

MARITIME STRATEGIC EVALUATION FOR ISRAEL 2022/23

Chief Editor: Prof. Shaul Chorev

Editor: Dr. Ziv Rubinovitz





המרכז לחקר מדיניות ואסטרטגיה ימית
Maritime Policy & Strategy Research Center



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Photos (left to right): Skyhawk jets on deck of a ship en route to Israel post-1973 Yom Kippur War; The Moskva cruiser; Hurricane in the Atlantic Ocean; Rosh Hanikra, the border between Israel and Lebanon; Wind turbines at sea; Unmanned Ukrainian vessel.

Maritime Policy & Strategy Research Center

The center is developing knowledge in maritime strategy, focusing on Israel's maritime surroundings: the Eastern Mediterranean and the Red Sea. The center does so in five core areas: (1) regional security and foreign policy, (2) the mobility of goods, people and ideas, (3) law, (4) energy, and (5) the environment. In 2017, the Wydra Research Center for Shipping and Ports was added as a division to the Maritime Policy and Strategy Research Center (HMS), and in 2020 the Ezri Center for Iran and the Gulf States Research was also attached to HMS.

The center was established in response to the of rising significance of the maritime domain both globally and in our region: the emerging strategic maritime competition between the United State and China, the expansion of exclusive economic zones (EEZ) and the crucial role of the seas in the international economic system both as a source of economic activity as well as serving as the world's main trade route. Our immediate environment saw a similar rise in the significance of the seas including the oil discoveries in the Eastern Mediterranean, the evolution of the Israeli Navy into a national strategic arm, Israel's total dependence on sea trade, and the growing realization that future development of national infrastructure may have to be done in the sea as land is becoming scarce.

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Executive Summary

In 2022, global processes with great significance for the maritime domain continued to develop, alongside new developments with immediate and long-term effects on the entire international system and the maritime domain. There is no doubt that 2022 was marked by the Russia-Ukraine war and the growing tensions between the United States and China, and the Maritime Strategic Evaluation for Israel 2022/23 reflects this in that most of the articles address the war or its effects – either directly or indirectly, emphasizing its naval aspects. The articles directly addressing the war and its effects are presented in section 2.

For Israel, the maritime border agreement with Lebanon is the main development in the maritime context, and one of the articles presented here is dedicated to this event. Against the background of the global energy crisis, which was partly caused by the Russia-Ukraine war, the energy sources in the eastern Mediterranean Sea, including Israel's natural gas fields, continue to shape the political and economic dynamics in the region, and given the war in Ukraine and European countries wish to stop relying on Russian gas, it seems there is and will be a growing demand for the Mediterranean energy resources, which all energy producing countries in the region will be able to benefit from.

The Maritime Strategic Evaluation for Israel this year includes 20 articles presented in six sections, as well as this summary and a conclusion, insights, and recommendations chapter. Below is a brief overview of the main points presented in this document.

Section 1: The Maritime Domain – Strategic Perspectives in the Global Arena

Global Developments in the Maritime Domain

Shaul Chorev reviews global political, economic, and environmental developments and their impact on the maritime domain. Like every year, he also reviews developments in major navies around the world and in the Middle East and their significance, including aspects related to strategy, budget, procurement, and operations.

Global developments: Over the past year, the international system continued to deal with new forms of Covid-19, while trying to return to normal, but the dying down of the virus around the world boosted the demand for goods, which led to delays in the global supply chain. However, this issue was slightly pushed aside in light of fewer reported cases of illness and due to a new issue on the global agenda – the Russia-Ukraine war. Following Russia's invasion of Ukraine, a series of harsh sanctions were imposed on Russia, which in

turn affected the global economy. A significant result of the war was the strengthening of NATO's eastern front against Russia, especially with Finland and Sweden beginning the process of joining the alliance.

At the same time, the conflict between the United States and China intensified – especially in the summer of 2022, in light of then-Speaker of the House, Nancy Pelosi's visit to Taiwan – and as the United States' balancing actions directed at China in the Indo-Pacific region increased. Additionally, negotiations to reinstate the nuclear agreement with Iran have not been progressing, while Iran continues to strive to become a nuclear threshold state. In the eastern Mediterranean, the Turkey-Greece-Cyprus conflict continues, as well as the severe economic and political crisis in Lebanon. The highlight for Israel in the maritime domain during the past year was the signing of the agreement on the demarcation of the maritime border with Lebanon, mediated by the United States. When it comes to climate-related issues, phenomena caused by climate change have continued to manifest and even worsened.

Russia's invasion of Ukraine on February 24, 2022, shocked the international community, and Russia has warned that under certain extreme situations, it may use its nuclear weapons. The West's response to this invasion is mainly the imposition of severe economic sanctions on Russia and the provision of military aid to Ukraine. That being said, opposition to the Russian invasion is not universal – about 35 countries did not support the decision to condemn Russia at the UN General Assembly in March 2022. The most significant country that abstained from voting in this context is China, which only in February 2022 (before the invasion) ratified its close relationship with Russia. Russia's invasion of Ukraine led the NATO member states to commit to increasing their defense budget, to a total amount greater than \$209 billion. The European Commission also raised a demand for a massive investment to modernize military equipment of its members.

Presidents of China and Russia, Xi Jinping and Vladimir Putin, declared a limitless friendship between their countries three weeks before the war and sharply criticized the United States and NATO. The Russian invasion of Ukraine, and especially the annexation of four occupied provinces following fabricated "referendums", caused economic and diplomatic unease for China, but did not undermine the relationship between China and Russia. Yet, it is important to note the differences in approach between the countries. While Russia is ready to destabilize the international system with forceful actions such as the invasion of Ukraine, China prefers to maintain stability and protect its economic interests around the world, being perceived as cautious. Russia and China perceive the alliances that the United States is maintaining, such as NATO in Europe and the Quad group in the Indo-Pacific region, as a threat to their security and regimes.

China continues to adhere to its goal of becoming a global power, protect territories it considers as belonging to it and building a world-class military to establish its importance when it comes to regional affairs, a move that may undermine stability and norms in international relations. China's military establishment and its aggressiveness in its territorial claims in the South China Sea and against Taiwan, raise questions in regard to its intentions.

The Biden administration released its national security strategy in October 2022. This document identifies the most pressing and worrisome challenge regarding authoritarian powers with revisionist foreign policies that challenge peace and stability. Thus, the United States prioritizes maintaining a sustained competitive advantage over China, while keeping Russia at bay. Russia is an immediate threat to the free international system, but China is the only adversary with intentions to reshape the international order. Furthermore, NATO has adopted its strategic concept document (created every ten years) in which China was defined as a "systemic challenge" and Russia as the "most significant and direct threat". In February 2022, the Biden administration published its strategy for the Indo-Pacific region, which is increasingly important for economic and military reasons. The United States goals in this context are to promote a free and open region, build ties in the region and beyond, promote prosperity and security, and build regional resilience in the face of transnational threats.

Regional developments: China has increased its involvement in the Middle East and in December 2022 President Xi Jinping visited Saudi Arabia and also met the leaders of the Gulf countries, which illustrates the difficulties in the relationship between the United States and Saudi Arabia. During the visit, a strategic alliance was signed between China and Saudi Arabia as well as a series of agreements amounting to tens of billions of dollars, which undermine US dominance in the Arabian Peninsula and the Persian Gulf. The volume of trade between China and Saudi Arabia increased by a sharp 380% between 2016 and 2020, mainly because of the sale of Saudi oil to China.

US President Joe Biden visited the Middle East in July 2022 and declared five principles of his policy in the region: partnership (with countries that accept the existing arrangement while the United States ensures that they can defend themselves against threats), deterrence (of other powers or regional powers from endangering freedom of navigation in the region, including in the Strait of Hormuz and Bab el-Mandeb; or of a particular country from dominating another country or region through military or threatening means), diplomacy (the United States will work to reduce tensions and resolve conflicts), integration (building political, economic and security ties between its partners in the region) and values (promoting human rights and values enshrined in the UN Charter).

Lebanon and Israel's maritime border deal was reached through US mediation, and its main goal is to address the status quo near the coast (the buoys line), establish a permanent border line from the end of the line of buoys to the end of the exclusive economic zone, end the conflict over the disputed area between the countries, and regulate the development of the reservoir that is located across the line. Lebanon will now be able to test the potential of the Kana Reservoir, which may help it recover from its ongoing economic and political crisis. For Israel, this agreement resolves questions regarding the development of the Karish field and may allow it to enjoy part of the profits of Kana in the future.

Two years after the signing of the Abraham Accords, opportunities arose for security cooperation mainly between Israel, the United Arab Emirates, and Bahrain, who share a similar view of the Iranian threat. The Negev Summit that convened in Sde Boker in 2022 added Egypt to the circle of the Abraham Accords and allowed for cooperation initiatives on issues such as energy, food and water security, health, and other issues. But without progress on the Palestinian issue, the Abraham Accords might turn into another cold peace.

The transfer of sovereignty over the Straits of Tiran from Egypt to Saudi Arabia in 2017 could create problems with Israel's freedom of navigation in the Straits. This issue was settled in the peace treaty with Egypt in 1979, but now that Saudi Arabia has sovereignty over the islands, it is not bound by this treaty. The multinational force that oversees the implementation of the treaty will end its role and be replaced by optical means. This might not be enough, especially when there are increasing signs that Saudi Arabia is politically moving away from the United States, meaning that US support for any understanding between Israel and Saudi Arabia will not be enough.

Iran continues its struggle against the United States and its allies in the Middle East. It will continue to project power through its security forces, including the Iranian Revolutionary Guard Corps, and its proxies in the hope of concessions on the part of the international community. Iran continues conducting brinkmanship regarding the nuclear deal negotiations. It also aims to continue its hold on Syria as part of expanding its influence in the region, for example, in Lebanon, and through Hezbollah. It will continue to threaten Israel with missiles and through Hezbollah and to threaten US interests in the region.

The Red Sea, the Arabian Sea, and the Persian Gulf were all at the center of international tensions in 2022. The tension between Iran and the Gulf states, the conflicts between Iran and Israel, and between Iran and the United States – all shifted to the maritime domain in the Persian Gulf, the Gulf of Oman, and the southern Red Sea. The Red Sea contains geopolitical barriers in the form of chokepoints. The Strait of Hormuz is such

a chokepoint over which Iran dominates. The Houthis, with the support of Iran, create increasing dangers in the southern Red Sea, similar to the situation in the Persian Gulf. The great powers and regional countries have commercial and security interests in the Red Sea. The blockade of the Suez Canal for six days in March 2021 was a reminder of its importance to world trade. Additionally, there is fierce competition west of the Red Sea, in North-East Africa and the Horn of Africa, which increases the instability in the region and involves the region's countries as well as the great powers.

Economy: The world economy that has not yet recovered from Covid-19 is now dealing with the implications of the Russia-Ukraine war and an economic slowdown that has only increased. The long-term consequences of the Covid-19 pandemic on the world economy are increasing inequality within countries and between countries, which are expected to increase anti-globalization notions in the future. Furthermore, the pandemic increased populism, nationalism, and the return of states intervening in the economy, paving the way for protectionism. Thus, government responses to Covid-19 challenged the international institutions upon which globalization depends.

The Covid-19 pandemic affected value chains, starting with the purchase of raw materials and ending with the consumer. It created logistical disruptions, production delays, over-reliance on a limited number of third parties, and more significant investment in technology, commodity pricing, personnel, and labor. The challenges for the supply chains are a lack of materials due to increasingly high demands when there is limited availability of materials, an increase in transportation prices due to a lack of containers (in light of the increase in demand), difficulty in predicting demand by manufacturers and suppliers, overload in ports due to a lack of manpower and social distancing, which created holdups in the ports causing suppliers to not meet delivery deadlines, and a change in customers' expectations, who began demanding quick deliveries during the pandemic.

All of these problems were exacerbated by the war in Ukraine. Russia exports 15% of the oil, gas, and coal in the world of which the European Union is the main importer, as it depends on these energy sources. There are also other materials of which Russia is a leading and even dominant exporter, and for this reason, the war creates a problem in many industries around the world due to a lack of raw materials. Ukraine is also a significant exporter in this context causing the problem for the various global industries to increase. When it comes to food, the consequences of the war have severely affected low-income countries in Africa. Russia and Ukraine export about a third of the world's wheat, a quarter of the barley, and 75% of sunflower oil. Thus, the war and Russia's naval blockade of Ukraine's ports led to the interruption of supply chains, and this was exacerbated by the slowdown created by Turkey when it blocked the Turkish Straits. Under international

pressure, with Turkish mediation and under the auspices of the United Nations, Russia, and Ukraine signed an agreement that opened Ukraine's ports for grain export.

The demand for oil: Europe refrained from purchasing oil from Russia as a response to its invasion of Ukraine. As a result, Russia began exporting much more oil to China and India, with the latter importing about 900,000 barrels of oil a day from Russia compared to 30,000 in 2021, and it will likely be able to import about a million barrels a day. China also increased its oil imports from Russia. All of this will cause an increase in demand for tankers, but insurance companies could be prohibited from insuring tankers carrying Russian oil, which will affect the entire global shipping market. On the other hand, the liquefied natural gas market is thriving, and in 2022 the volume of liquefied gas transportation in tankers increased significantly as a response to disruptions in the gas pipeline. Europe imported more than half of the natural gas in ships this year.

Protection of underwater infrastructure: the Russia-Ukraine war illustrates the importance of this issue. Technical dependencies, supply chain risks, and critical infrastructure vulnerabilities create opportunities for unwanted foreign interference. Geopolitical competition today also takes place in the technological and digital realms. Countries and companies strive for technological supremacy and control of the world's cyberspace. Fiber optic cable networks carry 95% of the world's communication and data traffic. Most of them are underwater and thousands of kilometers long. This is the core of the digital age, so these cables need to be protected. The damage to the Nord Stream pipelines in September 2022 illustrates this danger.

Over time, climate change will create a combination of direct and indirect threats, including to the economy, and to political stability, as well as cause waves of immigration and refugees. Scientists warn against more extreme and frequent weather phenomena such as heat waves, droughts, and floods. As a result of this natural resources will dwindle and there will be more competition for remaining resources. The shipping industry causes an extreme amount of pollution and is responsible for about 3% of the world's carbon emissions alone; for this reason, the International Maritime Organization aligns with the decisions of the recent climate conferences in Glasgow (2021) and Sharm el-Sheikh (2022) to bring about a reduction in carbon emissions and a transition of ships to the usage of clean energy sources.

Chorev also reviews the main developments in several major navies around the world and the Middle East.

The US Navy: The US Navy still heads the list of the most powerful navies in the world, even though the Chinese Navy has surpassed it in the number of vessels it has. At the end

of March 2022, the US Department of Defense published three documents: the National Defense Strategy, the Nuclear Posture Review, and the Missile Defense Review. For the first time, they were written at the same time, thus, it is guaranteed that the relationship between the strategy's goals and the means for its realization will be coordinated. The budget requested by the Department of the Navy is \$230.8 billion.

China is referenced in these documents as the main threat to the United States Navy. The Commander of the Navy, Admiral Michael M. Gilday wrote in the "Navigation Plan" for 2022 that over the past three decades, China has aggressively leveraged its economic power to grow and modernize its military; it has tripled the size of its Navy; expanded its strategic nuclear capacity and capability, etc., and the result is a threat to freedom of navigation and risk to the position of US naval forces. China, he argued, is directing its power to reshape the security environment to its advantage by denying the United States military access to the western Pacific and beyond. In this context, the US Navy has set for itself a goal "to be an essential decisive force in this security environment". The Navy recognizes the development and technologies it will be required to deal with in the future – artificial intelligence, sensors, unmanned systems, and long-range precision weapons. All of which will change future battlefields.

The Navy document emphasizes the role of submarines in integrated deterrence, i.e. the reliable and safe strategic nuclear capability against the United States adversaries' aggression, and emphasizes that submarines are the surviving leg of the nuclear trinity, and hold 70% of the United States nuclear arsenal.

The US Navy in the Middle East: Russia's invasion of Ukraine has focused attention on the Black Sea, the Sea of Azov, and the Turkish Straits, and the Sixth Fleet is in charge of these areas alongside NATO. Some analysts claim that the United States and NATO did not focus on the Black Sea and thus Russia was able to act aggressively in the region. They add that neither the United States nor NATO has a strategy for this region, despite its geostrategic importance and the presence of three NATO members on its shores – Turkey, Bulgaria, and Romania. Following the outbreak of the war, the United States placed the *Harry Truman* aircraft carrier, which can be used as an air base if the United States decides to intervene in the war, near Greece. However, President Biden made it clear at the very beginning of the war that the United States and NATO would not get involved in the war against Russia. In the Red Sea and the Gulf of Aden, which are under the responsibility of the Fifth Fleet, Iran has been provoking the United States, but the Fifth Fleet has been trying to contain and overlook these provocations. The Fifth Fleet established the Naval Task Force 153 in February 2022 to deal with maritime threats in the Red Sea and the Gulf of Aden and initially led it, but at the end of 2022, Egypt took command of this force. This force operates alongside other regional forces like Force 150 outside the Persian Gulf, in

the Gulf of Oman, and the Arabian Sea. Force 151 is meant to prevent piracy in the entire area under the control of the fleet, and Force 152 operates in the Persian Gulf. Force 153 will operate from the Suez Canal to the Yemen-Oman border.

Israel sees great importance in its relations with the United States Central Command and especially with the Fifth Fleet, as reflected in the meetings held by former Prime Minister Naftali Bennett and former Defense Minister Benny Gantz with the Commander of CENTCOM and the Commander of the Fifth Fleet during their visits to Bahrain in February 2022. The Israeli Navy has already held a series of exercises with the Fifth Fleet, which indicates growing cooperation.

The Chinese Navy: Ranked second only to the US Navy. The increase in the importance of China's maritime interests has led its navy to increase the frequency of operations, their duration, and their range from China's shores. The Chinese Navy has grown greatly in terms of the number of ships it owns and their quality is already comparable to Western fleets. China seems to want to reach a situation where its navy can deter the US Navy from intervening in a conflict in the South China Sea, Taiwan Island, or elsewhere. If deterrence fails, the Chinese Navy will be able to delay its US adversary. The Chinese navy is also meant to secure China's shipping lines, help evacuate Chinese citizens from other countries if necessary, and assist with humanitarian issues in the case of natural disasters. Despite all this, it seems that the Chinese Navy is inferior to the US Navy in the fields of anti-submarine warfare, attacking targets at a great distance, training large crews, and unity of command. The Chinese navy has no combat experience. China is increasing its involvement in the Middle East through financial means. It strives to develop and expand the Maritime Silk Road that will connect China to the Mediterranean Sea through the South China Sea, the Indian Ocean, and the Suez Canal. This is an essential component of China's Belt and Road Initiative. As the United States reduces its activity in the Middle East, China increases its own activity. China has been investing a lot of money in Iran but also in its rivals, Saudi Arabia and the Gulf countries.

The Russian Navy: Number three in the world ranking. Its performance in the war in Ukraine is mixed. It succeeded in imposing a naval blockade of the Ukrainian ports and fired missiles at shore targets but lost its flagship and another ship, failed to maintain its hold of Snake Island, and conducted almost no amphibious operations. This performance is below the expectations set for the fleet. The new doctrine published at the end of July 2022 defines the worldview of the Russian Navy but does not suit its capabilities as reflected in the war in Ukraine or the lack of operational success in the Persian Gulf and the Red Sea. The attitude regarding the Mediterranean Sea has changed in this document when compared to the previous version from 2015. The Eastern Mediterranean is now

defined as an "important" region in which Russia is willing to use force to protect its interests.

NATO: The Biden administration is dealing with the restoration of relations with European allies of the United States. The war in Ukraine led Sweden and Finland to request to join the alliance and they were indeed invited to join, but the completion of the process requires the approval of all 30 members of the alliance, and at this time Turkey and Hungary have not yet granted their approval. NATO and the European Union responded to the outbreak of war in Ukraine with a great degree of effectiveness. The United States led the international response, especially in coordinating military support for Ukraine. NATO's support for Ukraine is balanced by a reluctance to enter into a direct military conflict with Russia. But the prolonged war is putting the united front of the West to the test. NATO's naval forces do not intervene in the campaign in Ukraine and do not challenge the Russian navy in the Black Sea. Furthermore, there is no agreement within NATO on what to do. The naval campaign depends on Odesa's standing. If Odesa is captured by Russia, which at the moment seems unlikely, Russia will control the entire Ukrainian coast and this will negatively affect Ukraine's ability to resist and prevent it from reaching world shipping lanes, which will exacerbate the food shortage once more. NATO's test will be if Russia attacks one of the alliance members, meaning they will have to activate Article 5 – the collective defense article.

The Royal Navy: Ranked ninth in the world. The United Kingdom has been helping Ukraine with weapons and humanitarian aid and has imposed sanctions on Russia and Belarus. The Royal Navy works to uphold the rules in the Indo-Pacific region and, like the United States, views China as the major threat to the existing order. Recently, there was an improvement in France's relations with the United States, the United Kingdom, and Australia after the signing of the AUKUS alliance, which canceled a \$66 billion contract to build submarines for Australia in French shipyards. Cooperation between the four countries is increasing in the Indo-Pacific region in which France is present more than any other European country. The United Kingdom has now begun to establish a permanent presence in the Indo-Pacific.

The Indian Navy: India remains neutral between Russia and Ukraine and the West, although it has been preserving its historic close ties to Russia, has been buying much more Russian oil, and even hosted Russian Foreign Minister Sergey Lavrov in April 2022. The Indian Navy is trusted to preserve India's natural wealth and make sure its shipping lanes are open and its international status is maintained. The Indian Navy ranks seventh in the world. It has grown in the last decade in order to look after India's growing interests. India's main rival is China.

The Turkish Navy: Ranked 11th in the world. Turkey has become a major player in the Russia-Ukraine war even though it is not a party to it. Turkey supplied Ukraine with armed UAVs and blocked the Dardanelles and Bosphorus straits to warships at the beginning of the war in Ukraine and mediated the grain deal in July 2022. Turkey found a gas field in the Black Sea and will begin to stream gas for its own needs, thereby ending its dependence on imports. It seems that Turkey's activity in the eastern Mediterranean stems from the "Blue Homeland" (Mavi Vatan) doctrine which has taken hold of the army and government and demands an expansion of Turkey's territorial waters and its exclusive economic zone at the expense of its neighbors, particularly Greece with its wealth of islands. Turkey continues to invest many resources in building up its naval power. Given the American sanctions as a result of the purchase of the S-400 system from Russia, Turkey has begun to manufacture its own vessels. Turkey aspires for its navy to be similar in size to the (UK) Royal and French navies. The Turkish Navy will continue to function as part of NATO but will also act independently to protect Turkey's maritime interests in the Eastern Mediterranean and the Black Sea.

The Egyptian Navy: Ranked 13th in the world, which indicates that Egypt is growing more powerful and wants to own the strongest navy in the region. The buildup of the navy reflects the understanding of the geostrategic challenges surrounding Egypt, in the Mediterranean Sea and the Red Sea. The revenues from the Suez Canal increased significantly in 2022, but the threats to the freedom of navigation in the Red Sea are increasing, therefore the importance of the presence of the Egyptian navy in the region, especially in the south of the Red Sea near the Bab el-Mandeb strait, is growing. The Northern Fleet (in the Mediterranean) was formed to deal with the competition for energy resources in the eastern Mediterranean and its main mission is to protect Egypt's economic interests.

The Iranian Navy: Ranked 18th in the world. The Iranian Navy is buying new ships and continues its actions in the southern Red Sea with the assistance of the Houthis in Yemen, but also escorts tankers that transport fuel from Iran to Syria and Lebanon. In 2022, Iranian provocations toward the United States continued in the maritime domain and the Iranian-Israeli conflict at sea continued as well, including an Iranian attack on a ship with business ties to Israel. The Iranian, Russian, and Chinese navies cooperate and carry out joint exercises.

The Royal Saudi Navy: ranked 30th in the world and divided into a western fleet operating in the Red Sea and an eastern fleet operating in the Persian Gulf, both with full military capability. Given the struggles in the region, Saudi Arabia invests heavily in its navy and cooperates with the navies of neighboring countries in training and securing freedom of navigation.

China's Port and Shipping Diplomacy

Benni Ben Ari reviews China's existing ports and shipping strategy which is linked to its Belt and Road Initiative (BRI). Chinese shipping today is the largest in the world. This is necessary for China to satisfy the needs of its huge population, both in importing food and raw materials for industry, as well as for exporting. Container ships transport more than 80% of world trade, so the Chinese government invests in ports through which most of its international trade passes. Chinese companies also invest in ports around the world, similar to national companies of various countries that maintain many ports around the world – and in the Chinese case, more than 150 ports in 79 countries. China itself has seven of the ten largest ports in the world today, with the port of Shanghai being the largest in the world. China has three main maritime trade routes and invests accordingly in ports along the way: first through the Indo-Pacific region, Africa, and the Mediterranean Sea to Europe, second to the South Pacific and Australia, and third through the Arctic route to Europe (this is a future route). The article details the ports around the world in which China is involved and the implications of this involvement. Ben Ari claims that this network of ports is intended for economic and commercial needs only, not military ones.

Strategic Weapons Supplies in the context of Special Relations: AUKUS as a case study

Itzhak Bilia researches the motive for the establishment of the partnership between the United States, the United Kingdom and Australia (AUKUS) whose purpose is the construction of nuclear-powered submarines for Australia, and which implies a comprehensive move in an alliance against China, which is gaining power in the Indo-Pacific region, especially given its aggressive steps in the South China Sea and its threats to Taiwan. He emphasizes that there is no intention to arm the submarines with nuclear weapons. The cooperation is expected to be military, scientific, and industrial and will include areas of cyber technology, artificial intelligence, quantum technology, and underwater capabilities. The article examines the strategic contribution of these submarines to Australia, which is increasing the range and duration of operation of its submarines compared to conventional submarines, as well as increasing the range of launching missiles from submarines. The new submarines will allow Australia to participate in joint task forces with the United States, as well as participate in anti-submarine warfare (ASW) against China's nuclear submarines, which are the main force of China's nuclear deterrence. Bilia claims that the United States and the United Kingdom are providing this technology to Australia because of the special relationship between them based on shared culture, language, and history, different from the United States ties to its other allies in this domain, such as South Korea, Japan, and India. The article also compares this situation to the supply of Polaris missiles from the United States to the United Kingdom

in the 1960s. Even then, the special relationship with the United Kingdom prevailed over the relationship with France or other NATO members. The United Kingdom was the only country that possessed Polaris missiles, to the chagrin of France, which also requested to purchase these missiles and was rejected. The United Kingdom even managed to convince the United States to allow it the independent use of missiles in the extreme case of defense against a nuclear attack.

Section 2: The Russia-Ukraine War – Maritime Aspects

The Naval Campaign in the Russia-Ukraine War: A Roundtable Discussion

In a discussion at the end of October 2022, researchers from The Maritime Policy & Strategy Research Center analyzed the naval campaign in the Russia-Ukraine war. They reviewed the main developments in the maritime arena during the war and discussed their implications for the war itself, lessons from the war regarding the nature of warfare in the maritime domain, and the status and importance of the Russian Navy in light of its performance in the war up until that point. The issues raised were the implication of the sinking of the “*Moskva*” cruiser in April 2022 on the status of the Russian Navy and the ability of the Russian Navy to operate on the Ukrainian coast; the disappointing performance of the Russian Navy (with the distinct advantage it had over the Ukrainian Navy on the eve of the war); the use of unmanned aircraft in the service of both sides in the maritime arena and unmanned vessels by Ukraine; the adaptation of the Russian Navy to the changing operational reality during the war – on a tactical level an adaptation was certainly noticeable, but on a strategic level no such adaptation could be observed – and the structural problems that led the Russian fleet to fail. Tzevy Mirkin, Ido Gilad, Shlomo Guetta, Mark Shipton, and Alex Grinberg participated in the discussion, which was moderated by Shaul Chorev. A timeline of the war’s landmarks, on land and in the maritime arena, updated until November 2022, appears as an appendix to this discussion. It was prepared by Ido Gilad.

The Russian Navy and the War in Ukraine

Ido Gilad analyzes the Russian Navy’s actions during the war and claims that in light of the power relations between the navies, at the beginning of the campaign, Moscow expected the Russian Navy to play a central role in defeating its Ukrainian opponent. After the war began, the Russian navy was required to take control of the western part of the Ukrainian coast, from Odesa to the estuary of the Danube. Russia’s naval success included the blockade of Ukrainian ports that almost completely stopped commercial shipping, but this was interrupted 50 days later with the sinking of “*Moskva*”. The fear of a Russian takeover of Odesa led to defensive measures, including the self-scuttling of a destroyer for fear of it

falling into Russian hands. However, since the sinking of the “*Moskva*”, it has become clear to Russia that it will not be able to overwhelm Ukraine in the maritime domain since it is equipped with Western technologies, and the Russian navy has retreated to safer areas closer and the Russian coast. Russia planned to take over the home port of the Ukrainian Navy in Odesa but this did not happen. The takeover of Snake Island at the beginning of the war was part of the Russian effort to gain control over the shipping lanes in the region, as the island is an outpost of strategic control over shipping at a crucial junction in the southwest of the Black Sea. Later, Russia lost its control over the island.

Russia's New "Naval Doctrine" in the Context of the War in Ukraine

Tzevy Mirkin briefly reviews Russia's new naval doctrine published on Russian Navy Day, July 31, 2022, amid the campaign between Russia and Ukraine. The doctrine replaced the previous doctrine from 2015, but even though it was published during the war in Ukraine, the war and the conduct of the Russian Navy didn't seem to influence its authors. The new doctrine divides the various arenas into three levels: “vital” arenas are related to the protection of Russia's sovereignty and territorial integrity and affect the socio-economic development of the country, including Russia's internal waters, its territorial waters, its exclusive economic zones, the Arctic domain, the Sea of Okhotsk and the Russian part of the Caspian Sea. "Important" arenas greatly affect Russia's economic development and national security, and include the oceans to which Russia has direct access, the Black Sea and the Sea of Azov, the eastern Mediterranean Sea, the Black and Baltic Seas straits, and the Kuril Islands, as well as international shipping lanes along the coasts of Africa and Asia. The other arenas are categorized as "other".

The threats to Russia are specifically defined in this document and focus on the United States and its allies, who, according to this account, wish to maintain their dominance, including in the oceans. The new doctrine indicates the need to ensure the ability of the Russian shipping industry to build large ships, including aircraft carriers, but contrary to many interpretations that regard this as an intention to build an aircraft carrier, according to Mirkin, this means that Russia admits that it cannot do so but needs to acquire this ability. The new doctrine was published against the background of the failure of the Russian navy in the war but does not reflect this reality. During the past decade, the navy was presented as one of the symbols of the revival of Russian power, and the political leadership had to take steps to demonstrate support and trust in the navy. It seems that the ceremony of signing the doctrine was intended to mask the operational failure in the war, meaning that its media importance exceeded its strategic importance.

The Regime of the Straits (Montreux Convention 1936) and the Russia and Ukraine War

Glen Segell addresses the Regime of the Straits at the Turkish Straits (the Bosphorus and the Dardanelles) in the context of the war. From the beginning of the war, Turkey implemented the Montreux Convention, which established the regime of navigation through the straits under its sovereignty. Turkey has blocked the straits to war vessels, except for ships whose home port is in the Black Sea and to which the straits are their only sea access. The treaty does not allow fleets whose home ports are not in the Black Sea to pass through the Straits and to break the Russian blockade of Ukrainian ports. In July 2022, an agreement that allowed ships to pass through the Straits with grain essential for the nutrition of approximately 1.7 billion people around the world was signed. The agreement is renewed every 120 days so that its upholding remains on the global agenda. The United Nations Convention on the Law of the Sea (UNCLOS, 1982) recognizes the Montreux Convention since it is still in effect, therefore the navigation regime in the Straits continues to operate according to it. However, Turkey is careful in using this treaty so as not to create an opening for new negotiations that will also have to reflect the different technology and its different-sized ships since the treaty was signed. Changing this treaty can create an opening for other treaty changes.

The Impact of the Russia-Ukraine War on the Maritime Trade: Regional and Global Aspects

Mark Shipton examines the changes in maritime trade following the war, including the naval blockade imposed by Russia on Ukraine's ports, which prevented grain trade critical to global nutrition. Three factors directly affect maritime trade traffic: the naval blockade of Ukrainian ports, the sanctions imposed on Russia, and the increase in insurance prices in the shipping market. Only about 6% of the world's maritime trade passes through the Black Sea, but this is made up of about 12% of the steel market, 26% of the wheat market, and 20% of the corn market. The opening conditions for the war gave Russia an overwhelming advantage over Ukraine in the maritime domain, but eventually, Russia suffered blows like the sinking of the "Moskva". The Russian naval blockade of Ukrainian ports diverted Ukrainian maritime trade and the trade of other landlocked countries that depend on Ukrainian ports to the ports of neighboring countries, mainly Romania and Bulgaria. This led to an increase in prices in their ports. The war also stopped the use of the railway line from China to Europe causing goods to be transferred to ships, which also increased prices. The sanctions on Russia have led major shipping companies to stop trading with it and also to increase storage prices in the West due to goods remaining in warehouses. This also led to an increase in world oil prices. At the beginning of the

war, merchant ships were damaged in the Black Sea, which led the International Shipping Organization to raise the level of risk in the region to the highest level, and this boosted insurance premiums. The prices of global goods, such as oil, wheat, and corn have also dramatically increased. A similar thing happened in the steel market since Russia and Ukraine are among the leading exporters of steel. The markets have not yet recovered from the Covid-19 pandemic, and the price increases accelerated the increase in inflation. The war and the subsequent rise in prices demonstrate the shortcomings of globalization since the entire market is affected by a war in one limited area.

Maritime Alternatives to the Russian Gas Import to Europe

Nitsan Lifshits examines the alternatives available to European countries who wish to obtain energy sources that will replace Russian natural gas, some of which depend on it. In 2021, Europe consumed about 500 BCM of natural gas, of which 380 BCM was imported, with 45% of the imports coming from Russia. About 29% of the oil and coal that Europe imports are from Russia as well. European countries wish to diversify their energy sources. To reduce dependence on Russia, Europe can import more gas from other sources, use non-gas energy sources and cut back on consumption. The article presents the gas transmission routes from Russia to Europe – the pipeline through Ukraine and Belarus and the Nord Stream pipelines – and the alternative options, mainly in Algeria, the United Kingdom, Australia, and the United States – all of which depend on maritime transport. Algeria already supplies gas to Europe and has already increased its gas supply this year. One of the pipelines used to supply gas from Algeria to Spain passes through Morocco but due to the tension between Algeria and Morocco, the pipeline was closed. However, it is possible to increase the gas flow in the active pipes. Spain has liquefaction facilities that can allow for an increase in the amount of gas imported from the United States. The problem with the alternative options is that they are available to Western European countries, which are less dependent on Russian gas anyway, while Central and Eastern European countries have no short-term solution. The United Kingdom can increase the supply of gas to the Netherlands through the BBL pipeline and Australia can supply liquid gas, but given the situation in the global energy market and the fear of a shortage, there are those in Australia who prefer to store the gas rather than sell it. Europe can also optimize its gas consumption by reducing gas leaking or flaring in pipelines in its territory. It is possible to import larger quantities of liquefied gas from the United States to be gasified in Europe, for example in Germany which can build appropriate facilities. The problem is that some European countries cannot receive liquid gas and there is a real concern that this gap will affect their policy toward Russia as well as the united European front. Imports from Israel and Egypt do not amount to be significant for Europe. Libya is not a viable possibility because of the war there and Morocco itself imports gas from

Spain. For these reasons, the Mediterranean Sea is not a sufficient source of gas for Europe. The most realistic option is to import liquefied gas from the United States to the Iberian Peninsula, and from there to stream it through France to Central Europe, but the infrastructure is not sufficient at the moment, so this is not a relevant solution for the next two years.

The Iranian Strategy Following the War in Ukraine

Alex Grinberg claims that Iran's most important lesson from the war is not to give up its nuclear option. The article analyzes the Iranian strategy as a whole. As it perceives it, Iran faces several major threats: a threat from the United States since 1979, threats from Israel and Saudi Arabia, which Iran believes supports Sunni jihadist movements, and a host of threats from its neighboring countries as a result of its breached borders. Iran's vital interests are protecting the regime from internal and external threats, and deterring its enemies, who it understands have superiority in terms of weapons. For this reason, Iran invests many resources in operating proxies, and in retaliating against enemies that succeed in harming it – thus, Iran invests in asymmetric capabilities, and the ability to project power towards regional players who would rather cooperate than confront it. Russia's invasion of Ukraine surprised Iran. Iran does not fully support Russia, and given the opposition of parts of the Iranian public to Putin's regime, its leadership has been cautious. Iran's main lessons from the war have been that nuclear deterrence must not be given up in order not to end up in Ukraine's situation and that missiles capable of carrying nuclear warheads are of strategic importance. Thus, it has concluded that military capabilities are more important than international support. As Iranian leadership sees it, the war justifies its current strategy and the nuclear program is a strategic asset. The missiles Iran provides to its emissaries are a strategic aspect of deterrence against Israel and it will not compromise on these two matters. Iran does not have a written grand strategy, including in the maritime domain, but its maritime strategy is subject to its overall considerations regarding the Gulf, and especially its opposition to the US presence in the Gulf. Since 2016, Iran has adopted an offensive strategy at sea, defense through offense. Iran's capabilities do not match its geopolitical and ideological ambitions and its naval maneuvers express intentions more than actual capabilities.

Section 3: Political Aspects in the Eastern Mediterranean

The Delimitation Agreement between Israel and Lebanon – Challenges and Achievements

Benny Spanier and Orin Shefler discuss the agreement between Israel and Lebanon mediated by the United States to delimit their maritime boundary. This agreement was

reached during a limited window of opportunity and established a borderline that would allow for the future development of a gas and oil field named Sidon (Kana) which is located across the borderline. This agreement reflects a pragmatic and applied approach and guarantees Israel's security interests as defined by the government, the National Security Council (NSC), and the IDF. The agreement was reached with an enemy state without a peace treaty and states that the maritime border is "a permanent and equitable resolution" while ending Lebanon's claims regarding maritime territories and resources located on the Israeli side. The main challenge of this agreement is that the buoy line near the coast is not agreed upon and its future will depend on a future agreement regarding the land border between the countries. This entails a risk for the future of the negotiations and may raise issues regarding the line of buoys in relation to the landline. As for the "Sidon" reservoir, which is understood to be located on both sides of the new line, the agreement includes a statement that Israel holds a share in the reservoir insofar as it is located beyond the maritime borderline, a matter that Lebanon opposed until the signing of the agreement. At this time, there is no agreement on the distribution of profits from the reservoir, contrary to what has been reported in the media. There is no agreement between the countries on the management of the reservoir, and thus the actions of any of them can affect the way the reservoir is developed and managed. Another challenge is the return and compensation that Israel will receive in practice. Since the reservoir is not mapped, it is difficult to know what its size is within Israeli territory, and in the future, Israel could demand significant compensation from what it is currently estimated to be entitled to, which could lead to tension between the countries. Israel has agreed not to operate the reservoir independently and will not receive gas or oil from it. The operation of the reservoir in the future does not appear in the agreement and remains open for discussion with the future operator. There is no understanding in the agreement about additional reserves that may be found on the line, but the parties have committed to sharing new information through the United States. The agreement stipulates that the United States will help settle disputes between the parties. Israel sees this as an achievement because the alternative is for Lebanon to turn to international institutions. Israel must finalize legislation of the Maritime Zones Law which has been under discussion since 2017, and which will outline the method of determining its maritime border. The expectation is that Israel will need to agree on the maritime border with the Gaza Strip and the "Gaza Marine" reservoir, and the agreement with Lebanon could be an inspiration for such an agreement. The agreement with Lebanon indicates that countries can come to an agreement in a maritime environment, even though they have difficulty doing so on land.

From Sea to Shining Sea: The Reorientation of Turkish Foreign Policy in 2022

Omri Eilat examines the changes in Turkish policy in the Eastern Mediterranean, including toward Israel. During the past year, Turkey has made a considerable effort to improve its relations with Israel, Egypt, and the United Arab Emirates to get closer to the United States. If in 2020 Turkey was the "troublemaker" in the Mediterranean, at the end of 2022 it was the "responsible adult" in the Black Sea. However, changing its approach does not mean waiving its claims regarding maritime borders. Russia's invasion of Ukraine improved Turkey's position in NATO when it blocked passage through the Turkish Straits to Russian warships according to the Montreux Convention. The Turkey-Russia relations consist of cooperation and conflicts in various arenas such as Syria and Libya, which did not prevent Turkey from leaning on Russia when it was unhappy with its cooperation with the United States, for example in the procurement deal for the S-400 and the withdrawal of Turkey from the F-35 project. These complex political relations have not undermined the economic relations between Turkey and Russia, especially in the energy field. But Turkey also has extensive ties with Ukraine, and the most well-known transaction in connection with the Russia-Ukraine war is the sale of the unmanned aircraft Bayraktar, which gave Ukraine a significant advantage in the field of UAVs against Russia, which uses Iranian UAVs. Thanks to its extensive ties with both sides, Turkey has become the ultimate mediator between Russia and Ukraine. When it comes to energy, while European countries are having difficulty finding a substitute for Russian gas, Turkey has become a reliable energy corridor. Turkey wishes to strengthen this position, a fact that guides its diplomatic efforts in the Mediterranean as well. Furthermore, it is interested in purchasing gas from Israel in relation to its position as Europe's southern energy corridor. Under the 36th Israeli government led by Naftali Bennett and Yair Lapid, relations were renewed and ambassadors were even reappointed, which indicates the desire of Turkish President Recep Tayyip Erdogan to reinstate political relations. Erdogan's conversation with Prime Minister Benjamin Netanyahu after his win in the November 2022 elections indicates that the trend continues, although it is too early to determine anything concretely. Israel made it clear, even before President Isaac Herzog's visit to Turkey in March 2022, that the renewal of ties with Turkey would not come at the expense of its ties with Greece and Cyprus, and Turkey has accepted this. Israel has accepted the fact that its relations with Turkey are due to a meeting of interests regardless of conflicting interests in other arenas, such as Turkey's position on the Palestinian issue.

Türkiye–Israel Collaboration and Energy Diplomacy

This article by Oğuzhan Akyener and Abdullah Altun from the Turkish TESPAM Institute presents their position on the issue of energy in the Eastern Mediterranean given the war in Ukraine. At the moment, there are three major concerns, sufficient amounts of energy

resources, climate change, and "energy-hungry" countries like India and China. The current energy crisis causes countries to abandon the goals they set for themselves regarding green energy, and the war in Ukraine has only been worsening this crisis. According to TESPAM's analysis, the alternatives to Russian gas do not provide a satisfactory solution for Europe, not even in the short term. For this reason, Turkey can serve as an energy transition country for Europe, a process that requires energy diplomacy. Although the energy potential in the eastern Mediterranean is not as high as in the areas to its east, the development capabilities and the cost of transportation to Europe make it a preferred area. Israel and Turkey are in an excellent strategic position given the changes to the energy market. The authors call for close cooperation between Israel and Turkey, with Turkey being a transit point for energy to Europe that can be an alternative to transferring energy from Russia, and suggest that such a situation can help resolve conflicts in our region.

Section 4: Energy in the Eastern Mediterranean

Producing Energy at Sea in a Net-Zero Economy

Orin Shefler examines options and opportunities for energy production at sea to create a "net-zero" economy, that is, an economy without carbon emissions which is a pollutant and a major contributor to global warming and the climate changes the world is experiencing. As Israel diversifies its energy sources, the potential for the creation and production of cleaner energy from the sea will increase. During the transition period toward a net-zero economy, Israel needs not only to produce gas from the sea but also to consume new forms of energy that the sea can produce, such as wind energy, solar energy, and more. After diversifying its energy sources, Israel will be able to reduce the consumption of polluting resources. Each of these alternative sources has unique characteristics that may suit different parts of Israel's net-zero economy, but they must be reliably available to the public at a reasonable price and with minimal impact on the environment. According to the article, the government should create supply and demand scenarios for the different types of energy and prepare accordingly. It is already clear that there will be great demand for hydrogen and liquefied natural gas and the government should have concrete plans for maritime projects that will meet this demand. Furthermore, Israel needs to use the Mediterranean Sea for energy facilities that there is no space for on the coast, due to the increased density of the population. At the end of 2022 or the beginning of 2023, a tender for conducting a strategic environmental survey of Israel's economic waters should be issued, and depending on its results, the government could be able to act to produce the necessary energy sources. Since an increase in demand for liquefied natural gas is expected, there are already plans to establish floating facilities for its production

in Israel's exclusive economic zone. It is also possible to extract hydrogen, which has a considerable market, from the sea. The transition to a net-zero economy will take time, but clearly, this is the future.

Egypt and its Exclusive Economic Zone (EEZ) in the Mediterranean

Shlomo Guetta discusses Egypt's Exclusive Economic Zone (EEZ) in the Mediterranean. Egypt has signed agreements to establish an EEZ with Cyprus and Greece and has an understanding with Israel about their maritime border. At the same time, Egypt has been exporting gas to Turkey in increasing quantities despite the conflict between them in Libya and the tension between them since the ouster of Egyptian President Mohammed Morsi from the Muslim Brotherhood's Freedom and Justice Party in 2013. Egypt has built two natural gas liquefaction facilities in light of the growing demand for liquefied gas and thus has the ability to store liquefied gas. This gives it a great advantage in the face of the Russia-Ukraine war and Europe's energy crisis. To reach the goal of \$1 billion in gas revenues that Egypt has set for itself this year, it needs to reduce internal consumption and increase output or import gas from Israel to liquefy and then sell at a high price on the international markets. Egypt's gas reserves are found in its EEZ in the Mediterranean Sea. Gas reserves have increased eightfold in the last few years in comparison to 2010-2014 and are Egypt's biggest source of income after the Suez Canal. This is a logical reason for the massive buildup of the Egyptian navy in recent years. Israel should think about cooperation with Egypt on a commercial level and on a security level, such as in terms of security, protection, and dealing with threats from within and outside the region.

Section 5: Maritime History

The Warning that Came from the Sea: Naval Intelligence in the Yom Kippur War

Ehud Golan addresses the intelligence warning that was issued by navy intelligence and which was rejected by the IDF Intelligence Directorate, according to which war was expected in October 1973. The article presents the warnings that were transmitted and discussed and the fact that the Navy finally accepted the dominant assessment of Military Intelligence according to which war will not break out, though warnings to prepare for war were sent within the Israel Navy. The article explains the position of Navy Intelligence as professional Corps intelligence but also as an expert of Military Intelligence in the maritime domain, i.e., subordinate to the command of the Navy and professionally subordinate to the IDF Intelligence Directorate. While there was much intelligence information regarding the Egyptian navy, there was little data on the Syrian navy, which was smaller and perceived as a secondary threat. The article reviews the signs identified by the Navy's intelligence regarding the Egyptian preparations for war and discusses the

rejection of this assessment by Military Intelligence. The article presents the fact that the naval arena has operational characteristics that make it possible to receive early intelligence alerts compared to land and air arenas. On an organizational level, the Navy's intelligence was in a relatively inferior position in the intelligence hierarchy and did not receive the most sensitive information – unlike Air Force intelligence – and thus was more independent in its assessment ability. Although the previous wars (1956 and 1967) broke out following a naval move by Egypt – in both cases through the blockade of the Straits of Tiran – in the IDF the sea is considered a secondary arena and naval intelligence is not considered a provider of strategic intelligence.

Napoleon's Failure to Conquer the Land of Israel: Principles of Maritime Strategy, Then and Now

Danny Segev and Benny Spanier examine strategic aspects of Napoleon Bonaparte's failed attempt to conquer Acre in 1801, and explain how the Royal Navy, which was dominant in the Mediterranean Sea, thwarted his plans and helped the Ottoman Empire defend Acre. In other words, it was the complete naval control of the Royal Navy in the eastern Mediterranean and its commitment to the Ottoman side that defeated Napoleon. The article presents several principles relating to the concept of naval control and according to them, analyzes Napoleon's journey up until his retreat. The article extrapolates from these findings to Israel's current maritime strategy and concludes that Napoleon was, and Israel today is dependent on supplies from the sea, requiring this maritime domain to be under their control.

Section 6: Crisis Management and Technology in the Maritime Domain

Whole-of-Government Frameworks for Maritime Security

Eleanor Dayan discussed the need to establish whole-of-government frameworks to address maritime pollution to better coordinate the various bodies and optimize responses to these incidents. The "Zefet Haseara" (2021 Mediterranean oil spill) event in February 2021 in which Israel's Mediterranean coastline was contaminated with tar from an unknown source, could have been handled better if the information that was available even before the event had been known to the authorities. The proposed frameworks should be the responsibility of a government ministry, should gather the relevant information and coordinate between the various relevant bodies to optimize the handling of maritime incidents. The goal here is to increase maritime security, and this concept can be interpreted as the prevention of environmental damage. Among the multitude of definitions for maritime security, it is clear that dealing with a maritime incident or

threat requires the participation and cooperation of many private, governmental, and international bodies, knowledge of broad issues, and the ability to respond quickly to complex events. Coping includes identifying the incident, monitoring, and warning of its development, deploying forces and resources as a response as quickly as possible and finally assessing damage and creating a rehabilitation plan. This whole-of-government framework approach is designed to create a joint effort on the part of government entities and organizations to fully utilize existing resources in a coordinated response to an incident. Otherwise, each organization will focus on its own interests and goals. This approach aims to improve efficiency through the sharing of information, resources, and capabilities from each organization and should also reduce costs. Some countries have already established such frameworks and what they have in common are the size of their maritime domain and its national importance. Every country establishes an appropriate body to handle threats, constraints, and various characteristics of its maritime domain. The article presents the Singapore model and the British model as well as a comparison of New Zealand and Australia. Two lessons emerge from the international examples presented, the first is the importance of building a collection system from a variety of information sources and the second is the question of authority – is the body under the responsibility of one ministry, that will also finance it? And if it only coordinates between different bodies will they share the operational costs?

Cyber Threats to Maritime Platforms and Insights from Coping with the Covid-19 Pandemic

Itai Sela addresses the cyber protection of operational computer systems installed on maritime platforms whose value – and damage costs – increased following the war in Ukraine, which has been pushing Europe to break away from its dependence on Russian gas. Since the outbreak of the Covid-19 pandemic, there has been an increase in cyberattacks on operational computer systems. In maritime platforms, a distinction must be made between the information technologies (IT) that help manage and transfer information between the platform and external parties such as company headquarters, ports, suppliers, and the like and the operational technologies (OT) that help perform the critical operations on the platform itself. These systems are particularly vulnerable because they are based on outdated operating systems that are no longer supported by the manufacturers with security and software updates. The purchase of up-to-date equipment can amount to hundreds of thousands of dollars in a commercial vessel and up to tens of millions of dollars in a maritime energy platform; for this reason, the owners of the platform avoid these purchases as much as possible. The cost increases even more because of the need to disable activity for a long period of time to upgrade the systems. The systems are connected to the Internet for much longer than before, which

causes prolonged exposure to potential cyberattacks. These attacks can come from the outside or through planting malware during the routine activity of staff members who unknowingly insert it into the systems they operate. Experiments have proven the degree of danger that a cyberattack can expose the platform to, including downtime and even collision with various objects that the platform operators will not know about because of a cyberattack to their systems. There are three approaches when it comes to protecting against cyberattacks, which can be paralleled to the approach to Covid-19: (1) Training and education of staff members for cyber protection, similar to educating citizens to wear masks, wash their hands and maintain social distance. (2) Separation of networks to reduce the possibility of a cyberattack, similar to quarantines during the outbreak of Covid-19, and monitoring solutions to alert against abnormal behavior following the intrusion of malicious code, similar to locating cellular devices and checks at border crossings. (3) Active protection software installed on all operational computer systems, which are, of course, equivalent to Covid-19 vaccines. Decision-makers are advised to examine the level of the cyber threat faced by each of the components of the maritime industry against the existing level of cyber protection and to adopt a cyber standard that will allow a threat to be measured and the required level of protection to be defined. It is recommended that regulation in the field become mandatory and that more rigorous inspections be carried out.

Disruptive Technological Changes in the Field of Shipping and Ports as an Opportunity for Israel

Ehud Gonen claims that the shipping and ports sector is conservative and operates according to global regulation, and this is one of the reasons for its late digital revolution. International bodies such as the International Maritime Organization (IMO) are working to build a regulatory framework for new technologies, including autonomous technologies. As long as there is no regulation or technological advancement on the part of any particular company, the technological changes in the shipping world in recent years are an opportunity for Israel on a national level. There are three opportunities in this field: economic – autonomous shipping technologies as a driver of growth and employment (e.g. the unmanned aircraft industry, autonomous vehicles, autonomous shipping), regional – blue economy as a driver for regional cooperation in the Eastern Mediterranean and the Red Sea, and strategic – an opportunity for Israel to remove its maritime blindness, creating the possibility of greater Israeli influence in the international system. These economic opportunities can help Haifa and the northern district. The decision of the Ministry of Innovation, Science and Technology regarding the sea as a national resource among the five areas of national priority is an important start that requires budgetary backing and appropriate regulation. Regional cooperation: Cyprus is a potentially fruitful

party for cooperation for both sides. Cyprus depends on the sea for its existence and its shipping industry is several times more developed than Israel's. Israel-Cyprus relations have become closer in recent years, mainly around common interests in the energy field and Turkey as a common rival. The maritime border between Israel and Cyprus presents Israel with a border with the European Union. There are understandings regarding the Aphrodite-Yashi reservoir and there is an agreement to connect the power grids of the two countries with the longest submarine cable of its kind. Egypt is a key country in world shipping because of the Suez Canal through which about 10% of world trade passes. Israel and Egypt have a series of collaborations in the context of the blue economy, energy, and shipping technologies. The development of maritime technologies will renew disappearing knowledge in the field and increase Israel's soft power. Compared to the existence of six seaports and three energy ports, Israeli shipping is in decline. There are very few ships raising the Israeli flag and very few naval officers. In an emergency, ships will not enter Israel's ports.

Summary of Maritime Strategic Evaluation for Israel and Policy Recommendations

Shaul Chorev concludes that 2022 was characterized by diverse challenges that influenced each other: the war in Ukraine, the effects of the Covid-19 pandemic, the Iranian nuclear program, the Chinese threat to Taiwan, signs of a slowdown in the global economy, inflation, the use of energy as a weapon, the uncertainty in the global food market, climate change and drought. The Middle East, from which the United States tried to distance itself in recent years, returned to center stage and all great powers attach great importance to it.

Insights into Israel's position towards the Russia-Ukraine war: Given recent developments, including Iran's increasing involvement in the war through the supply of UAVs to Russia that are used to attack the population of Ukraine, Israel could soon face pressure from the United States and its allies to end its neutral position concerning Russia and Ukraine. It is prudent that the new government formulate its position as soon as possible. At the same time, Israel must create new regional coalitions to prepare for a new world order and the upheavals it will bring, including in dealing with Iran. With regard to Turkey, Israel must make it clear that any progress in relations will not come at the expense of its relations with Greece, Cyprus, Egypt, and the United Arab Emirates. Israel should support a political solution to the maritime border dispute between Turkey and Greece, and not only within the framework of the Sea Convention rules.

The Russia-Ukraine war in the naval arena has an impact in two areas: the cessation of grain supply from Ukraine and Russia, and the naval warfare that led to the sinking of the "Moskva", which changed the nature of naval combat and how fleets operate. Our insight

is that the authorities in charge of the maritime domain, including the Israel Navy, must learn the lessons of the naval campaign in the war, internalize the changes in combat in the maritime domain, and adapt the structure of the naval force and its operating doctrine. Asymmetric and hybrid warfare was used in this war, as well as unilateral closure of international shipping lanes for the passage of military vessels (a matter that Israel has also been affected by more than once in the past), as well as damage to large vessels with large crews. We need to develop an appropriate response to threats that are quickly developing, such as attacks by UAVs on vessels, alongside rockets and missiles.

The government's handling of issues in the maritime domain: The committee of the director generals of government ministries recommended establishing a directorate for the economic development of Haifa Bay in the Prime Minister's Office. In July 2022, the Israeli National Center of Blue Economy was established in Haifa. The National Council for Civilian Research and Development determined five areas of national priority for the next five years. Maritime Policy & Strategy Research Center and the School of Marine Sciences at the University of Haifa presented to the committee three issues in the field of "the sea as a national resource" on behalf of the National Council for Civilian Research: Development of artificial islands, blue economy, and aquaculture. "The Sea as a National Resource" was chosen as one of the five priority areas. This important decision is backed by a government budget. The new government must promote these issues.

For five years, a 2017 proposal for the Maritime Zones Law has been on the Knesset's Economic Affairs Committee's table in preparation for a second and third call but has not yet been approved. Without this law, Israel's governance in its maritime domain is compromised. The new government must formulate a policy and strategy for Israel's maritime domain.

The development of Israel's gas resources and their protection: given the cessation of the flow of Russian gas to Europe and the search for alternatives, it is expected that Israel will export more gas to Europe through Egypt (for liquefaction). Israel, Jordan, the United Arab Emirates, and the United States signed an agreement to build a solar power plant in Jordan and a water desalination plant in Israel so that Jordan will supply Israel with electricity and Israel will supply water in return. Both parties will benefit from this deal. With the signing of the maritime agreement with Lebanon, the Ministry of Energy issued a tender for gas exploration in Israel's EEZ south of the maritime border line. Our conclusion is that alongside the search for alternative energy sources, the gas fields should continue to be developed. The funds of Israel's Wealth Fund should be directed to the training of scientific and technological personnel who will be able to deal with the challenges expected for Israel when it comes to the field of energy.

Security considerations for the rigs in Israel's gas fields led to the rigs being brought closer to Israel's shores, but the Navy purchased 6 "Saar" assault ships to protect distant rigs. It seems that there is a flaw in the planning of the location of the rigs. In addition, the explosion in the Nord Stream pipelines in the Baltic Sea indicates that we need to prepare for new and complex threats. It is also necessary to prepare for the protection of the underwater communication cables that connect Israel and Europe.

The investigation into the purchase of the submarines by the State Commission of Inquiry headed by former Supreme Court President Judge Asher Grunis is being conducted slowly, and with the new government, some fear for the fate of this commission. Our recommendation is that the current committee continues its work and submits its report as soon as possible since it is essential to Israel's defense establishment and to the Navy in terms of lessons for future procurement transactions.

Demarcation of the maritime border with Lebanon: in our opinion, the established maritime border meets Israel's security interests, as defined by the government, the NSC, the IDF, and the Navy. This is the first border agreement with an enemy country, although it is important to note that it is not a peace treaty. The agreement states that the line will be "a permanent and equitable resolution of [the parties'] maritime dispute" and adds that Israel's return will be determined later on and that the development of the disputed area will not begin before there is an agreement that includes this return. Our insight is that in the maritime domain, there is room for creativity that is not possible on land and in the air. The maritime domain will allow Israel to expand its infrastructure and cooperate with its neighbors. The agreement with Lebanon should start a process of thinking about the maritime domain and how to utilize it. There are two main goals at this stage: (1) to create a policy and strategy regarding the maritime domain, its borders, and plans for its utilization. Israel needs to regulate its thinking about the maritime domain for years ahead. It is necessary to determine the point on the coast from which the maritime border with Lebanon begins (this remains unclear in the agreement and could become a stumbling block in the future), and to establish a policy regarding the dispute with the Palestinians over the area across from the Gaza Strip. It is also necessary to think about the location of the gas rigs, with their protection in mind. (2) Understanding that the maritime domain is unique and enables cooperation that is not possible on land, even with an enemy state.

The dangers to freedom of navigation at chokepoints are real, as became clear this year when Turkey blocked the Bosphorus and the Dardanelles to the passage of warships in the context of the Russia-Ukraine war and in regard to the Houthis activity in the Bab el-Mandeb Strait. During the year, Iran also attacked several ships that had connections to Israel on the high seas. In the Straits of Tiran, which returned to the sovereignty of

Saudi Arabia, Israel's legal position in the context of freedom of navigation has worsened. Saudi Arabia has announced that the provisions of the peace treaty between Israel and Egypt regarding Tiran do not apply to it and the international observing force operating in the islands to secure the agreement is now operating as a foreign force in its sovereign territory. The Maritime Policy & Strategy Research Center estimated as early as 2017 that for Israel this situation means a return to the pre-Six-Day War reality. During the visit of US President Joe Biden to our region in July 2022, it was reported that the force will move to Sharm el-Sheikh and continue to operate through remote observation systems. It is not yet known whether the United States gave any guarantees to Israel regarding the freedom of navigation in the Straits and if so of what nature, but given the unstable relations between the United States and Saudi Arabia, it is prudent to examine these fragile agreements in the Middle East. Israel needs to think about enhancing its power in the Red Sea, the importance of which for Israel and in general is increasing.

In terms of ports, efforts should be made to optimize the activity of the ports for general cargo ships and bulk carriers. When experience is gained with private ports, the government will need to decide whether to continue the privatization process and privatize the Ashdod Port or leave it as a single port under government management.

The former government promoted a plan to improve Israel's position as a start-up country in the maritime domain and the Minister of Innovation, Science and Technology should adopt the plan and ensure that the budgeting for this plan continues. A multi-year work plan should be drawn up as well.

In terms of protection against cyberattacks in the maritime domain, our opinion is that recommendations in this field become mandatory. It is also necessary to increase supervision of rig owners and energy companies operating in Israel's sovereign waters and its EEZ and to build a multi-system and interagency plan that will enable dealing with possible cyberattacks that could end in large-scale damage to human life, the environment, the economy, and security.

In recent years, various countries are beginning to consider climate change not only on a civil level but also on a security level. In the West, it is considered an existential security threat. Israel, whose rate of warming is double the world average, is lagging when it comes to preparing for the coming crisis. The climate crisis should be perceived as a threat to Israel's national security. Israel needs to establish clear and realistic goals for reducing emissions and back up these goals with a budgeted action plan.

In the field of education and academic research, the University of Haifa leads the Mediterranean Sea Research Center of Israel (MERC) and in 2022 has received a budget

from the higher education Planning and Budgeting Council (PBC) to support the center for the next two years. The PBC has obliged the partner institutions to participate in the funding, but this is a very modest budget that does not allow for the implementation of the committee's recommendations, led professionally by Prof. Zvi Ben Avraham, to promote marine sciences research. The state must increase its investment in the field of marine sciences in higher education institutions. The Wealth Fund is a source that can be used to increase funding in this context.

The master's degree program "National Security and Maritime Strategy" is an affiliate program of the Division of International Relations at the School of Political Sciences at the University of Haifa. Five years after it began, it is considered a prestigious program. For the program to be able to train a reserve of researchers in the field, it should become independent and have a closer relationship with the School of Marine Sciences at the University of Haifa. Unfortunately, very few naval officers study in the program and expand their education in the maritime field. This affects the level of officers; some of whom advance to senior ranks.

Finally, ten policy recommendations appear in the evaluation summary:

1. Formulating a comprehensive maritime policy for Israel.
2. Formulating Israel's foreign policy for the Eastern Mediterranean and the Red Sea.
3. Improving efficiency of Israeli shipping and ports.
4. Israeli preparation and readiness for civilian emergencies at sea.
5. Developing and using energy resources at sea and protecting the environment.
6. Moving infrastructures from land to sea.
7. Developing Israel's human infrastructure to manage challenges in its maritime domain.
8. Promotion and regulation of maritime law and regulations.
9. Israel as a maritime start-up nation.
10. Preparing for the effects of climate change on Israel's maritime domain.