard facilities in India, Pakistan and Bangladesh where ships are dismantled directly on tidal beaches, the NGO Shipbreaking Platform's demolition stats show.

None of the said South Asian yards comply with international standards for safe and environmentally sound ship recycling.

"The demolition of the largest movable man-made structures is hazardous and must be conducted in a controlled manner



using adequate infrastructure such as cranes as well as necessary health and safety provisions," the Platform said.

In 2014 the Platform reported 23 deaths and 66 severe injuries due to accidents such as explosions, workers crushed under steel plates and falling from heights on the South Asian beaches.

"South Asia is still the preferred dumping ground for most ship owners as environmental, safety and labour rights standards are poorly enforced there," said Patrizia Heidegger, Executive Director of the NGO Shipbreaking Platform.

"Ship owners sell their ships to the beaching yards for considerably greater profit than the price they could obtain by cooperating with modern ship recycling facilities. It is shameful for the shipping industry that so many ship owners choose to close their eyes to the realities on-the-ground in South Asia and do not to face up to their responsibility and demand clean, safe and just ship recycling."

According to the NGO, German ship owner Ernst Komrowski tops the list of the worst global dumpers with 14 end-of-life vessels sold to the beaches; all formerly part of the Maersk fleet.

Second ranks South Korea's largest container ship owner Hanjin Shipping with 11 ships, followed by Swiss-based Mediterranean Shipping Company (MSC), the second largest container ship operator in the world.

The Platform said that MSC's shipbreaking activities in India have already cost the life of six workers in 2009 when a fire broke out on the MSC Jessica.

"Despite recurrent public criticism of MSC's deplorable management of their end-of-life fleet, MSC has not developed a ship recycling policy that can prevent such tragic accidents. Hanjin and MSC's bad practice stands in sharp contrast to that of their competitors Maersk and Hapag-Lloyd, two leading containership companies that have committed themselves to the recycling of their end-of-life vessels in modern facilities off the beach," the Platform pointed out.

According to the statistics, number four amongst the worst dumpers is Petrobras with six end-of-life vessels sold to South Asia.

Komrowski, Hanjin, MSC and Petrobras are followed by companies such as as Conti, one of the largest German ship owners offering private investment in ships, G-Bulk and Danaos from Greece and Ignazio Messina from Italy. Also American TBS International, Singapore-based Pacific International and Taiwanese owner Yang Ming each sold five ships to the beaches in South Asia, the Platform added.

"Every single ship owner can do something: instead of selling to intermediaries and losing leverage on the fate of their vessel, ship owners can talk to ship recycling experts and negotiate directly with modern ship recycling facilities. Teekay and Hapag-Lloyd's decision last year to adopt responsible ship recycling policies shows that ship owners can make alternative choices," Heidegger went on to say.

The Platform said that the European Union has a particular responsibility to act as 34% of the gross tonnage broken in South Asia last year was European.

Amongst the ships dismantled in 2014, 285 were either owned by a European company or flying the flag of an EU Member State. Two thirds of these European ships ,182 ships, including many having primarily operated in European waters, were beached, according to the statistics.

"Comparatively, Chinese owners, including those based in Hong Kong, only sold 39% of their end-of-life vessels to beaching facilities in South Asia. China is the only major shipping nation in the world building up domestic capacity and working towards self-sufficiency in the management of its end-of-life fleet," the Platform concluded.

Falling Piracy figures hide worrying trends: The UK Chamber of Shipping has warned that a significant drop in Somali based piracy should not mask significant security threats to shipping and seafarers in other regions, both off West Africa and in South East Asia. - where a violent 'petro-piracy' is thriving.



A report by the International Maritime Bureau shows a remarkable drop in Somali-based piracy, falling from 236 incidents in 2011 to just 11 in 2014.

The fall indicates that the military operation combined with industry best practices has finally had a significant impact on piracy in the Indian Ocean.

UK Chamber CEO Guy Platten said that "whilst most of the media and Hollywood attention has been focused on Somali-based piracy, the worrying trends emerging in the Gulf of Guinea and Singapore Straits have received little attention."

"This new form of maritime criminality, which often has links to shore-based oil theft, is taking place within the jurisdictions of functioning nation-states, but ones that pay little attention to maritime security and governance. Put simply, these regions have become a breeding ground for future pirates," Platten said.

UK Chamber suggests that, seeing that these new threats do not require military action, global leaders should pressure governments in West Africa and South East Asia to enforce stricter laws and develop better maritime governance structures.

HHI's Order intake plunges: The newbuilding order intake of South Korean shipbuilder Hyundai Heavy Industries (HHI) has taken a plunge as the shipbuilder recorded 27.5 pct dip in new orders in 2014 when compared to last year's figures.

The company's orderbook ending with December 2014 amounted to USD 19.8 billion, around USD 8 billion lower from 2013, when it totaled in 27.3 billion.



HHI's overall shipbuilding business activity decreased by 34.9 pct when compared to the same period last year.

Faced with losses amid fierce competition from Chinese counterparts, the South Korean shipbuilder has already undertaken restructuring measures which saw HHI lay off 81 out of 262 executives, cutting its number of executive by 31 percent.

As a way of cutting back on expenses the company said it was considering closing unprofitable business branches such as those engaged in renewables.

The company faced the first strike in two decades last November as unionized workers urged for sorting out of wage and benefit issues.

At the beginning of January, workers at HHI voted down a tentative wage agreement proposed by the shipbuilding conglomerate thus further prolonging talks between the two parties.

The workers had called for 132,000 won pay raise, and at least 250 percent of the base salary as performance-based benefits. HHI responded to demands with an offer of 37,000 won salary increase, arguing the demands were unrealistic seeing that the company was experiencing losses.

Prosecution of Somali Piracy Leaders

Crucial: Piracy activity in the Gulf of Aden and Western Indian Ocean has declined significantly, as concluded by the Foreign Affairs Council of the European Union in a report on Somalia.



However, networks supporting piracy are still operating and the threat of piracy remains, the Council said.

"The EU is deeply concerned by the news of the recent release of a pirate leader, in Mogadishu, and reiterates the urgent need for the Somali authorities to end impunity of piracy network leaders and strengthen the rule of law," the report read.

According to the EU, the main issue that remains to be done to disrupt piracy networks' operational capabilities is the prosecution of piracy leaders.

"Therefore, the EU calls on Somali authorities to take concrete measures towards the establishment of such legislative framework pertaining to piracy and maritime crime."

The EU also noted that new threats such as trafficking in human beings and drugs, illegal trade in charcoal, smuggling of migrants and proliferation of small arms and light weapons require increasing attention.

The Union said it would continue to play its role in fighting piracy including through its CSDP missions as well as in its capacity as Chair of the Contact Group on Piracy off the Coast of Somalia (CGPCS) in 2014.

The counter-piracy efforts include Operation EUNAVFOR ATALANTA which is set to last until December 2016.

Piracy in Sub-saharan Africa needs to be addressed on land: Given the tremendous social and political conflict occurring in many piracy prone countries in Sub-Saharan Africa, counter-piracy efforts at sea will likely fail, as indicated in a recent research paper of the Office of Naval Research in the United States on the trends in maritime piracy.

Extant research shows state fragility, economic deprivation, population, and geographic opportunity are all related to the incidence of piracy in territorial waters. Similar to the growth of armed insurgencies, political and economic conditions help facilitate corruption and criminality, both of which enable piracy, Brandon C. Prins, Professor of Political Science at the University of Tennessee, notes in the research.

The average fragility score for the nine Sub-Saharan countries examined in the report (averaged across the 2009-



2013 time period) is 16.8, which is 2.5 times higher than countries without piracy.

The average fragility score for countries without piracy during the 2009-2013 time period is 6.6. Somalia, with an average score of 24, represents the closest thing to a failed state in the international system. The political improvement Somalia witnessed from 2011 to 2012 (and likely into 2013 although the data for 2013 are not yet available) appears to have helped counter-piracy efforts in the Greater Gulf of Aden.

Given that trade in the greater Gulf of Aden is valued at nearly one trillion US dollars a year, it is clear why would-be pirates gravitate toward these waters. Further, Somalia despite having only five deep-sea ports, sits only five kilometers from where the Red Sea empties into the Gulf of Aden, and approximately twenty thousand ships transit through the Greater Gulf of Aden each year. These vessels represent in many cases easy targets for would-be pirates.

Economic deprivation within countries also helps to facilitate piracy and illegal markets more generally. Unemployed youth (especially males) provide the foot soldiers both for insurgencies and pirate gangs.

Some of the most piracy-prone countries remain some of the poorest places on Earth. Somalia had an average per capita GDP in 2009-2013 of only \$562. Nigeria was slightly higher at \$1,013.

Convincing individual fishers or farmers to forego the opportunity of a lucrative payoff (typically several thousand US dollars) remains difficult when there are few employment alternatives. And, monies from pirate operations tend to depress job growth in the legal economy.

The research shows that efforts to increase wages and job growth in piracy-prone countries must be part of an effective counter-piracy strategy.

Although pirate attacks dropped dramatically off the coast of Somalia in 2013, they increased significantly in the Gulf of Guinea. Counter-piracy naval operations and improved security onboard ships likely contributed to the decline in the greater Gulf of Aden.

Some strengthening in Somali governing institutions also likely had an effect even as armed conflict continued to create difficulties for the new regime. In the Gulf of Guinea, a deteriorating security environment and continued fragility in many West African governments provided space for pirate groups to operate.

"Although West African leaders met during the summer of 2013 to plan an assault on piracy and pirate groups, insufficient resources and too few naval patrol craft will likely hamper their efforts. Permitting foreign-armed guards on merchant vessels transiting Nigerian waters may be a next step in countering this maritime threat. Clearly, though, conditions on land must improve before the piracy threat will disappear. Weak states, joblessness, and abundant targets currently ensure that piracy will continue," the research reads.

Former "Google" Barge sold: JANUARY 23, 2015-Did you ever wonder whatever happened to those four Google barges that were supposed to serve as floating showrooms perhaps for Google Glass in strategic locations on the U.S. East and Gulf Coast?

One of them was recently sold by Marcon International, Inc., Coupeville, WA, to private buyers on the U.S. West Coast.

The Google barge sales was one of three ocean barge sales transactions brokered by Marcon International to start off the New Year. Marcon says it hopes to report on several additional sales before the end of this month. Five 4,500 - 6,000 hp tugs, one 5,150 bhp AHTS and two 3,200 - 5,500 dwt ocean barges continue to be fixed on previously arranged long-term charters.

Marcon reports that the former "Google" barge JMC 262 (ex-BAL0001, CIB 721) from Cashman Equipment Corp. was sold. The 260 ft x 72 ft x 16 ft ocean deck barge was built in 2010 by C & C Marine & Repair of Belle Chasse, LA, and is best known as one of the four proposed four-story "mystery" barges owned by By and Large LLC, a company affiliated with Google. The barges were reportedly being outfitted as floating "studios" and "temporary technology exhibit spaces" providing an interactive experience where people could learn about the tech company's newest technology and products. After various questions arose regarding building permits and U.S. Coast Guard safety concerns, the project was put on hold and conversion halted.

The double-raked, ABS +A1 Ocean Deck barge can carry about 5,107 long tons on a 12.58 ft draft and has a 9/16 in. plate deck with a uniform deck load of 5,000 psf. The ½ in. plate hull is divided by six transverse watertight, two longitudinal watertight and one centerline mid-body non-watertight bulkheads forming 15 epoxy coated watertight compartments.

Marcon International acted as sole broker in the sale. In 2014, Marcon brokered six ocean and inland deck barges totaling 25,658dwt capacity. Over the past 34 years Marcon International has sold or chartered a 216 ocean and inland deck barges with an aggregate deadweight capacity of over 1 million tons.



One of the four former "Google" barges that were to be fitted with technology showrooms

BC Ferries, initiates the First Steel Cut:

Poland's Remontowa Shipbuilding S.A. last week held a steel cutting ceremony at its Gdansk shipyard to mark the start of construction of three new LNG fueled intermediate class ferries (ICF) for Canada's BC Ferries.

BC Ferries awarded the \$165 million contract to Remontowa last July after an extensive bidding process. build three new vessels. They will be the first dual fuel ferries in BC Ferries' fleet to operate. The first ICF is scheduled to arrive in Canada in August 2016.

"Today is an exciting day for BC Ferries as we officially commence the physical construction of the first ICF, which will replace the 50-year old Queen of Burnaby on the Comox - Powell River route," said Mark Wilson, Vice President, Engineering. "We look forward to welcoming these new LNG ferries to our fleet, to help reduce both upward pressure on fares and our impact on the environment."



The second ICF is scheduled to arrive in October 2016 and will replace the 51-year old Queen of Nanaimo, sailing on the Tsawwassen - Southern Gulf Islands route.

The third ICF will arrive in February 2017 and will be used to augment peak and shoulder season service on the Southern Gulf Islands route, and provide refit relief around the fleet.

The new intermediate class vessels will measure approximately 107 m and will have the capacity to carry 145 vehicles and up to 600 passengers and crew.

The ships will have roll on/roll off vehicle decks, capable of loading/unloading at the designated terminal berths.

The vessels will be constructed for a service life of approximately 40 years.

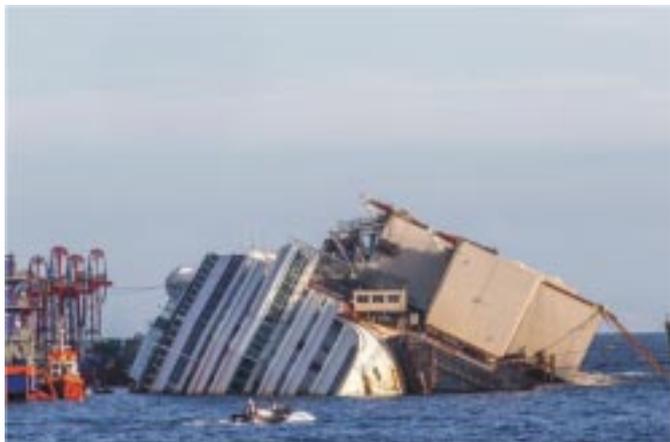
The ships will have a contract service speed of 15.5 knots and accelerate time to 12 knots in 125 seconds.

26-year Jain Term sought for Concordia Master:

An Italian prosecutor asked a court on Monday to sentence the captain of the Costa Concordia cruise liner to more than 26 years in jail for his role in the 2012 disaster that killed 32 people.

Francesco Schettino was the commander of the vessel, a floating hotel as long as three football pitches, when it came too close to shore and hit rocks off the Tuscan holiday island of Giglio.

In summing up arguments at the trial in the nearby of Grosseto, Prosecutor Maria Navarro said Schettino should serve 14 years for manslaughter and causing injuries, nine for causing a shipwreck, three for abandoning ship, and a further three months for giving false testimony.



The trial is expected to go to the jury next month.

The prosecutor said that if he is convicted, Schettino should be jailed immediately because there was a risk he would try to leave the country. In Italy, most defendants remain free pending appeals trials

More than 4,000 passengers and crew were on the ship when it capsized, prompting a chaotic nighttime rescue.

It wallowed partially submerged near the port of Giglio for more than two years. The wreck was towed away last year in one of the most complex maritime salvages on record.

The Tuscany region and the island of Giglio are seeking 220 million euros (\$247 million) in damages from Costa Cruises, a unit of Carnival Corp because of the negative effects the disaster had on tourism.

Costa Cruises avoided a criminal trial in the case by agreeing to pay a 1 million euro fine to Italy last year, but has said it would pay thousands of euros in damages to survivors.

Schettino drew derision in Italy for bringing the Concordia too close to shore in an ill-fated maritime manoeuvre known as a "salute" and abandoning ship before all survivors were rescued.

An audio recording of an Italian coast guard officer shouting at Schettino in a cell phone conversation to: "Get back on board, damn it!" went viral on the internet and the phrase was printed on T-shirts.

Fire Scare Aboard British Cruise Ship: The Boudicca, a Fred Olsen cruise liner, with more than 1,000 people on-board has been left without power off the coast of Morocco after an engine fire.

Passengers of the U.K. based luxury cruise liner were terrified when a fire plunged it into darkness and they prepared to abandon ship. The Boudicca was sailing off the



coast of Casablanca, Morocco at 4am on Sunday when the engine room caught alight.

As the ship lost power and started to list the passengers were ordered to put on life jackets and assemble at emergency locations. Local media reports created havoc: "A fire in the engine of a cruise ship sailing off the coast of Morocco Sunday morning caused the vessel to "list" without power for up to five hours."

However, it is now on the move again with three auxiliary engines and two main engines running. No one was injured in the incident.

The ship left Southampton on January 20 and was making its way to Lanzarote, when it caught fire this morning. It is carrying 784 passengers and 356 crew members.

Three auxiliary engines were running along with two main engines, and the firm was reviewing the itinerary to get the ship back on schedule. The firm said: "The safety of all guests and crew on board Boudicca is Fred. Olsen Cruise Line's utmost priority. "The ship will liaise with the relevant maritime authorities, should any need emerge."

The company statement in the website says: "Fred. Olsen Cruise Lines can confirm that the ship is now proceeding towards the Canary Islands, at a slower speed than planned. Guests are being kept informed of the situation at all times. There have been no injuries to any of Boudicca's 784 guests and 356 crew members, and there is reported to be a good atmosphere on board. The ship's Master has confirmed that at no point were guests asked to don their lifejackets and gather at the muster stations, as the situation was contained within the Engine Room by our crew members."

Libya forces Tanker away from supplying rival Government: Libya's recognized government said it forced a tanker from delivering fuel to its rival administration, diverting the vessel to its own territory by threatening an air attack on it.

The tanker Anwaar Afriqya was approaching the port of Misrata, but diverted to Tobruk, a port official at the latter said on Monday.

"Our planes are forcing an oil tanker to sail to Tobruk after it had been on the way first to Misrata," Saqer al-Joroushi, air force commander for recognized Prime Minister Abdullah al-Thinni, told state news agency Lana.

Libya's recognized government works from a headquarters in the east of the country since the summer when rival forces under the banner Libya Dawn took over the capital Tripoli and installed their own self-proclaimed government.

The latest tanker incident has underscored how increasingly Libya's oil infrastructure is at the heart of conflict that Western powers worry is dragging it closer to a civil war.

Forces loyal to Thinni's government carried out air strikes earlier this month on a Greek-owned oil tanker and a fishing vessel carrying fuel in an escalation of the conflict.

Tripoli's rival oil minister, Mashallah Zwai, said late on Sunday a tanker loaded with 24,000 tonnes of fuel oil was forced to divert to Tobruk while en route to Misrata, which is allied with the Tripoli forces.

"We were contacting the captain until late at night on Jan. 24 to convince him to continue his journey to Misrata to discharge the fuel, but the captain said he had been told in repeated phone calls to move to Tobruk or get bombed," Zwai's oil ministry said in a statement.

This month two crewmen were killed in the airstrike on a Greek-owned oil tanker moored off the port of Derna, drawing international condemnation and stoking concerns about growing violence.

While the Tripoli government is not recognised by world powers, it controls ministries in the capital as well as ports and airports in western Libya, making it difficult for oil buyers and shippers to avoid dealing with it.

Each side has appointed its own oil minister and head of the state-owned National Oil Corp. Armed forces allied to Tripoli tried to seize the eastern ports of Ras Lanuf and Es Sider, forcing both to shut down.

Training Coastguards is Key to tackling Piracy: Training and mentoring of coastguards in Africa, Middle East and South East Asia is essential if coastal nations are to have effective control over their Territorial Waters and Economic Zones, says maritime security company Maritime Asset Security & Training Ltd (MAST).

Furthermore, if Western Governments continue to cut back on defense spending, these nations will be increasingly reliant on their own resources to provide security in international waters adjacent to their territorial limits.

Gerry Northwood OBE, COO of MAST, said, "While the U.K. Chamber of Shipping has recently reported that Indian Ocean piracy is under control, it should not be forgotten this is directly attributable to the success of international maritime military deployments to the Indian Ocean, and because commercial shipping has taken positive and decisive action to protect their vessels through Best Management Practices 4 (BMP4) and armed guards.

"However, the report rightly warned that there is still much to be done ashore if a resurgence of piracy in the Gulf of Aden and the Indian Ocean is to be prevented. Somalia remains a politically fragmented state and in places, the lack of governance, and law and order, means that the 'pirate breeding grounds' are still intact."



He added, "This is not just about Somalia. Coastal nations in other piracy prone areas such as West Africa and South East Asia are being encouraged to police their Territorial Waters and Exclusive Economic Zones, and will benefit from mentoring in how to do so more effectively."

Richard Battrick, Director of Training, Compliance and Ordnance Management at MAST, said, "There remains a paucity of multinational naval assets which will be further affected by defense budget cuts in 2015 as states continue to identify savings in the wake of the global recession."

"Nonmilitary solutions such as national coastguard agencies require improved capabilities and capacities if they are to become a sustainable solution. An integrated approach, including international public-private cooperation to maintain border security and safeguard the maritime flank is the way forward."

He added, "While avoiding military levels of expenditure, to be effective, it is important that coastguards are able to implement a more sophisticated and layered application of maritime security. This requires that they can efficiently manage a range of capabilities, which include surface vessels, helicopters and fixed wing surveillance aircrafts. Networked operations centers should coordinate these assets and share critical information.

"Well trained and professionally proficient personnel are essential to achieving this."

Northwood added, "Coastal nations are becoming increasingly cognizant of the need to be able to exploit and protect their maritime flank. Some nations, such as Oman, Egypt, Indonesia and Malaysia, have been highly proactive and have already made significant steps to improve their maritime capabilities.

"However, there remains much to be done to ensure coastal states improve their surveillance capabilities, and are able to efficiently co-ordinate assets. In particular, it is important that air and surface assets are regarded as essential yet complimentary capabilities."

SeaGull secures Panama Flag Approval:

Seagull Maritime said it has secured training center approval from the Panama Maritime Authority, marking the first time that an overseas company has done so following the PMA's 2014 change of leadership. The approval process included a two-day inspection of Seagull Maritime's Horten, Norway facilities by three PMA staff.

"We are the first training center in the world to be audited and approved by the new administration of PMA outside of Panama, as part of an exhaustive review by the Flag State demanding the attention of six Seagull Maritime staff," said Torger Tau, Manager - Training Courses, Seagull Maritime AS.

The audit confirms the alignment of Seagull Maritime's entire onboard training program with IMO Model Courses, and authorizes Seagull Maritime to conduct training courses on PMA's behalf in line with the International Convention on Standards of Training, Certification and Watchkeeping.

"In most cases Flag States review individual courses, while their approval of the training center itself is based on approvals we hold from the Norwegian Maritime Authority," Tau said. "Separate approval from Panama - the largest ship registry in the world, with about 8,600 ships carrying its flag - included a request to verify our own record-keeping on seafarer data. Our archive was interrogated at random down to the level of single seafarer records, while PMA required a briefing on our training methods.

"PMA showed particular interest in our updated Ship Security computer-based training modules and the suite of products we have refined to reflect the demands of STCW. However, with more than 9,000 ships using the Seagull training solution onboard, this approval is of great significance for us and our customer base."

During 2014 Seagull Maritime broke a previous company record, by issuing more than 14,000 certificates and course diplomas to seafarers to acknowledge the completion of the training specialist's onboard courses.

Britain to Ban Fracking in National Parks:

Britain said on Monday it would ban fracking in national parks, reversing a policy announced last year, in a concession to the opposition Labour Party which had called for tighter controls to be written into law.

"We have agreed an outright ban on fracking in national parks, sites of special interest and areas of natural beauty," said junior energy minister Amber Rudd during a debate on new laws regulating the extraction process.

Last year the government said fracking -- extracting gas and oil by pumping chemicals, sand and water at high pressure into underground rocks -- would be possible within national parks in exceptional circumstances.

The government also accepted a Labour proposal to tighten several other rules governing when and where fracking would be permitted.

"This is a huge u-turn," said Labour energy spokeswoman Caroline Flint. "The government has been forced to accept that tough protections and proper safeguards must be in place before fracking can go ahead."

Prime Minister David Cameron has championed fracking as a way to offset a decline in the country's North Sea energy resources and reduce its dependence on gas imports.

But the method has attracted criticism over its potential environmental impact. Critics have expressed concerns about chemical leaks into groundwater resources and the disposal of waste water produced in the process.

Last year an application by London-based oil and gas exploration firm Celtique Energie to explore for shale oil and gas within a national park in southern England, where large reserves are believed likely to exist, was rejected.

Lawmakers voted down a separate bid on Monday to introduce a moratorium on all fracking.

The Dangers of Ro-Ro ship design: A Naval Architect's Perspective:

There is something about Ro-Ro ships that make them completely different from other types of ships. But we will come to it a bit later, after knowing the broad categorization of ship types by IMO according to freeboard and subdivision.

IMO has classified ships into Class A and Class B.

The Class A ships are those which have lesser sea openings and better protected from the sea, also because of stringent



subdivision restrictions. But Class B ships are those which have higher freeboard and are directed by less stringent subdivision rules.

Now, RORO ships are of Class B, but what yet sets them different is that they have a completely open vehicle deck extending right from the fore to aft, without any transverse subdivision bulkheads in between.

The reason behind this is very simple, yet unavoidable- to make access of cars (and other vehicles) possible from the forward to aft ends of the ship.

Let's take a look at some of the main concerns regarding Ro-Ro ships:

No Subdivision Bulkheads: The problem with not having transverse subdivision bulkheads is actually an adverse one, given the circumstances. Transverse bulkheads are basically incorporated to maintain the damaged stability or water-tight integrity of the ship, in case of flooding of any of the compartments. Simple, that two consequent bulkheads shall limit the water flooding within themselves, and thus help the ship being stable even in case of some damage.

But here's what happens if water enters a RoRo ship- The flooding starts progressing. How? Consider that there has been a damage in any part of the ship, due to which, water starts flooding in it. Since the only restrictions are the aft and bow doors, the water actually starts progressing along the entire length of the ship. Sounds bad, but is actually worse. Why? Read on.

Risk of Progressive Flooding: Due to absence of subdivisional bulkheads, the water progresses along the



length of the ship. This not only causes the ship to lose its inherent buoyancy, but adversely affects its stability because of increasing free surface effect. In case of a single compartment damage, as in case of any other ships, the free surface created by one or two compartments is lower than what is created in an entire Ro-Ro ship, as the free surface area in this case is much more, due to the absence of transverse bulkheads. As a result, the ship loses its stability more rapidly than we generally expect it to do so. However, even in case the ship is not damaged, a Ro-Ro ship always stands at a higher risk of reduced stability.

Problem of Maintaining Stability: Every Ro-Ro ship, being a Class B type, has considerable freeboard, which means it operates at a low draft. These ships are also featured with multi-tier decks for accommodation of cars, trailers and trains, therefore requiring higher overhead clearance. Due to this, the depth of these ships is very high, owing to a high depth to draft ratio.

Cargo is stowed up to the top-most deck, resulting in the rise in the accommodation deck. As a result of the increased depth to draft ratio, such ships are very sensitive to heeling moments, and a heeling moment cannot only be created by wind gusts or waves, but also internal cargo shifting. Thus, cargo latching and locking systems must be regularly checked and ensured so as to prevent cargo shifts during voyages.

Also, heeling moments in lightship condition are prevented by incorporating heeling tanks at port and starboard sides. There have been many accidents of Ro-Ro ships which have caused due to rapid heeling moments, giving the crew very less time for proper evacuation.

The disasters of MV Sewol (Korea, 2014) and MS Express Samina (2000) were basically due to the above explained theory. These ships being Ro-PAX had cost lives more than that of just the crew.

Ro-Ro are Stiff Ships: Though this is a lot related to stability, but it's interesting to discuss it separately. The steel structure of Ro-Ro ships is designed to have a very low centre of gravity, as cargo is loaded up to the top most deck, this would offset the rise in centre of gravity. But due to the risk of rapid heeling, the overall centre of gravity of Ro-Ro ships are kept considerably low. Though this is stable, it laces a problem with itself. A reduced Centre of Gravity (CG) will always tend to decrease the rolling period of the ship. So if you're sailing on the ship itself, you'll feel that the ship is rolling too fast. It is true, that once it rolls, it

will come back to its upright position rapidly (which means it is quite stable), but the rapid motions will cause you motion sickness. We call such ships to be stiff. This may also cause high stresses on the cargo lashing systems.

Problem of Cargo Doors: Other than doors on the port and starboard sides, Ro-Ro ships also have aft or bow doors with ramps, for heavier cargo to be loaded from the port. Both these door types have had their individual kind of problems as discussed further:



1. Stern Cargo Door: Stern cargo doors are generally very close to the waterline of the ship. There have been cases, when the stern door was not locked properly (which is basically a human error, since improper locks are notified by the ship's systems). Guess what could have happened next? As the ship moved into the sea, the improperly locked stern door served as the source of water ingress. Though, this is a human error, several efforts to alter the design of these doors have been made, but it is nearly impossible to place such doors high above the waterline, as that would not be feasible for easy cargo loading when the ship extends her ramps onto the port.

2. Bow Door: Many Ro-Ro ships have bow doors, i.e. the bow of the ship is itself a hydraulically hinged structure which acts as a door, from which a ramp extends out for cargo flow in and out of the ship. One of the worst maritime accidents has occurred due to the failure of this very system on board MV Estonia in 1994.

Let's look at it this way. The bow of the ship is vulnerable to the waves as the ship surges. Since this goes on continuously since the ship has set sail, the material on the bow of the ship experiences fatigue. In case of MV Estonia, the bow door mechanism had undergone fatigue (which should have been replaced during surveys) and ultimately, it gave away. The bow door separated from the ship's hull, ultimately leading in progressive downflooding, which resulted in sinking. But even then, the inherent problem of "rapid heeling" existed, and as a result the time available for evacuation was insufficient.

International Legal Framework Governing Maritime Security:

The United Nations Convention on the Law of the Sea (UNCLOS) was ahead of its time. It pre-empted environmental protection and low-intensity conflict paradigm shifts of the late 1990s by already encompassing many new security challenges at the time of its codification in 1982. These included environmental security, illegal immigration, human trafficking and piracy. This allowed UNCLOS to remain relatively flexible and current



with international security concepts.

But are additional instruments needed to support UNCLOS in order to provide sufficient legal basis to meet and regulate contemporary security responses at sea?

The global character of shipping requires global regulation, and UNCLOS is not alone in this endeavor. There is not simply one international treaty on maritime security law. While UNCLOS includes several articles regulating state responses against piracy (Articles 100 to 107 and 110), the Convention provides no foundation or guidance for private efforts in combating piracy. Instead, there are many fragmented treaties, conventions, legal principles and soft law instruments that supplement UNCLOS.

Although UNCLOS sets the static legal framework of maritime zones and jurisdiction, the convention is silent in regard to specific non-state actions for countering piracy. Instead, a kaleidoscope of overlapping, confusing, and occasionally conflicting international and domestic policies, practices and laws has emerged in an attempt to tame this often considered unwieldy industry.

UNCLOS is static in order to provide a stable legal platform but must also be dynamic to adapt to changes and developments in the international law arena. It is a framework convention and therefore sets the playing field and rules-of-the-game for interaction between other instruments.

Suppression of Unlawful Acts: The Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA) Convention and Protocol was designed to fill voids in international law necessary to combat other threats to human life and security of navigation and commerce at sea not fully prescribed under UNCLOS. It requires states to pass legislation making unlawful piratical and terrorist acts against navigation serious criminal offenses under their national laws. The SUA framework came in two waves.

(1) SUA Framework 1988: First was the 1988 Convention and Protocol. Under this legislation, states have an obligation to establish jurisdiction to extradite or prosecute violators even if the alleged offenses were committed outside their physical territory.

Unlike the UNCLOS definition of piracy, which only applies

on the high seas and therefore only allows security responses on the high seas, the SUA framework criminalizes piracy-like offenses against vessels which have journeyed out of the territorial sea or are scheduled to transit beyond the territorial sea. Yet a major gap in the 1988 SUA framework is that it only granted flag states the necessary jurisdiction to respond to threats against vessels that flew their particular flag.

(2) SUA Framework 2005: In 2005 the 1988 SUA Convention and Protocol were amended to become the 2005 SUA Convention and the 2005 SUA Protocol. The 2005 SUA framework contains three new categories of offenses.

Using a ship as a weapon or as a means for committing terrorist acts.

Proliferation of weapons of mass destruction (WMD) on the high seas.

Transporting a person alleged to have committed an offense under other UN anti-terrorism conventions.

In addition, the 2005 SUA framework broadened state jurisdiction to include not only the flag state but also third states. Thus, the SUA frameworks further the extent of criminalizing acts against navigation beyond UNCLOS, increasing states' legal latitude to prevent attacks and pursue violators in maritime zones shoreside of the High Seas. Examining the SUA framework from the broadest perspective, it is evident that it provides an agreement condemning maritime threats, acknowledging that countermeasures must be taken in shoreward maritime zones, including but not exclusively limited to private shipborne responses to threat mitigation. Standards and guidelines for private responses have been created via the necessary channels in IMO such as SOLAS, described below, as well as in soft law implemented by the industry.

SOLAS: The Safety of Life at Sea (SOLAS) Convention, first developed to increase safety aboard ocean-going vessels after the Titanic disaster, has grown since 1914 into the most thorough of all marine safety conventions. Its main purpose is to establish minimum standards for the construction, equipment and operation of ships, compatible with their safety. It is enforced by flag states and port state control measures.

In relation to private maritime security, a main legal conundrum with SOLAS is whether employing armed security on board a vessel can deprive the ship's Master of their overall responsibility to control all actions aboard their vessel, as required by SOLAS. If so, this would be in contradiction of SOLAS Reg 34-1 and Reg 8, Chapter XI-2.

Many coastal states have taken additional steps to clarify the relationship between Master and privately contracted armed security personnel (PCASP), amending national legislation to reaffirm the Master's overall authority to authorize PCASP targeting, deployment and target engagement (specifically, weapons discharge of any-kind). In an effort to resolve this dispute, the largest international shipping association, the Baltic International Maritime Council (BIMCO), has released a commercial contract template, GUARDCON, which establishes this clear line of superiority

with the ship's Master remaining in command at all times.

Despite the superiority of the Master being reaffirmed in SOLAS, by flag states, and even in many industry contracts between PCASP and shipowners/operators, many security providers affirm that in certain grave life-or-death situations, they would disobey a Master's call to stand down under their individual right to self-defense should they believe their life or the life of crew-members to be in danger.

GUARDCON aims to accommodate this extenuating circumstance, acting as a contract between PCASP and the Master to break this link in the chain-of-command, freeing PCASP to act at will, without the Master's orders, and outside the conventional SOLAS protocols, indemnifying the Master of much of the responsibility for PCASP actions.

SOLAS allows port states to prevent ships from sailing when serious deficiencies are found that may pose a danger to persons, property, or the environment. This can be extended to implementation of maritime security procedures within SOLAS and its family of regulations (ISPS, ISM, etc.) if PCASP, their behavior, or their equipment seem to be substandard and as a result pose a danger to those aboard the vessel or the general public.

U.N. Firearms Protocol: In addition to the Law of the Sea framework, maritime security providers must also navigate the complex international legal regime of the U.N. Firearms Protocol, a legally binding agreement which entered into force in 2005, currently signed by 109 states plus the European Union, to ensure armed security provider, or those importing/transporting weapons, carry the required port and transit state permits.

This UN regulation suggests not only seeking pre-embarkation permission from the Flag State but also from all countries through which PCASP will transit. The Protocol sets the regulations for firearms transport. PCASP must be careful and take the necessary precautions to ensure their carriage of weapons systems is rightly permitted and does not qualify as illicit trafficking. According to the Protocol:

"Illicit trafficking" shall mean the import, export, acquisition, sale, delivery, movement or transfer of firearms, their parts and components and ammunition from or across the territory of one State Party to that of another State Party if any one of the States Parties concerned does not authorize it in accordance with the terms of this Protocol"

The Protocol, however, prescribes the option for establishing a simplified system for temporary import and exports between states, as follows.

"States Parties may adopt simplified procedures for the temporary import and export and the transit of firearms, their parts and components and ammunition for verifiable lawful purposes such as hunting, sport shooting, evaluation, exhibitions or repairs."

Some states have taken advantage of this clause to establish systems for transiting PCASP and military Vessel Protection Details (VPDs). Spain, for example, has made an agreement with the Seychelles to allow simplified transit procedures for its VPDs to board Spanish-flagged fishing vessels in Seychelles territorial waters and EEZ.

Making this matter more complicated in recent years, floating armories have emerged as offshore supply stores delivering weapons and crews to client vessels, circumventing port and coastal state regulations and bypassing the need for import/export compliance. Of course, this has opened a Pandora's box in terms of unaccounted-for firearms. In other circumstances, PCASP have jettisoned weapons into the sea after completing missions in order to sidestep import/export regulations reaffirmed in the Protocol.

The Principle of Self-Defense: Of primary importance to the legal reasoning behind the private use of force at sea in counter-piracy is the principle of Self-Defense. According to the International Group of P&I Clubs:

"Customary international law, among other legal authorities, provides that the use of force is restricted to cases of necessity or self-defence, i.e. cases in which there is no other way out and in which the requirements of necessity, reasonableness and proportionality are observed in connection with the use of force. Such customary international law is binding [...] The use of force by private security guards must therefore be based on the general, internationally accepted principles of self-defence."

This was reaffirmed by the International Court of Justice (ICJ) in the Oil Platforms case, which stated that Iran had the right to protect its offshore installations against threats to their infrastructure.

Moreover, individual guards or any persons aboard a vessel, for that matter, have the right to self-defense of their person. This is a fundamental human right. If pirates or other assailants are directing weapons' fire in their direction, for example, and they believe their lives to be in grave danger, the same right of self-defense for vessels applies at the personal level.

Doctrine of Necessity: After being discussed for decades in international law circles, the Doctrine of Necessity was finally incorporated into the International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts.

Article 25 of this document provides that an otherwise illegal act, such as using force to neutralize a terrorist or pirate attack at sea, can be justified if it meets two criteria.

The act was the only means of safeguarding an essential interest of the state against a grave and imminent peril.

The act did not seriously impair an essential interest of the state toward which the obligation existed.

Such activities could be justified on the basis that the ramifications of such an attack would be severe, with imminent loss of life, and also possible irreversible damage to the environment (i.e., attack on a tanker or offshore drillship resulting in a possible oil spill).

In such situations, minor interferences with navigation such as allowing PCASP to engage and disable an approaching vessel, or as a last resort neutralize attacking individuals, would be considered relatively minor when compared with the grave destruction or loss of life which could result from a successful attack.

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