Editorial

From the Editor-in-Chief

Professor Chris Bellamy

Welcome to the fourth issue of the *International Journal of Maritime Crime and Security*, Vol.2, No. 2. At the time of publication, crime (as many regards it) and security are at the forefront of our attention with the full-scale Russian invasion of mainland Ukraine on 24 February 2022. Much of the media attention and analysis has focussed on the Russian land forces' near-encirclement of, and then incursions into, the sovereign democratic state of Ukraine which came into existence after the break-up of the Soviet Union in 1991.

Ukraine proclaimed sovereignty on 16 July 1990 and formally seceded from the USSR on 24 August 1991. In fact, the Byelorussian Soviet Socialist Republic and the Ukrainian Soviet Socialist Republic had already joined the UN as original members on 24 October 1945. After declaring independence, the Ukrainian Republic changed its name to Ukraine on 24 August 1991, and the Byelorussian Republic became the Republic of Belarus on 19 September. The February 2014 revolution that ousted the pro-Russian Ukrainian president Viktor Yanukovych triggered a political crisis in Crimea, initially marked by demonstrations against the new interim Ukrainian government but rapidly escalated. In January 2014, the Sevastopol city council had already called for formation of "people's militia" units to "ensure firm defence" of the city from "extremism." On 27 February, Russian special forces seized the building of the Supreme Council of Crimea and the building of the Council of ministers in Simferopol.

On 1 March 2014, exiled President Yanukovych asked Russia to use military forces 'to establish legitimacy, peace, law and order, stability and defending the people of Ukraine.' On the same day, Russian President Vladimir Putin requested and received authorization from the Russian Parliament - not that he really needed it, but it looked good - to deploy Russian troops to Ukraine. The Russians took full, unchallenged control of the Crimean Peninsula by the next day. Although most of the international community did not recognise the Russian annexation of Crimea, it was now, *de facto*, part of Russia, a fact reinforced by the completion of the Crimean bridge between the peninsula and mainland Russia in May 2018. At 12 miles (19 km) long, it is the longest in Europe. Then, on 24 February 2022, Russia launched a further phase of expansion, north from Crimea, south from Belarus and west from Russia and the Russian controlled parts of the *oblasti* (provinces) of Donetsk and Luhansk further into Ukraine.

Russia's Black Sea Fleet played an important part in the plan. These most significant naval and maritime warfare developments, including the sinking of the Black Sea Fleet flagship *Moskva* on 14 April 2022 and the Alligator class amphibious assault ship *Orsk* on 24 March, and the firing of *kalibr* missiles from Black Sea Fleet submarines at shore largest far inside Ukraine are addressed further in the Comment piece below. That extensive piece is twice the length of one of our normal double-blind refereed articles, but the war has now been running for six months so I feel that a comprehensive treatment is justified. This

Editorial will now focus on other maritime developments in terms of crime and security, in its widest sense, from September 2021 until September 2022.

Moving from state-on-state conflict to piracy, after more than a decade of effective threat-reducing counter-piracy operations the shipping industry is to remove the 'Indian Ocean High Risk Area' (HRA) from 00:01 UTC on 1 January 2023 BIMCO 2022). Notification of the HRA's removal by industry bodies was forwarded in a submission of 22 August, to the International Maritime Organization (IMO) for the next meeting of the Maritime Safety Committee scheduled to start on 31 October 2022.

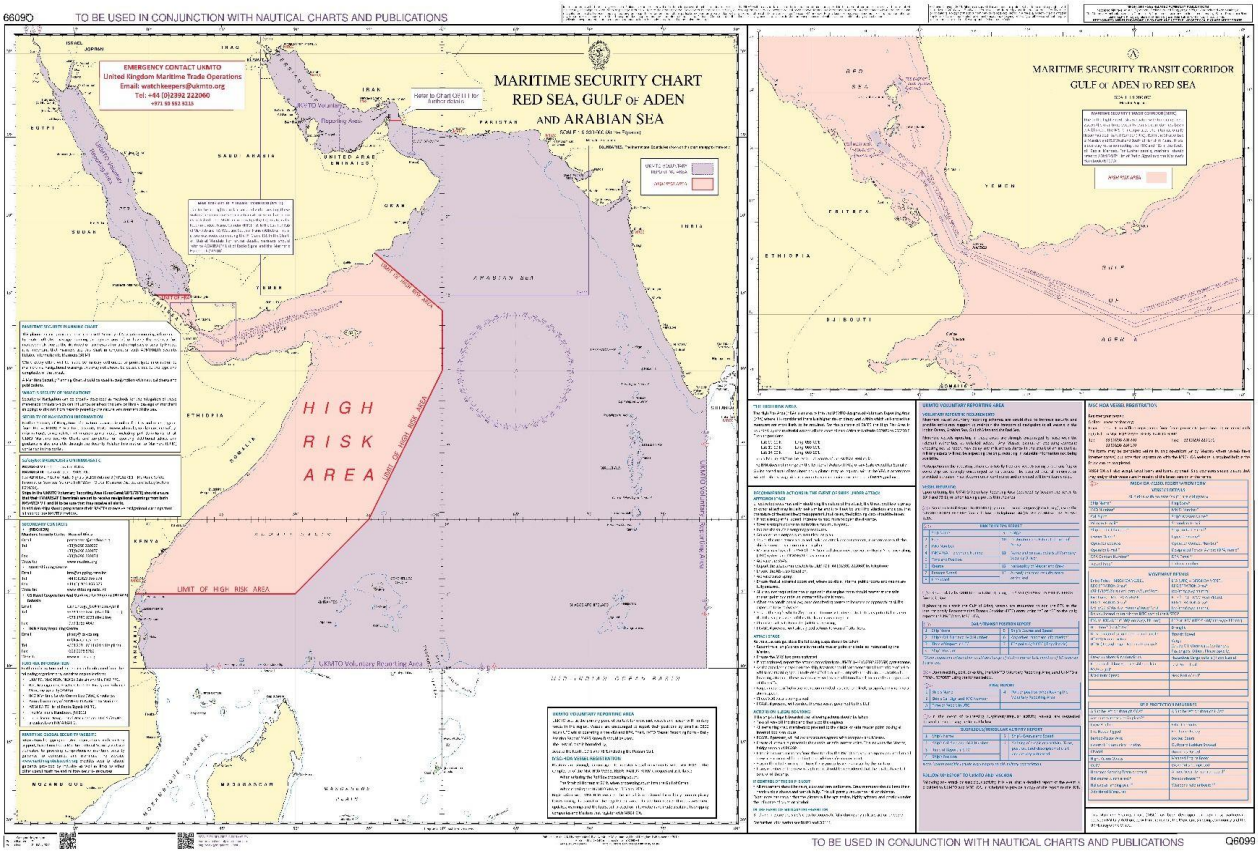
The removal of the HRA reflects a significantly improved piracy situation in the region, largely due to concerted counter-piracy efforts by many regional and international stakeholders. No piracy attacks against merchant ships have occurred off Somalia since 2018.

The IMO has been informed of the decision made by International Chamber of Shipping (ICS), BIMCO, International Marine Contractors Association (IMCA), INTERCARGO, INTERTANKO and Oil Companies International Marine Forum (OCIMF).

Measures enacted to secure the waters by military, political, civil society, and shipping industry, as well as Best Management Practices guidance, have reduced the threat of piracy in the Indian Ocean. The removal of the HRA from 00:01 UTC on 1 January 2023, will allow charterers, shipowners, and operators time to adapt to the changed threat from piracy. Best Management Practices 5 (BMP5) will continue to provide the necessary guidance for shipping to ensure threat and risk assessments are developed for every voyage to mitigate the risks presented by remaining security threats in the region. The shipping industry will continue to monitor and advise on maritime security threats to assist the safe transit of vessels and the seafarers who crew them. Pre-voyage threat and risk assessments should consider the latest maritime security information from organisations supporting the VRA.

The area being removed is the "High Risk Area" as shown on UKHO Chart Q6099 (Figure 1). The Voluntary Reporting Area (VRA) administered by UKMTO has not changed. Ships entering the VRA are encouraged to report to the UKMTO and register with the Maritime Security Centre for the Horn of Africa (MSCHOA) in accordance with industry BMP (Best Management Practices).

Figure 1 UKHO Q6099



From 2013 the epicentre of piracy and armed robbery at sea moved from the Indian Ocean to the Gulf of Guinea. One of the most significant incidents started on 24 November 2021 when the Danish frigate *Esbern Snare* killed four pirates in an exchange of fire in the Gulf of Guinea off the coast of Nigeria. The frigate had been patrolling the area since early November. A fifth pirate fell overboard. The remaining four pirates were taken on board the frigate. After the engagement the pirate ship sank. The Gulf of Guinea is a piracy hotspot stretching 5,700 km (3,540 miles), from Senegal to Angola, and had seen 195 attacks in 2020. In 2013 the number of piracy and armed robbery at sea incidents exceeded those off Somalia for the first time, although they are of a different type, focussing on theft of cargo, often oil and natural gas, and crew possessions rather than ransom.

This incident led to an unusual denouement when, on 7 January 2022 it was announced that three of the four captured pirates had been let loose in a dinghy and allowed to head for shore after charges against them were dropped. The fourth, was taken to Ghana where his leg was amputated, and was then transferred to Denmark to face a charge of attempted manslaughter, having been judged unfit to travel by dinghy.

Denmark's treatment of the pirates was unprecedented and controversial. Birgitte Skjodt, the lawyer of the detained suspect, criticised the decision to still press charges against him, telling local media: "It simply cannot be right to treat the four people so unequally." Justice Minister Nick Haekkerup defended Denmark's decision, saying that it would deter other pirates from attacks. He added that if they had sent

the men to Denmark, then there was a "risk that they would not subsequently be deported". This is the first time Denmark has extradited a piracy suspect to his territory. It has no agreement regarding extradition with the countries along the Gulf of Guinea coast. (Danish patrol kills four pirates in Gulf of Guinea: Navy | News | Al Jazeera 25 Nov 2021; https://www.bbc.com/news/world-africa-5991351 7 January 2022).

Another piracy incident had occurred in the Gulf of Guinea a month before. The pirates came up against a stronger opponent than they had anticipated after they attacked and boarded container ship 1985-built, Panama--flagged MSC *Lucia* (IMO 8413887) in the Gulf on Monday October 25th. MSC *Lucia* had called at the port of San Pedro in Cote D'Ivoire the previous week and transited to Lomé, Togo on October 22nd. It departed Lomé during the morning of the 24th and headed southeast across the Gulf of Guinea, en route to Douala, Cameroon, with an ETA of October 27th. At about 09:00 GMT on the morning of the 25th, when the vessel was about 150 nm to the northwest of the island of Sao Tome, MSC *Lucia* slowed from 14 knots to a halt, according to AIS data.

The Russian Ministry of Defence said that its *Udaloy* class destroyer *Vice Admiral Kulakov* received a distress signal from the MSC *Lucia* on Monday morning. The feeder container ship broadcast that armed attacker had approached via speedboat and had climbed aboard. The crew of the MSC *Lucia* had retreated to the engine room for safety. The *Kulakov* launched its Kamov Ka-27PS helicopter, carrying a boarding party of Russian Naval Infantry (marines). The pirates fled the vessel as soon as they saw the approaching aircraft, the ministry said. The *Kulakov* transferred a boarding party to the MSC *Lucia* to search the ship. As of Monday evening, the MSC *Lucia* remained adrift, at position 02 12 N 004 54 E. The Russian vessel was in the Gulf of Guinea on a three-week deployment, accompanied by a fleet oiler and a rescue tug.

On its way home, the destroyer monitored large-scale NATO naval exercise in the Norwegian Sea with two Norwegian frigates, four corvettes, two submarines and other ships, as well as German, French, Danish and Portuguese frigates. In 2022, as part of a concentration of Russian naval forces in the Mediterranean and in the context of the Russian invasion of Ukraine *Vice-Admiral Kulakov* again deployed to the Mediterranean, accompanying the cruiser, *Marshal Ustinov*. Those ships were reported to be in the Mediterranean on 9 March (BlackSeaNews | The Presence of Russian Warships in the Mediterranean Sea as of 9 March 2022) but following Russia's invasion of Ukraine on 24 February Turkey asked Russia not to send any more ships into the Black Sea and four ships, including *Vice-Admiral Kulakov*, did not do so. On 28 February 2022, Turkey announced that it had closed the Bosporus and Dardanelles in accordance with the 1936 Montreux Convention, which prohibits the passage of warships of warring countries (see also comment piece below).

The situation in the disputed South China Sea led to an embarrassing incident for the US Navy. On 2 October 2021, the USS *Connecticut* struck what the US Navy initially called an 'object' while submerged in international waters. The USS *Connecticut* (SSN 22) is a nuclear powered Seawolf-class fast-attack submarine and had 140 crew, including 14 officers, aboard at the time of the incident. The Navy says the Seawolf vessels are "quiet, fast, well-armed, and equipped with advanced sensors". They also have eight torpedo tubes. On 5 November it emerged that the submarine had struck an 'underwater mountain' and that the Navy had fired the commanding officer, Commander Cameron Aljilani, the executive officer and top enlisted sailor of the *Connecticut*, saying the accident was preventable. The USS Connecticut was forced to sail on the surface for a week to reach Guam.

"Sound judgement, prudent decision-making and adherence to required procedures in navigation planning, watch team execution and risk management could have prevented the incident," the western Pacific-based 7th Fleet said in a statement. Aljilani was replaced by an interim commanding officer.

The South China Sea is one world's most disputed and economically significant waterways. China claims almost the entire area under its controversial 'nine-dash line' and has built artificial islands and set up military outposts in recent years. Malaysia, Brunei, Vietnam, and the Philippines also claim parts of the sea, as does Taiwan, which the People's Republic claims as its own. The US Navy regularly conducts operations in the region to challenge China's disputed territorial claims on small islands, reefs, and outcrops. (US submarine commander fired after South China Sea crash | South China Sea News | Al Jazeera 5 November 2021).

Moving to the commercial sector, the Covid-19 pandemic. the pre-eminent health security issue of the previous two-and-a-half years, continued to have a major impact on global supply chains. It was first identified in China and its first great impact was on the supply of microchips to the rest of the world. The first quarter (Q1) of 2022 saw the worst quarterly performance since Q1 of 2019 when China's chip output slid by 8.7percent. On 18 April 2022 Bloomberg reported that China's quarterly production of semiconductors had shrunk for the first time since early 2019 as consumer electronics demand softened and COVID-triggered lockdowns in regions including Shanghai disrupted output. (Bloomberg April 18, 2022, 11:01 AM). Output of integrated circuits dropped 4.2 percent in the first three months of the year 2022 as chipmakers reported a steeper decline in March 2022 according to data from the Chinese National Bureau of Statistics.

China put Shanghai, a key chipmaking hub, into a month-long lockdown as Xi Jinping's administration tried to stop the spread of Covid infections. The nation's biggest chip manufacturers, from the Semiconductor Manufacturing International Corp. to Hua Hong Semiconductor, have struggled to source some components due to traffic controls imposed by local authorities. Chip production dropped 5.1 percent in the month of March. A number of executives from Chinese auto and hardware companies expressed concerns over supply chain disruptions as more regions announced stricter prevention measures following reports of local Covid cases. Those include the tech manufacturing hub of Kunshan and Zhengzhou, home to the world's largest iPhone factory.

Tech factories across the country could be forced into idle production after May if suppliers in Shanghai remain closed, Huawei Technologies Co. Executive Director Richard Yu wrote in a WeChat post in the week beginning 11 April 2022 China's Chip Output Shrinks as Lockdowns Hurt Production (yahoo.com) (18 April 2022).

"The economic loss will be immense," said Yu, who oversees the Chinese company's smartphone and smart car businesses.

However, although Covid-19 initially triggered a drop in maritime traffic, the recovery from the pandemic paradoxically brought about another problem. Traffic jams as the revived maritime industry queued to berth a swelled volume of shipping. By 19 October 2021, a record 100 ships, including 70 container ships, were now waiting at anchor or in drift zones in San Pedro Bay for entry into either the Port of Los Angeles or Long Beach Port. The number of vessels drifting or anchored off LA / Long Beach had been rising steadily, but then fell back from the previous peak to somewhere in the mid-50s. Now, however, the queue has shot up again. As of Tuesday October 19th, the count stood at 100 vessels, beating last month's record of 97.

By way of comparison, back in 2014 the fact that twelve vessels were waiting in San Pedro Bay was considered newsworthy and a matter of concern. There are dozens more in transit on the core transpacific trade lanes, which could mean that the number of waiting ships might rise further. That in turn will reduce the availability of container vessels and containers in other parts of the world, compounding the global dislocations of the international supply chains. It had been hoped that LA / Long Beach terminal lessees agreeing to transition to 24/7 gate hours, incurring a contractual time-and-a-half wage premium

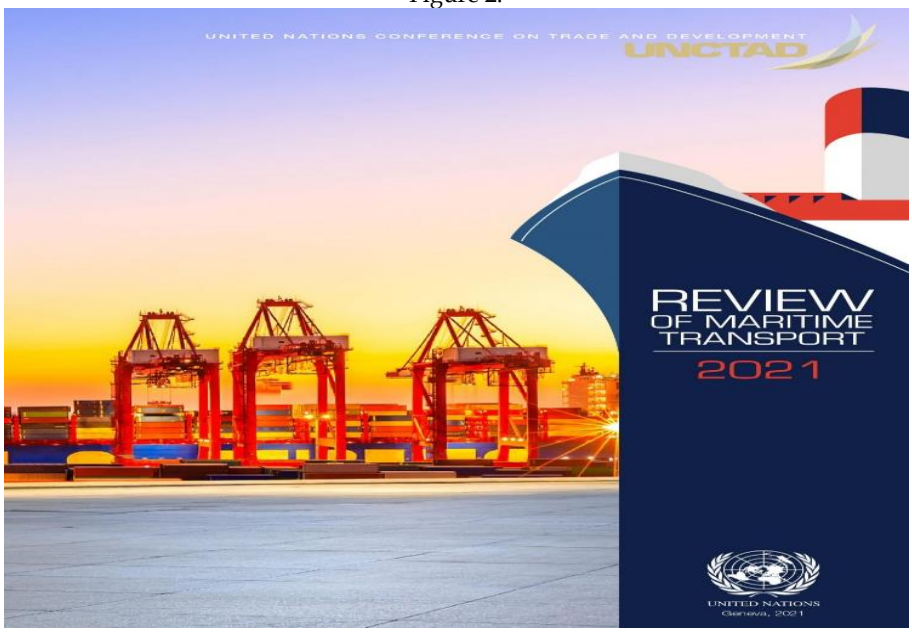
for longshoremen on the night shift, but the impact of this change was expected to be gradual and not a solution in its own right. This was because there was now a serious backlog in rail yards, truck depots and warehouses.

Residents of Wilmington and Long Beach have noted that trailered containers were now tailing back into residential streets. Meanwhile, an executive at Philippines-headquartered port operator International Container Terminal Services (ICTSI) has said that the world was facing "very prolonged" disruptions to shipping cargo flows. Christian Gonzalez, head of corporate with ICTSI, said that "from a transpacific point of view, it's going to be quite messy for some time, and it is not something that can be solved by adding more ships into the system. That is going to create a bigger backlog."

There is no one single cause for the log jam. The backlog at the ports in Los Angeles is a result of multiple factors, including supply chain problems, reaction to a global slowdown during the COVID-19 pandemic, an increase in consumer demand and truck driver availability. (A hundred vessels now waiting to berth at LA / Long Beach | Insurance Marine News, October 21st 2021. https://insurancemarinenews.com/insurance-marine-news/a-hundred-vessels-now-waiting-to-berth-at-la-long-beach/)

The impact of Covil-19 on maritime trade and development formed the focus of the 2021 United Nations Conference on Trade and Development *(UNCTAD)(report published on 18 November (Maritime trade weathers COVID-19 storm but faces far-reaching knock-on effects | UNCTAD Review of Maritime Transport 2021 | UNCTAD.) UNCTAD's report (see Figure 2) predicts that annual growth in maritime trade between 2022 and 2026 will slow to 2.4%, compared to 2.9% over the previous two decades.

Figure 2.



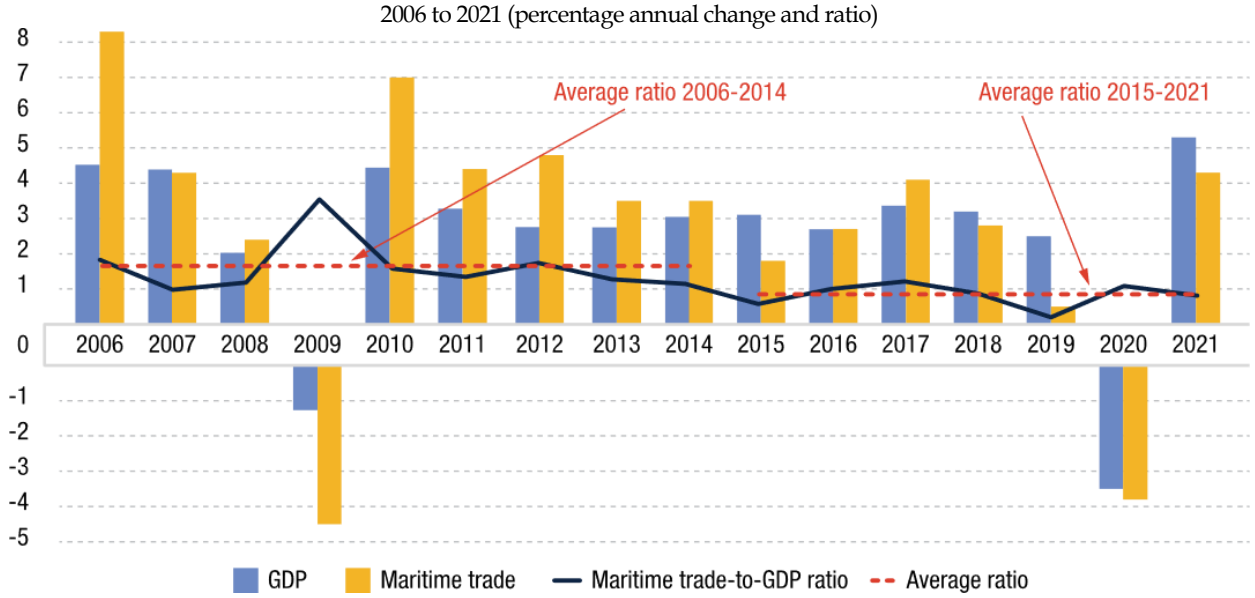
https://www.weforum.org/agenda/2020/06/ongoing-impact-covid-19-global-supply-chains/
22/06/2022

The COVID-19 pandemic's impact on maritime trade volumes in 2020 was less severe than initially expected but its knock-on effects will be far-reaching and could transform maritime transport, according to UNCTAD's Review of Maritime Transport 2021 published on 18 November.

The report shows that maritime trade contracted by 3.8 percent in 2020, reflecting an initial shock, but it rebounded later in the year and is projected to increase by 4.3 percent in 2021. The medium-term outlook for maritime trade remains positive but subject to "mounting risks and uncertainties".

Figure 3 shows the trends in international maritime trade, based on UNCTAD data and also analysis by the World Economic Forum.

Figure 3
International maritime trade, world gross domestic product (GDP) and maritime trade-to-GDP ratio, 2006 to 2021 (percentage annual change and ratio)



Source: UNCTAD calculations, based on the Review of Maritime Transport, various issues, data from UNCTADstat and table 1.1 of the UNCTAD Trade and Development Report 2021. From recovery to resilience: The development dimension. See also The ongoing impact of COVID-19 on global supply chains | World Economic Forum (weforum.org)

The chart shows that there was a drop in international maritime trade at the immediate onset of the pandemic and then a sharp rebound – with the consequences outlined above, in 2021. While acknowledging the recovery, the UNCTAD report points to unprecedented pressures in global supply chains, dramatic spikes in freight rates, significant price rises on the horizon for consumers and importers and potential shifts in trade patterns due to trade tensions and in the quest for more resilience.

UNCTAD Secretary-General Rebeca Grynspan said "A lasting recovery will depend on the path of the pandemic and largely hinges on being able to mitigate the headwinds and on a worldwide vaccine roll-out," She continued "The impacts of the COVID-19 crisis will hit small island developing states (SIDS) and least developed countries (LDCs) the hardest," UNCTAD says the pandemic exposed and magnified challenges that already existed in the maritime transport industry, notably labour shortages and infrastructure needs.

The report raises concern over the continuing pandemic-induced crisis around crew changes, with lockdowns, border closures and lack of international flights leaving hundreds of thousands of seafarers stranded at sea, unable to be replaced or repatriated.

The report calls for urgent attention from the flag, port, and labour-supplying states to end the crew change crisis, insisting that all states should be parties to relevant international legal instruments, including the Maritime Labour Convention of 2006. It urges governments and industry to continue working together and in collaboration with relevant international organizations to facilitate crew changes. According to the UNCTAD report, supply chain bottlenecks have hindered economic recovery, as the rebound in trade has run into pandemic-induced logistical challenges, including shortages of equipment and containers, less reliable services, congested ports and longer delays and dwell times.

Supply-side constraints in container shipping are also rocking maritime transport and trade. While orders for new ships declined by 16 percent in 2020, continuing a downward trend of previous years, in 2021 shipping companies responded to these capacity limitations with a surge of new orders. This issue is highlighted in the reports from the western United States in late 2021, covered above. Shipping lines have benefitted from soaring freight rates, the report notes, as surcharges, fees and rates temporarily hiked even further after the container ship Ever Given blocked the Suez Canal in March 2021. The increasing costs of container shipping have been a challenge for all traders and supply chain managers, says the report, but especially so for smaller shippers, who may be less able to absorb the additional expense and are at a disadvantage when negotiating rates and booking space on ships.

The report warns that if the current surge in container freight rates continues, it will significantly increase both import and consumer prices. UNCTAD's analysis predicts that global import price levels will increase on average by 11 percent as a result of the freight rate increases, but SIDS that primarily depend on maritime transport for their imports could face increases of up to 24 percent. If container freight rates remain at their current high levels, global consumer prices are projected to be 1.5 percent higher in 2023 than they otherwise would have been. However, the rise is expected to be 7.5 percent in SIDS and 2.2 percent in LDCs. The report says that

"In the face of these cost pressures and lasting market disruption, it is increasingly important to monitor market behaviour and ensure transparency when it comes to setting rates, fees and surcharges."

The pandemic has also accelerated 'megatrends' that could transform maritime transport in the longer term. Covid-19 has 'catalysed digitalization and automation, which should deliver efficiency and cost savings. However, the shipping industry is also coming to grips with climate adaptation and resilience, and the urgent need to decarbonize and find alternative fuels to reduce emissions, which will inevitably come at a cost,

Shamika N. Sirimanne, UNCTAD's director of technology and logistics said:

> "By exposing the vulnerabilities of existing supply chains, the COVID-19 disruption has sharpened the need to build resilience and revived the debate over globalization and the supply chains of the future,"

The report points out that it may be straightforward to reshore labour-intensive and low-value production, but it's more complex to move production and switch suppliers for mid and high-value-added manufacturing.

The report also predicts a blend of reshoring, diversification, replication, and regionalization, with China still likely to remain a leading manufacturing site. "Hybrid" operating models involving just-in-time and just-in-case supply chain models are likely to emerge. These adjustments could lead to a demand for more flexible shipping services, with implications for vessel types and sizes, ports of call and distances travelled. Meanwhile e-commerce, accelerated by the pandemic, has transformed consumer shopping habits and spending patterns, and driven the demand for distribution facilities and warehousing that are digitally enabled and offer value-added services. This could generate new business opportunities for shipping and ports.

Looking ahead, UNCTAD says global socioeconomic recovery will depend on smart, resilient, and sustainable maritime transport and a broad-based worldwide vaccination effort, with developing countries

having fairer access to vaccines. It urges industry, governments, and international organizations to ensure that seafarers are designated as key workers and vaccinated as a matter of priority.

That brings us to the next issue of extreme prominence in our field. The supply, welfare, and rights of seafarers. Without the men and women who are highly trained, qualified, and disciplined to operate ships, and to service, load and unload them, the biggest and most technologically sophisticated ships, and the facilities onshore, are next to useless. Two major seafarers' rights issues have surfaced since our last issue. The first, not directly related to the war in the Black Sea, is the supply of seafarers, particularly officers. The second is the wanton abuse of seafarers' rights by the P&O Ferries company (not the same company as P&O Cruises), based in the UK in March 2022.

On the first, in February 2022 it was reported that the war in Ukraine would add to the problems with maritime human resources. According to the *TradeWinds* Journal, part of NHST Media Group, reporting on 4 and 25 February 2022, shipowners and managers face the prospect of huge seafarer shortages following Russia's invasion of Ukraine. A BIMCO and International Chamber of Shipping (ICS) study estimated there are 198,123 Russian seafarers of whom 71,652 are officers and 126,471 are ratings. Ukraine supplies 76,442 seafarers of whom 47,058 are officers and 29,383 are ratings. The two countries, therefore, represent no less than 14.5 percent of the global maritime workforce. Russia and Ukraine are therefore two of the largest labour supply countries to the international fleet.

Ship managers are predicting difficulties in getting thousands of crews in and out of Ukraine during the crisis, while sanctions are likely to make it difficult for Ukrainian or Russian seafarers to be paid. These difficulties add to the problems created by sanctions and travel restrictions which add to already existing chronic labour supply problems in the shipping industry. (4 February 2022 13:39 GMT *UPDATED 25 February 2022 18:25 GMT Russia's* Ukraine invasion set to spark seafarer crisis https://www.tradewindsnews.com/ship-management/russia-s-ukraine-invasion-set-to-spark-seafarer-crisis/2-1-1174040)

Ukraine grew as a key labour supply country during the Covid-19 pandemic. Over the last two years, officers and ratings from the country have made up the shortfall that caused difficulties in securing crew from the Far East. One manager told *TradeWinds* the war conditions will make it nearly impossible for seafarers from Ukraine to travel to ships. They also expect a large proportion of Ukrainian seafarers to be conscripted into the military. The logistical problems in securing seafarers come as the industry is still struggling with crew issues related to the Covid-19 pandemic.

The outbreak of war has thrown up multiple operational problems for shipowners and managers. "What do we do if we have Russian and Ukrainian crew on the same ship?" questioned one manager. "What is going to happen if we have Ukrainian crew on a ship that is calling at Russia, or Russian crew on a ship calling at Ukraine? The whole thing is going to be an operational nightmare," he said. Since this interview, it is clear that no – or very few - ships will be calling into Ukraine, while Russian ships are banned from western ports. In this issue of the *Journal,* we are privileged to feature a first-hand account from a ship's captain who faced these very issues. In the Indian Ocean and on two visits to Russian ports.

The other issue is that the additional sanctions from the US and Europe may make it difficult for shipowners to pay both Russian and Ukrainian crew. Danica Crewing Specialists told *TradeWinds* it has put its contingency plans into action following the invasion. All 50 staff at its Odessa office are safe and working remotely, as they did during the pandemic. They are in constant touch with CEO Henrik Jensen in Hamburg and with vessel owners, seafarers, and their families.

ICS secretary general Guy Platten said "The safety of our seafarers is our absolute priority. We call on all parties to ensure that seafarers do not become collateral damage in any actions that governments or others may take.

"Seafarers have been at the forefront of keeping trade flowing through the pandemic and we hope that all parties will continue to facilitate free passage of goods and these key workers at this time."

One likely development is that, following escalating military action around the Black Sea and the Sea of Azov, the area is likely to be designated as a high-risk area under International Transport Workers' Federation wage agreements. The designation would entitle crew working in the region – if any still are - to higher pay. "Seafarers have been at the forefront of keeping trade flowing through the pandemic and we hope that all parties will continue to facilitate free passage of goods and these key workers at this time", a spokesman added.

One such agreement is made under shipping's largest collective bargaining agreement the International Bargaining Forum (IBF).

The crisis caused by the war in Ukraine which has threatened more than 15 percent of seafarer supply has been compounded by Covid-19 to create what has been seen as a crisis in morale in the industry. According to a report in the Journal *Splash,* seafarer morale has dropped 'across the board. On 28 April 2022, just before this issue went to press (Seafarer morale drops across the board - Splash247), Adis Anjin reported that Seafarer happiness levels have hit new lows in the first quarter of 2022, driven by concerns over the Covid-19 Omicron variant, the conflict between Russia and Ukraine, and contractual issues

The latest Seafarers Happiness Index report, based on thousands of anonymised responses to 10 key questions, is compiled quarterly by the welfare charity Mission to Seafarers, with support from Standard Club and Idwal. The 22-page report revealed the lowest levels of seafarer satisfaction for eight years, with the Index's measure of overall happiness decreasing from 6.41 to 5.85 and levels dropping across all categories.

Seafarers responding to the survey highlighted that they were still feeling the effects of Covid-19, facing a maze of different regulations, ongoing port restrictions, and, in many cases, limited or no shore leave. Concerns were raised about rising tensions between the Russian and Ukrainian crew. If this general trend was not bad enough, the decision by the UK-run ferry company P&O Ferries to make more than 800 seafarers redundant on 17 March 2022 was catastrophic for UK seafarers. The decision, which provoked huge political controversy and backlash, was seen by many as an insult to experienced and skilled seafarers and disregard for the UK's maritime expertise and heritage, P & O Ferries has been owned by a Dubai-based company DP World since 2019 .and is not related to the separately-owned eponymous and prestigious P&O cruise line, and also the separately-owned Australian cruise line, P&O Cruises Australia. P&O originally established ferry services in the United Kingdom in the late 1960s in the North Sea and the English Channel. Following a series of mergers and acquisitions, in October 2002 the Portsmouth and North Sea operations were merged with the Dover operations to create P&O Ferries Ltd, jointly managing all services from its head office, Channel House in Dover.

By way of background, P&O, The Peninsular and Oriental Steam Navigation Company was a British shipping and logistics company dating from the early 19th century. Formerly a public company, it was sold to DP World in March 2006 for £3.9 billion. DP World currently operates three P&O branded businesses, P &O Ferries, P&O Maritime, and P&O Heritage. P & O Cruises was separated from P&O in 2000 and is now owned and operated by the US-based Carnival Corporation. The former shipping business, P&O Nedlloyd, was bought by and is now part of Maersk Line.

On 17 March 2022, P&O abruptly suspended its operations, cancelling all sailings and offloading passengers and cargo. Some 800 UK staff were informed by a video call [1] that their employment was

"terminated with immediate effect due to redundancy", and that their work would in future be undertaken by staff contracted to a third-party supplier. This meant firing skilled and experienced UK staff and replacing them with those who could be paid far less, on the grounds that the ferries were not always operating in UK waters and that the UK national minimum wage – now £9,50 per hour for those over 23 years of age, and £9,18 for those aged 21-22, did not apply. (National Minimum Wage and National Living Wage rates – GOV.UK (www.gov.uk))

Staff on some ferries refused to leave their vessels. A spokesman for the National Union of Rail, Maritime and Transport Workers (RMT Union) said that there had been no consultation with the staff or trade unions, there was public outrage, and the Chair of the House of Commons Transport select committee (a cross-party body that enables the legislature to keep an eye on the executive, Huw Merriman, MP, criticised P&O. In the light of this action by P&O Ferries, the UK government said it would review its contracts with this company. This led to calls to boycott P&O Ferries including calls from members of the public, businesses in the travel trade and politicians.

The method of expulsion, overseen by ex-military security guards, has been criticised by several governments and business leaders.

On 24 March 2022, P&O Ferries' CEO Peter Hebblethwaite confirmed before the Transport Select Committee of MPs that the management of the company acted unlawfully when it fired the crew members without consultation. This frank admission that he had broken the law, and that he admitted it, created outrage and astonishment. Grant Shapps, the UK Secretary of State for Transport, confirmed that the ships concerned would only be able to operate following full training and subsequent inspection by the Maritime and Coastguard Agency (MCA).

On 24 March Grant Shapps wrote to Hebblethwaite to give him a "final opportunity" to reinstate the 800 workers Hebblethwaite did not take it. On 29 March Hebblethwaite said he would not resign. Unsurprisingly, the MCA impounded two of the company's vessels over concerns about the new crews' training and expertise. However, Hebblethwaite said that the company would not reinstate the 800 workers it sacked. Hebblethwaite later said that the decision to sack some 800 highly qualified UK seafarers and replace them with foreign agency workers had been the subject of 'misinformation'. (P&O Ferries boss Peter Hebblethwaite hits out at 'misinformation' after mass Zoom sacking (kentonline.co.uk 6 May 2022)

On 25 April, it was reported that P&O Ferries was forced to reverse its attempt at pay cuts for the new workers. The RMT Union received reports of seafarers being asked to sign new contracts with reduced payment. Then, the union reported the company to the MCA, which made sure that the wages for the agency workers were not further reduced. The controversy also caused P & O Cruises another company originally owned by P&O but divested to Carnival corporation in 2000, to suffer public backlash and embark on a media campaign to emphasize their separate ownership from P&O Ferries.

Seafarers' rights are a major issue in the wider field of maritime crime and security. Particularly in the light of the Maritime Labour Convention (MLC), of 2006, which entered into force in 2013 and was amended in 2014 and 2016, (wcms_554767.pdf (ilo.org)).

Moving to the separate issue of maritime boundaries, an important if as yet still indecisive milestone was reached on 12 October 2021. The International Court of Justice (ICJ) ruled on the long-standing dispute between Kenya and Somalia over the maritime boundary between their respective Territorial Seas and Exclusive Economic Zones (EEZs). The ICJ, based in the Hague, is responsible for ruling in the not infrequent cases of disputed maritime boundaries. The ruling concerns about 100,000 square kilometres of Indian Ocean waters off the east coast of Kenya and Somalia. The area, believed to hold oil and natural

gas deposits, has been a source of dispute between the East African neighbours for years. (Kenya–Somalia Maritime Boundary | Sovereign Limits)

The judges found that there was no evidence of any prior agreement on the maritime boundary between Kenya and Somalia, nor that Somalia had ever submitted to Kenya's use of latitude and longitude to determine maritime borders (see Figure 3). Further, the ICJ partially agreed that Somalia had a right to the oil-rich region of the disputed area of the Indian Ocean - but sought to strike a balance by allowing them only an extra 200 nautical miles (about 370 kilometres) of the area currently controlled by Kenya (see Figure 4). However, the court judged that Kenya, by its conduct in the disputed area, did not violate its international obligations and was therefore not responsible under international law to make full reparation to Somalia. The court was therefore tasked with identifying the maritime boundary.

Figure 4. Source www.polgeonow.com, *https://www.polgeonow.com/2021/10/kenya-somalia...* adapted by the author

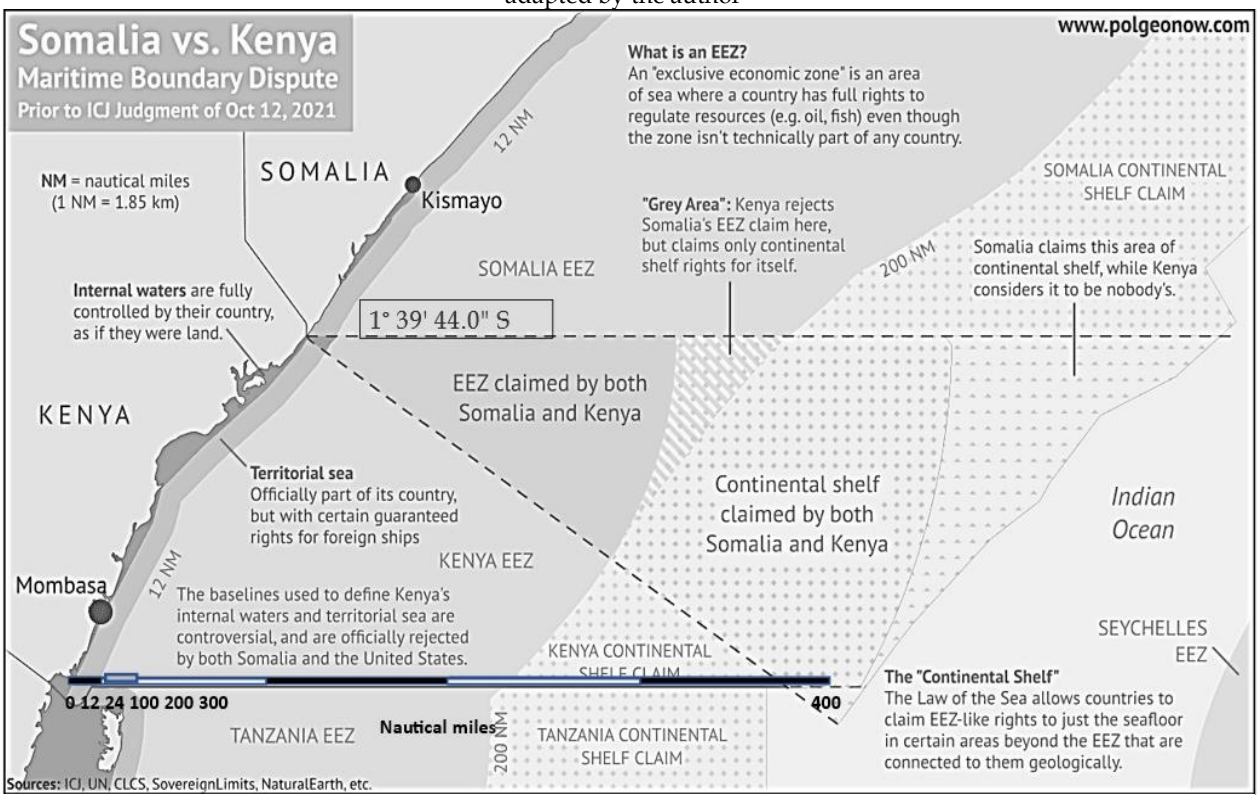
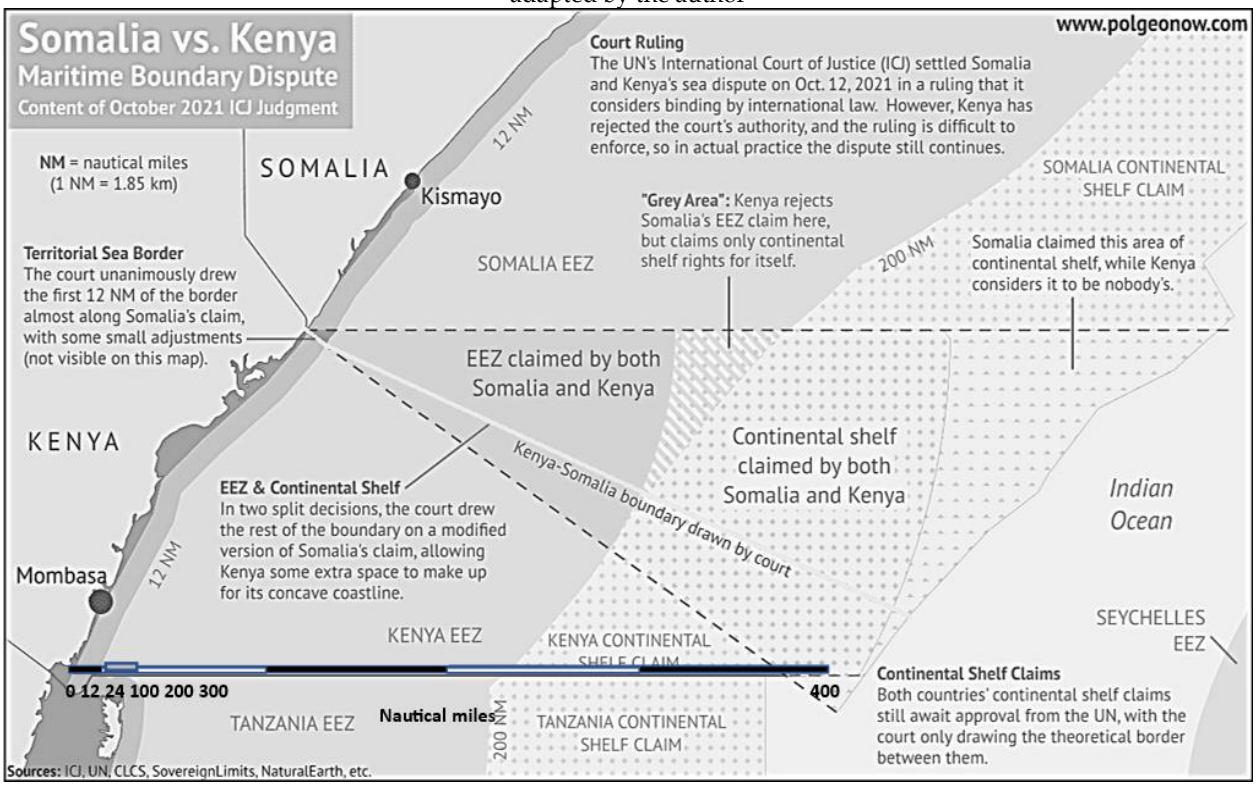


Figure 3 shows the claims and counterclaims before the 12 October 2021 judgment. In essence, Kenya claimed Territorial Sea and EEZ up to the line of latitude 1° 39' 44.0" S, close to and running parallel with the Equator. Somalia claimed the area down to a line starting at the same point on the coast but extending at 114 degrees perpendicular to the general line of the coast (the 'baseline').

ICJ decided that the starting point of the single maritime boundary delimiting the respective maritime areas between the Federal Republic of Somalia and the Republic of Kenya is the intersection of the straight line extending from the final permanent boundary beacon (PB 29) at right angles to the general direction

of the coast with the low-water line, at the point with coordinates 1° 39' 44.0" S and 41° 33' 34.4" E (WGS 84); (see Figure 5)

Figure 5. Source www.polgeonow.com, *https://www.polgeonow.com/2021/10/kenya-somalia...* adapted by the author

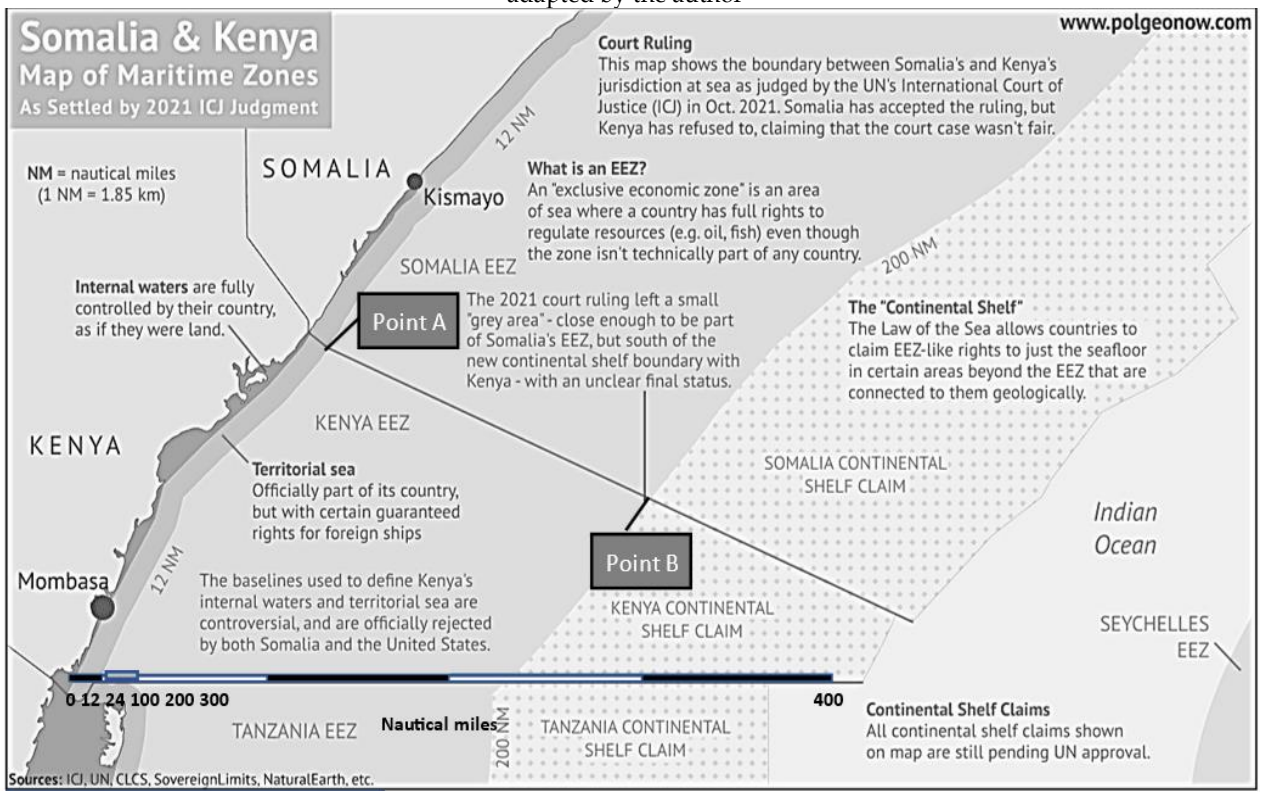


From the starting point, the maritime boundary in the territorial sea follows the median line until it reaches the 12-nautical-mile limit at the point with coordinates 1° 47' 39.1" S and 41° 43' 46.8" E (WGS 84) (Point A).

From the end of the boundary in the territorial sea (Point A), the single maritime boundary delimiting the exclusive economic zone and the continental shelf up to 200 nautical miles between the Federal Republic of Somalia and the Republic of Kenya follow the geodetic line starting with azimuth 114° until it reaches the 200-nautical-mile limit measured from the baselines from which the breadth of the territorial sea of the Republic of Kenya is measured, at the point with coordinates 3° 4' 21.3" S and 44° 35' 30.7" E (WGS 84) (Point B). (See Figure 6)

From Point B, the maritime boundary delimiting the continental shelf continues along the same geodetic line until it reaches the outer limits of the continental shelf or the area where the rights of third States may be affected.

Figure 6. Source www.polgeonow.com, *https://www.polgeonow.com/2021/10/kenya-somalia...*
adapted by the author



The court's ruling, seen as favourable to Somalia, was rejected by Kenya. The court awarded Somalia the bulk of the territory while adjusting the border slightly northward to address Kenya's security and economic interests. The ICJ rejected one of Kenya's key arguments, that Somalia had previously agreed to a boundary, saying there was no proof to show that from the documents Kenyan lawyers supplied to the court. The Hague-based court also rejected Somalia's demand for compensation for Kenya's past economic activity in the area. Somalia filed a complaint against Kenya in the International Court of Justice in 2014, saying it had exhausted all other avenues of finding a solution to the dispute.

It remains to be seen if the ruling will have any real-world impact, as Kenya boycotted the hearing and said it would not respect the ICJ verdict.

Finally, on a lighter note, despite the wars, piracy, catastrophes, abuse of seafarers, and boundary disputes, there have been some positive developments. Maritime security embraces the environment. The sea, like outer space, requires artificial environments to enable humans to survive upon it, over it and under it. Since our last issue, there have been several developments.

On 29 October 2021 the author was privileged to be able to see's new £200 million polar survey ship RRS *Sir David Attenborough* (see Figures 6 and 7). She is owned by the Natural Environment Research Council (NERC). and is operated by the British Antarctic Survey (BAS). She is an impressive 129 metres long with a draught of seven metres and a beam of 24 metres, giving her room for two helicopters. Her weight is 15,000 Gross Tonnes (GT) and 4,475 Deadweight Tonnes (DWT). The latter is a measure of her overall cargo-carrying capacity and is the sum of the weights of cargo, fuel, fresh water, ballast water,

provisions, passengers, and crew. The former is based on her overall internal volume. The disproportionate difference in *Sir David Attenborough*'s case is due to the weight of the ice-breaking reinforcement of her hull and her massively powerful engines. She is classed as a Polar class 4 ship, with a hull capable of breaking through the ice a metre thick, but with a Polar Class 5 propulsion system. In fact, on 2 April 2022, she proved able to crash through two-metre-thick ice floes. She is also the first British polar research ship to feature a moon pool – a vertical shaft (~4 x 4 m) running vertically through the vessel, open to both the air and sea (see Figure 9). Using the moon pool, scientific equipment can be deployed and recovered through the centre, and most stable part, of the hull. This is easier and safer than deploying equipment over the side or stern, particularly in the polar oceans' rough seas.

She was on her visit to Greenwich, the home of the Prime Meridian before setting off for her first expedition to the South Pole. Built at the Cammell Laird shipyard at Birkenhead, west of the river Mersea, close by Liverpool, she had completed basic sea trials and had come up the Thames through the Woolwich Barrier. She was now tied up in Greenwich. to enable the public to see her, but also to mark the start of the COP26 climate conference in Glasgow (Sir David Attenborough polar ship makes its London debut - BBC News https://www.bbc.co.uk/news/science-environment-59022676), 28 October 2021,)While under construction at Cammell Laird she had not been named and was known, irreverently, with classic British humour, as *Boatie McBoatface*. A public poll duly voted to make this her official name, but the bosses decided to give her the far more august name of *Sir David Attenborough*, in recognition of the famous environmentalist and naturalist. However, the humorous nickname stuck, being given the name for her remote Unmanned Underwater Vehicles (UUVs), or reconnaissance drones (see Figure 9).

Figure 7. Author with *Sir David Attenborough* at Greenwich 29 October 2021. Author's photograph.

Figure 8. *Sir David Attenborough* at Greenwich, Author's photograph. The Uber catamaran is the Thames Clipper, the best way to traverse London using the 16-lane motorway that is the river Thames. The ice-breaking underside and lower bow section are coloured maroons.

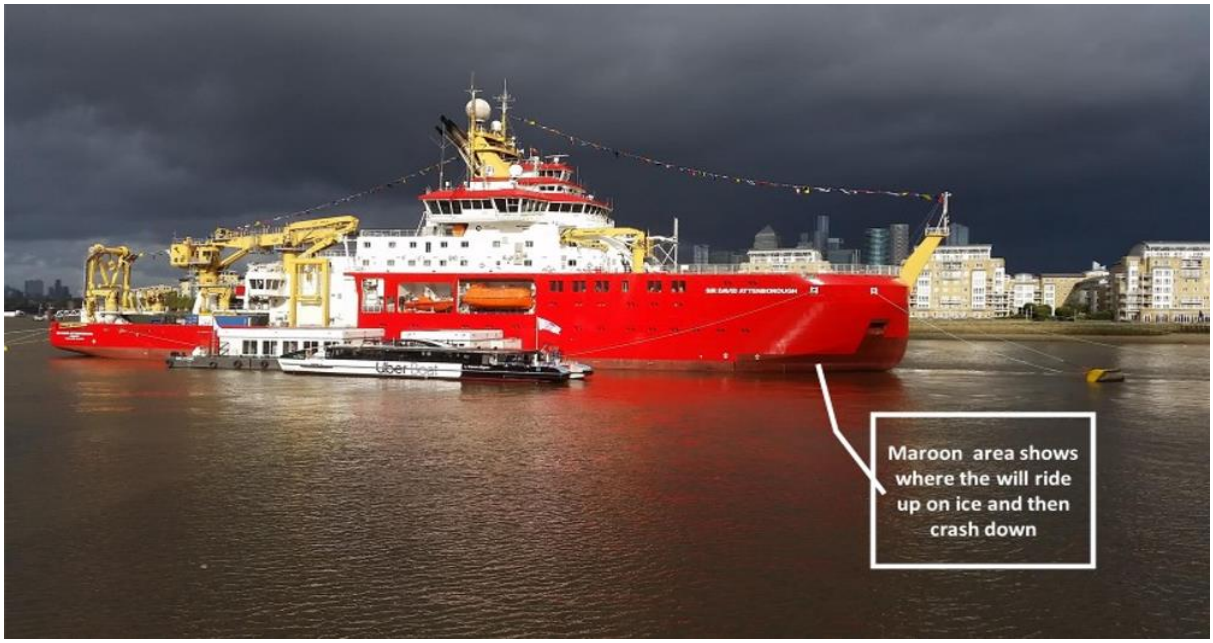


Figure 9. The *Boaty McBoatface* UUV. Source: https://www.bbc.co.uk/news/science-environment-59022676

https://www.bbc.com/news/science-environment-54597767

Figure 10. The 'moon pool.' https://www.bbc.co.uk/news/science-environment-59022676

International senior scientific advisers used *Attenborough* as a platform to issue a statement about the urgent need to address the climate crisis.

They wanted to see a concerted drive to develop - and use - the technologies that will keep the global temperature rising over 'pre-industrial' (1880) levels to1.5C and underpin the net zero economies of tomorrow. These technologies include better ways of creating, storing and using low-emissions energy - including improving semiconductors, batteries and low-emitting fuel production - as well as work on heating and cooling, and carbon capture and storage.

The vessel headed south in mid-November 2021. She first delivered supplies to the UK's main scientific base, at Rothera, on the continent's peninsula, as well as to other minor stations dotted around the Southern Ocean. Engineers needed to check her performance in sea ice, which they had not had the chance to do during her work-up off the UK; The *Attenborough* demonstrated that she met all the criteria for a Polar Class 4 icebreaker, proving it had the strength to crash through metre-thick floes at a steady pace and without damage to its hull.

Dr Rob Larter, the British Antarctic Survey (BAS) marine geophysicist, said the *Attenborough* was the product of lessons learned after decades of operations in the frozen south and north

> "The way science has progressed means you now have to be able to handle much bigger gear. So, that's why this ship has these very big cranes and gantries. You also need to be very flexible because there are so many different sorts of science that people want to do now. We have laboratories that come in containers, like for example a radioisotope lab, an ultra-clean chemistry lab and an experimental aquarium. These can all be added to the ship."

Attenborough is at the forefront of understanding how Earth's atmosphere and oceans are warming, and the impacts the temperature rise will have, in particular, on the ice-covered waters and lands of the Arctic and Antarctic.BAS scientists have already established, for example, how the Southern Ocean, which surrounds Antarctica, helps to shield us from the worst effects of global heating.

Oceanographer Dr Emma Boland explained: "The Southern Ocean takes up about 40% of the carbon dioxide that the oceans as a whole take up, even though it only accounts for 20% of the total ocean surface area. So, it's doing double the work.

"And if that CO2 didn't get taken up by the ocean, it'd be in the atmosphere, and global warming at the surface as we experience it, as human beings, would be that much worse." (https://www.bbc.com/news/av/science-environment-60933341).

Since we last published there have been a couple of other interesting and futuristic developments in vessel design and technology.

On 22 October it was reported that a robot boat able to travel ten nautical miles autonomously had been launched from a Royal Navy warship for the first time.

Figure 11. © UK Ministry of Defence. The PAC 24 Rigid Inflatable Boat (RIB) moves without a human driver present.

HMS *Argyll*, a Type 23 frigate, successfully controlled the crewless Pacific 24 rigid inflatable boat (RIB) while at sea off Plymouth.

The boat's onboard cameras and sensors gave feedback to *Argyll*, with a temporary operating centre set up in the ship's hangar. In another first, the RIB's control system was also integrated into the ship's Ops Room, meaning it could be controlled and commanded from the depths of the frigate. The Navy said the RIB was operated from up to ten miles away and that the ship was able to successfully send instructions to the boat, such as conducting basic missions, identifying targets on the water, and cueing its camera and weapons to tracked targets.

Lieutenant Commander Rob Manson, trials lead for NavyX, who held the week-long tests in conjunction with BAE Systems, said: "Operating with the Pac 24 while at sea showed that in the future these vessels have the potential to deploy with current frigates and destroyers and be used for a range of operational tasks."

A Navy source said that enabling a RIB to operate autonomously showed that it could "be useful for situations where the risk of life" was possible.

They said one scenario in which the RIB might be deployed would be where a fire on a ship needed to be put out, but it would be risky to send people close to the fire to contain it.

"Risking human life reduces significantly and you can drive a boat closer to an object," the source said. "You can put an autonomous RIB in more hazardous situations because the risk to human life is lessened.

This issue of the *Journal* includes an article on the legal and ethical issues involved in operating autonomous vessels. However, in cases such as the use of the Pacific RIB 24, the command ship would ensure it remained firmly under human control. (Armed and unmanned, the Navy robot boat that fears no enemy (msn.com) Armed and unmanned, the Navy robot boat that fears no enemy. Danielle Sheridan, *The Telegraph* 22/10/2021).

While autonomous vessels exploit the technologies of the future, a Swedish firm, Wallenius Marine AB, has used technologies based on those of the past. The *Oceanbird* is a giant, 200-metre-long wind-powered ship. The ship will have an engine as a backup but aims to save 90 percent of carbon emissions compared to a conventional ship. The ship is expected to cost somewhat more than a conventional car carrier, but operation costs are expected to be lower. Shipping accounted for 2.9 percent of man-made greenhouse gas in 2018, and the industry's share of planet-heating emissions has been rising in recent years, according to the U.N.'s International Maritime Organization. One solution may be to turn the clock back to pre-industrial times and again hoist sails to carry cargo around the world.

Sweden's Wallenius Marine AB, which designs and builds ships, is currently testing a sleek white model of an Oceanbird car carrier in a bay in the Baltic Sea. Per Tunell, Wallenius Marine AB's chief operating officer said results from the seven-metre model were encouraging and that he was "very confident" the full-scale *Oceanbird* will be ready to order by the end of next year.

The sail-driven ship could be in service in 2024 on Atlantic routes, he said.

An artist's impression of *Oceanbird* is shown in Figure 12 and a photograph of a scale model is under test in Figure 13.

Figure 12. *Oceanbird*: artist's impression. Source WalleniusMarine.

Figure 13. Scale model (seven metres long) of *Oceanbird* under test in the Baltic.

The full-sized *Ocean bird* will be 200 metres long with the capacity to carry 7,000 cars. It may be the tallest sailing ship ever built, equipped with wing sails reaching 105 metres above the water. The sails, however, look little like traditional billowing fabric sails, instead more closely resembling aircraft wings rising vertically from the deck. The vessel will have engines as a backup but aims to save 90% of carbon emissions compared to a conventional ship run on polluting bunker fuel. It will take Oceanbird about 12 days to cross the Atlantic, compared to eight for a fuel-powered ship. The design "could also be applied as a cruise vessel, a bulk carrier, a tanker," Tunell said. "One of the key conditions is that it shall be commercially feasible."

Oceanbird would probably cost more than a conventional car carrier, he said, declining to estimate the exact price. But operating costs would be lower, especially if governments trying to curb climate-changing emissions impose a price on carbon emissions from using fuel.

The *Oceanbird* is not the only emerging contender in the low-carbon shipping race. Neoliner in France is seeking orders for a smaller, 136-metre vessel, also suitable for transporting cars or farm machinery. Like *Oceanbird*, it reckons its carrier could cut emissions by 90 percent.

Both *Oceanbird* and Neoliner plan to use engines, powered by fossil fuels or biofuels, to stick to schedules if the winds depend on calm en route. But Tunell said the engines and fuel tanks would be smaller than on a comparable vessel.

"Most of the other companies are focused on wind assistance. We are focusing on wind power. This is a sailing vessel," Tunell said. Jakob Kuttenkeuler, a professor at the Swedish KTH Centre of Naval Architecture who is running tests for *Oceanbird*, said one research puzzle is what wind changes will be like as sails reach new highs above the sea surface.

Oceanbird's wing sails, likely to be built from aluminium, steel, and composite materials, will rise from a deck 35 metres above the water, reaching 105 metres (345 feet) above sea level. Most mariners have learned how to manage winds closer to the water line, where waves cause air turbulence. "Not too many people have utilised this part of the atmosphere in the open ocean. Planes go higher and ships go lower,"

he said. (Giant wind-powered ship developed by Swedish company | World Economic Forum (weforum.org), Alister Doyle, Writer, Reuters 17 Dec 2020, The *Oceanbird*: Swedish firm develops largest wind-driven cargo ship).

In this Issue

In this Editorial, I have tried to summarise some of the key developments since we previously went to press with Volume 2 No 1. The naval and maritime aspects of the war in Ukraine are covered in the Comment article which follows. We then feature two double-blind refereed articles: Tin Long Cheung's Evaluation of the maritime security threats and issues 'to the future of the shipping industry – Maritime Autonomous Surface Ships' and Alex Martin and Ben Smith, 'A New AI-driven Risk assessment Tool for Investigating Insider Theft and Associated Maritime Crimes in a Southeast Asian Energy Company. We are then extremely privileged to publish an opinion piece by Constantine Stathakis, 'Maritime Security in the Real World: A Master Mariner's Perspective'. Constantine's recent voyages as skipper of a tanker have involved dealing with piracy - embarking and managing Privately Contracted Armed Security Personnel (PCASP) – and, right up to date, with state-on-state conflict - visiting Russian ports and having Ukrainian and Russian seafarers working together. We then have Peter Cook's regular piece on electronic media and its enormous impact on research in the field of Maritime Crime and Security. Then we have three book reviews. Dr Jessica Simmonds reviews a book on Piracy and the Privatization of Maritime Security; Dr Katinka Svanberg reviews a book on Maritime Security and the Law of the Sea and Dr David Letts reviews a book on South China Sea Developments and its Implications for the Freedom of Navigation.

We, therefore, have a great package covering both theory and practice. I thank all the contributors and reviewers and our wonderful publishers – The Centre for Business and Economic Research UK (CBERUK). I need authors! Please go online and familiarise yourself with the automated procedures for submitting double-blinded pieces. We may also publish comment pieces which do not have to be double-blind refereed. Please also look at our author guidelines – it tells you the format, typeface, fonts – everything.

Chris Bellamy, 18 September 2022