
Global Developments in the Maritime Domain

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Introduction

As in previous years, the situation evaluation in this report focuses on the Eastern Mediterranean and Red Sea, however the developments in this arena cannot be detached from recent global developments in general, and in the maritime domain in particular. This is due to the close links between the global-scale events and their impact on the arena close to Israel.

2021 saw several outstanding events which have had their influence on the maritime domain:

- The prolongation of the Coronavirus pandemic, including the emergence of new variants
- Recovery of global trade and, in some areas even its growth due to the crisis in the global airline industry
- The mobilization of combat fleets in the conduct of the maritime activity under the constraints of the Coronavirus pandemic
- The inauguration of the new Biden Administration, its focusing of the security effort toward China and its continued scaling down of its involvement in Middle Eastern affairs (including the withdrawal from Afghanistan)
- China's ascending stature as a military and economic superpower, posing a challenge to the United States
- The election of a new President in Iran (Ibrahim Raisi), who is considered a conservative and the tougher diplomatic struggle against the United States
- The geopolitical changes in the Middle East following the Abraham Accords signed between Israel and the United Arab Emirates, Bahrain, Morocco and Sudan and the efforts to broaden the accords to include Saudi Arabia and Oman
- The escalation of the Turkish-Greek-Cypriot dispute over the demarcation of Exclusive Economic Zones
- "Raising of the curtains" from the covert war between Israel and Iran in the maritime domain and its escalation
- The decline of Lebanon, one decade after the Arab Spring, into its current state as a failed state in the Middle East

- The critical condition of the Earth's climate, as reflected in the climate report issued by the United Nations' Intergovernmental Panel on Climate Change (IPCC), including its maritime aspects

The international system

The world is in the midst of a transition from a unipolar system to a multipolar system or, in fact, a post-hegemonic system – a development which causes experts in political science and international relations to take a closer look at the future of the international order. The current crisis of an international order is deep-rooted and has been developing for over a decade, despite the tendency of some political science experts to attribute it to the Trump administration. Some political science experts believe that the main factor impacting the global order, which prevents it from being managed, is the combination of international terrorism and civil war. Over 90% of all war-related deaths in the last five years have occurred in countries where a terrorist organization was active. Of these, the majority (70%) are concentrated in the Middle East. The high body count is not the only unfortunate consequence. This reality has also influenced the large-scale flow of refugees and has affected the tensions pervasive of the entire region.¹

Dramatic changes around the world prove that the commonly-accepted terms of left and right in political science are losing ground and are being replaced by a new kind of common ideology. Thus, for example, President Biden turned his back on his predecessors' neo-liberal legacy upon being elected, and placed his support behind state investment in stabilizing and developing the economy, in regulation and taxation of large companies. His presidency has been marked so far by efforts to forge bipartisan alliances spanning these three areas: 1. clean energy, 2. investment in the working class and the pursuit of social justice, and 3. investment in infrastructure. Britain's Prime Minister Boris Johnson, who was elected on a conservative platform, has also drifted to the left in all matters concerning public spending and tax cuts for the underprivileged among the lower working classes. Johnson was able to enlist the support of the "traditional right" thanks to his support for BREXIT and his tight immigration policy. He also got the support of environmental activists by making ambitious, specific commitments which are set to make Britain a world leader in achieving reduction of greenhouse gas emissions to zero by 2050.²

¹ Bruce Jones, Susana Malcorra, [It is now time to focus on multilateral order](#), *Brookings*, April 19, 2021.

² Yuli Tamir, [Populism in Retreat. Welcome to the Age of Disengagement](#), *Haaretz Weekend*, August 11, 2021 [Hebrew]

China's ascendance as a world power: China continues to pursue its ambitions to become a world power, to safeguard what it considers to be its territory, and also to consolidate its importance in regional matters by building a superpower-class military – a development that could undermine the stability and norms of international relations. China's military commitment includes a multi-year agenda of comprehensive military reform initiatives.³ Interwoven with the extraordinary scale of its military buildup, is the question what use will be made of this force and in particular in view of the increased Chinese aggressiveness in all matters related to its territorial claims in the South China Sea and Taiwan. A new survey from 2020 found that 57% of global investors predict China is going to replace the United States as the largest superpower by 2030.⁴ However despite all the talk about China, the Russian Federation still poses a formidable challenge to the new American administration. Therefore, despite the need to deal with domestic problems and with the rivalry with China, the new American administration will have to deal with the Russian challenge as one of its top priorities. Russia's agenda for 2021 includes several pressing issues including the strategic stability dilemma, the threats to the rules-based international order and unresolved regional conflicts.⁵ President Putin even made it clear that Moscow was interested in maintaining a strategic nuclear advantage over the USA, including by activating several versions of strategic and sub-strategic hypersonic systems, intercontinental ballistic missiles of a new production series, laser-based combat systems etc.

In March 2021, the new American administration hastily issued the Interim National Security Strategic Guidance, signed by President Biden. This is the first time an American administration issues interim guidelines. Previous administrations avoided issuing formal guidelines expressing strategic intent and making them public before they have been approved by congress. The administration announced it would publish the final document in 2021 or early 2022.⁶ In the foreword to the guidelines document, President Biden notes how important he considers this document, since it "convey[s] my vision for how America will engage with the world". The President also demands that the rest of the administration's agencies "align their actions with

³ [Annual Threat Assessment of the US Intelligence Community](#), Office of the director of the national intelligence, April 9, 2021, p. 7.

⁴ Saloway, Scott, "China will replace the US as the world's biggest superpower by 2030: UBS survey". *Yahoo Finance (UBS)*, January 24, 2020.

⁵ Alex Muraviev, Nina Markovic, [Russia-US relations in 2021: Key things to watch out for](#), *The Interpreter*. January 22, 2021.

⁶ Congressional Research Service, ["The Interim National Security Strategic Guidance"](#), In Focus, March 29, 2021.

this guidance, even as we begin work on a National Security Strategy".⁷ The main priorities highlighted in the document were specified as follows:

- Protecting the security of the American people by meeting the challenges from great powers, regional adversaries and transnational threats.
- Expanding economic prosperity and opportunity, by redefining America's economic interests in terms of working families' livelihoods and achieving economic recovery grounded in equitable and inclusive growth.
- "Reinvigorating our democracy, living up to our ideals and values for all Americans, and standing up for our values abroad, including by uniting the world's democracies to combat threats to free societies."⁸

The review of the strategic situation states that: "Today, more than ever, America's fate is inextricably linked to events beyond our shores. We confront a global pandemic, a crushing economic downturn, a crisis of racial justice, and a deepening climate emergency. We face a world of rising nationalism, receding democracy, growing rivalry with China, Russia, and other authoritarian states, and a technological revolution that is reshaping every aspect of our lives. Ours is a time of unprecedented challenges, but also unmatched opportunity".⁹ The document notes the need to strengthen American society and states that "Our strength abroad requires us to build back better at home",¹⁰ and that "This agenda will strengthen our enduring advantages, and allow us to prevail in strategic competition with China or any other nation".¹¹ With this, the Biden administration effectively singles out China as the United States' primary adversary, although he also declares the preference to rebuild America domestically, economically and socially.

President Biden's administration began carrying out damage control measures with its partners in the European Union and NATO as to what the Trump administration had left behind, and according to its estimate, it will take considerable efforts to regain trust and restore the relations with the United States' partners. In a survey held among the European Union countries in April 2021, the following findings emerged, reflecting the positioning of the European Union in the international system: public confidence in the European Union institutions has diminished due to their handling of the COVID-19 pandemic and the way they purchased vaccinations. The responders

⁷ INTERIM NATIONAL SECURITY STRATEGIC GUIDANCE, The White House, March 2021.

⁸ Ibid, p. 9.

⁹ Ibid, p. 6.

¹⁰ Ibid, p. 17.

¹¹ Ibid, p. 19.

believe the European Union and its institutions are still relevant, since the citizenry still believes in the need for greater cooperation – in particular to strengthen the European Union as a global player. They are skeptic as to the rebuilding of America's leadership and they feel there cannot be a return to the Cold War-era West. They recognize the central role the European Union plays in their future, but their sense of common vulnerability will not be sufficient to advance the European project. They believe the European Union will in future have to prove its ability to "demonstrate its capacity to deliver".¹² On the other hand, the Europeans currently regard the world as consisting of strategic partnerships, with no automatic alliances. Indeed, in view of the mounting strategic unease throughout Europe as to Russian conduct and intensions in the Baltic region and in the Black Sea region, the Russian-Ukrainian tensions since 2014 and the allegations of Russian intervention in European affairs through a variety of means – have turned the Russian Federation once more into the main strategic and military threat both to NATO and to the European Union, and these might facilitate building the trust and restoration of the relations with the Biden administration. It is important to note that the agreement between the United States, the United Kingdom and Australia regarding the assistance the former two would be extending to Australia in the construction of eight nuclear-powered submarines in exchange for strengthening Australian assistance to the United States against China and the resulting cancellation of Australia's project with France, has tainted the relations between France and the United States to the extent that the French have recalled their ambassador from Washington.

The Russian Federation will continue employing various tactics intended to undermine the American influence, to develop international norms and partnerships, to sow divisions among the western countries, to weaken the western alliances and to demonstrate Russia's ability to shape global events as a leading player in a multipolar international order. In the Middle East and North Africa, Moscow is exploiting its involvement in Syria and Libya to increase its strength, to undermine American leadership, to present itself as an indispensable mediator and to gain access to military facilities and economic entitlements and opportunities.¹³ It is to be expected that the Russian posture and military conduct – including modernization of its military, use of military force and inclusion of information warfare – will all be employed to undermine the United States' interests and those of its allies. Despite the stagnation in its security spending, in fact despite even a slight decline, Russia is

¹² Susi Dennison, Jana Puglierin, *Crisis of confidence: How Europeans see their place in the world*, European Council on Foreign Relations, Policy Brief, June 9, 2021.

¹³ Annual Threat Assessment of the US Intelligence Community, 9.

going to emphasize new weaponry, which poses increased threats to the USA and the regional players while at the same time continuing its agreements to supply weapons to various countries, holding joint exercises and implementing lessons learned from its involvement in Syria and Ukraine. Russia will remain a prime cyber threat the more it upgrades and uses the espionage network it employs, and will be using this domain to expand its influence and attack its adversaries' infrastructure. Russia will continue to mark critical infrastructure as targets for attack, including underwater cables and industrial control systems, in the United States and its allies and partners, since damaging such infrastructures improves – and in certain cases can prove – its ability to hit infrastructures during a crisis.¹⁴ In addition, Russia will continue demonstrating its ability to strike satellites operating in space, as demonstrated in an experiment conducted in November 2021, in which the Russian army launched surface-to-air missiles to destroy a Russian satellite.

The Quadrilateral Security Dialogue (Quad), which includes the United States, Australia, India and Japan, and which was set up to cooperate following the 2004 tsunami in the Indian Ocean, and which is not a formal alliance, strengthened its ties in 2021. This was due to an increase in the level of joint concern of the leaders of these four countries with China's increasing assertiveness in the region, a situation which caused them to outline a constructive agenda of cooperation. One must bear in mind that the Indo-Pacific region spans two oceans and several continents. This fact makes it important to the United States' maritime interests. American maritime trade worth 1.9 trillion USD in 2019, and in 2021 approximately 42% of the global exports and 38% of the imports passed through this region.¹⁵ In November 2020, these countries' navies held a joint marine exercise – the first in over a decade, and in March 2021 US President Joe Biden convened a virtual meeting of the four heads of state, in which they decided to set up working groups on COVID-19 vaccinations, climate change, technological innovation and supply-chain resilience.¹⁶ To strengthen the alliance and to harness Australia's commitment to take an active role in the maritime battle against China, the United States and the United Kingdom agreed to assist Australia in building the next generation of Australian submarines, and to

¹⁴ Ibid, 10.

¹⁵ [Trade in Goods Outlook in the Asia and The Pacific 2020/2021](#), UN Economic and Social Commission for Asia and the Pacific (ESCAP), p. 1.

¹⁶ Sheila A. Smith, [The Quad in the Indo-Pacific: What to Know](#), Council on Foreign Relations – CFR, May 27, 2021.

equip them with nuclear engines.¹⁷ The initiative, which has been named AUKUS, was announced jointly by President Joe Biden and Prime Ministers Boris Johnson and Scott Morrison. They portrayed it as a critical step toward renewal of the old alliance whose goal is to serve as a counterbalance to the Chinese attempts at extending its influence over the western Pacific Ocean and South China Sea. This decision incensed France and China – France for losing a contract to build submarines for the Australian navy worth billions of dollars, and China because this alliance alters the existing balance of power in the region.

As part of the target the United States set for itself to leave Afghanistan by the end of August 2021, the exit process itself and the transfer of control to the local administration amounted to a tremendous strategic and public relations failure. Afghanistan was overrun by Taliban forces even before the evacuation could be completed. Even though one US administration after another, since the Obama presidency, had declared their desire to leave Afghanistan, this war, which began in 2001, the longest in the United States' history, ended in the collapse of the Afghan government that had been propped up by the Americans and in total humiliation of the United States. The United States is now perceived around the world as a superpower rapidly losing its status as such, and the defeat in Afghanistan will have tremendous repercussions around the world in all matters concerning its political and military commitments, its willingness to intervene militarily and its reliability and commitment as an ally.¹⁸ Thus for example, the reliability of the American commitment toward Taiwan against a Chinese invasion will no doubt be put to the test in the near future. This is evident from the threats coming from China, from China attempts to project its power off the Taiwanese coast and Taiwan's own willingness to defend itself.¹⁹

A decade after the advent of the Arab Spring, the Middle East remains an area characterized by escalating conflicts, active insurgencies in several countries, the rivalry between Iran and its proxies and other countries, persistent terrorism and protest movements which will rise from time to time, leading to violent acts of protest. The local volatility will continue so long as popular discontent and socio-economic grievances continue to exacerbate, particularly while the region is coping

¹⁷ Kevin Liptak and Maegan Vazquez, [Biden and UK to help Australia acquire nuclear-powered submarines in new pushback on China](#), *CNN*, September 16, 2021.

¹⁸ Martin Jacques, [Defeat in Afghanistan a complete humiliation for the US](#), *Global Times*, August 15, 2021.

¹⁹ Tong Zhao, [U.S. commitment to Taiwan under scrutiny after Afghanistan's fall](#), *Politico*, August 19, 2021.

with the economic crisis caused by the COVID-19 pandemic and its leaders are in the midst of a struggle due to the public expectations of political and economic reform. As a result, several countries are expected to join the dubious club of "failed states" – a situation which might trigger their economic collapse. Conflicts on the verge of boiling over could potentially lead to conflagration especially if countries like Russia, Turkey and others intervene – a development which could increase the probability of an escalation and of erroneous decision-making.

Iran considers itself committed to the struggle against the United States and its regional allies, due to its assumption that the latter are occupied with diminishing Iran's geopolitical influence in the Middle East and strive for regime change in Tehran. Iran's actions reflect its concepts regarding the hostility of the Americans, Israel and the Gulf states. Iran will continue projecting its power through its security forces (including the Iranian Revolutionary Guards) and proxies, in an effort to extract diplomatic and economic concessions from the international community. As for the United States' interests in particular, Iran's willingness to carry out attacks apparently depends on its assessment of the American readiness to retaliate, on its ability to carry out attacks without triggering a direct confrontation, and on the likelihood that by doing so they might be jeopardizing the possibility of easing the American sanctions on Iran. The leaders in the new regime of President Raisi will be hardening their political line, but will apparently continue their brinkmanship in all matters concerning the Joint Comprehensive Plan of Action (JCPOA, the nuclear deal). Iran persists in its commitment to pressure the United States, while at the same time avoiding involvement in a full-scale confrontation.²⁰ Iran is determined to retain its influence in Syria as part of its route toward broadening its regional influence, as it is doing in Lebanon and with Hezbollah, and will be threatening Israel. Iran will take advantage of the lingering economic crisis in Lebanon and will, through civilian assistance (including supplying oil) through Hezbollah to prevent the Lebanese government from asking the West for assistance.²¹ Iran will continue its ongoing support of Yemen, since Tehran's support for the Houthis – including the supply of missiles and unmanned systems – constitutes a threat to American partners and interests, in particular through attacks on Saudi Arabia. Iran will continue posing a threat to Israel, both directly through its missile and indirectly through its support for Hezbollah and other terrorist organizations. It will try to reap the rewards of its support for the rebel forces in Afghanistan, through conducting a pragmatic policy

²⁰ Annual Threat Assessment of the US Intelligence Community, p. 12.

²¹ "Lebanon's Hezbollah says Iranian fuel oil to arrive this week", *Al Jazeera*, September 13, 2021.

of cooperation with the Taliban, in order to safeguard its interests, despite the deep ideological and religious differences between them.

The American strategy in the Eastern Mediterranean remains unclear. The Biden administration has not developed a consistent policy toward Turkey, it is missing clear definition of its diplomatic goals in Libya and there are no policy goals regarding Syria's reconstruction. Even though the short-term chances of an improvement in American-Turkish relations seem slim, both countries might be able to find common ground as the Biden presidency proceeds. They have worked together to promote an intra-Afghan dialog. Turkey also frames its increasing influence in Central Asia, which is intended to dilute the Russian and Chinese hegemony in that region, as being favorable for American interests. Even if the relations between Biden and Erdogan are frostier than they were between Trump and Erdogan, and even if there are occasional flare-ups between the USA and Turkey, they are both NATO allies and they share important strategic interests which could lead to creative collaboration in the region.²² Russia, on the other hand, continues to maintain its assertive policy in the Eastern Mediterranean as part of its wider strategy to undermine NATO and EU cohesion, thereby hindering NATO's ability to take action, to plan and form policy. Russia's interests are geared toward increasing dependency on natural gas and on the cash influx to Russia, to cultivate the governing elite and toward thwarting NATO's ability to expand, and – to a lesser extent – the European Union's ability to expand. Whereas Moscow's efforts in the region, after its intervention in Syria in 2015, are often portrayed as a means for strengthening Russia's formidable brute force, one may assume that the Russian leadership regards its actions there as part of its broader rivalry with the West, stretching from the Atlantic Ocean to the Black Sea and from North Africa to the Arctic.²³

The maritime dispute between Turkey and Greece and Cyprus, which was discussed at length in the previous report (2020/21), has undergone a certain shift since the end of 2020: Turkey's aggressive policy has been tempered with diplomacy, which is intended to weaken the support of the European Union, Egypt and Israel for the Greek position. President Erdogan announced in December 2020 that he is interested in "turning a new page" in his relations with the European Union and in January 2021 he announced that talks with Greece on the energy exploration would be

²² Samuel Ramani, *The US in the Eastern Mediterranean Region*, *RUSI*, June 1, 2021.

²³ Paul Stronski, *A Difficult Balancing Act: Russia's Role in the Eastern Mediterranean*, U.S. European Command, Stuttgart Germany, U.S. EUCOM, the Department of Defense, Carnegie Endowment for International Peace, June 2021.

"will herald a new era".²⁴ Furthermore, official Turkish sources noted that relations between Turkey and Egypt would improve in the near future (relations which were severed with the removal of Morsi from power in Egypt). In December 2020 the attitude toward Israel also underwent a slight shift, with Turkey announcing that Israel's gas resources could be traded more efficiently in other markets with Turkey's mediation. In response, Israel's then-Minister of Energy Yuval Steinitz announced, in March 2021, that Israel would be pleased to see Turkey in the East Mediterranean Gas Forum.²⁵ Erdogan's surprise conversation with Israel's new president Isaac Herzog, on July 12 2021, in which the two presidents stressed that "Israel's and Turkey's relations are of great importance to the security and stability of the Middle East and that there is considerable potential for cooperation between the two countries in many areas, in particular energy, tourism and technology" – is also consistent with this trend.²⁶ The phone conversation between Prime Minister Naftali Bennett and President Erdogan during the diplomatic campaign to release the Israeli couple who were arrested in Turkey for espionage is another example of this trend. In the face of long-term geo-strategic worries and short-term public opinion considerations, it is likely that Ankara will continue its two-pronged approach to Turkey's disputes in the Mediterranean – balancing arm-twisting and diplomacy. Openness to the West does not necessarily mean a softening of Turkey's policy toward Greece or toward the Republic of Cyprus. Erdogan will want to keep his options open, to watch which path leads toward better political and strategic accomplishments, including regarding Cyprus. A Greek-Turkish conflict in the Eastern Mediterranean is unlikely although it cannot be ruled out altogether. The fear of such an escalation, economic hardships and fear of harming their relations respectively with other regional powers have for the time being motivated Athens and Ankara to engage in talks on settling their maritime differences. A united trans-Atlantic front in the eastern Mediterranean might persuade both Greece and Turkey to retain their seat around the negotiating table.²⁷

Finally, the east Mediterranean region requires the upholding of a new political order. In the absence of a robust, coherent and coordinated policy from the European

²⁴ "Turkey hopes to turn new page with U.S. and EU in 2021, Erdogan says", *Reuters*, 23 December 2020; "Erdogan hopes new Turkey-Greece talks will herald new era", *Reuters*, 12 January 2021.

²⁵ Turkey-Greece: From Maritime Brinkmanship to Dialogue, International Crisis Group, Report No 263, May 31, 2021, p. 15.

²⁶ Itamar Eichner, "Erdogan Calls President Herzog: 'Great Potential for Cooperation with Israel'", *Ynet*, July 13, 2021 [Hebrew].

²⁷ *Turkey-Greece: From Maritime Brinkmanship to Dialogue*, p. 36.

Union and NATO, relations within the Eastern Mediterranean might become ever more volatile. At the same time, political resolutions for the maritime boundary between Greece and Turkey, the Cyprus issue and the conflict in Libya, which should be based on the rule of law and on the existing political situation, have the potential at present to favorably affect the entire Mediterranean region, and to reset the Turkey-EU relations. They may also affect the future of the cooperation between the European Union and the Mediterranean and North African (MENA) countries.

The Red Sea Region, Arabian Sea and the Persian Gulf

The east and west coasts of the Red Sea have, in recent years, become a shared political and security arena in which the world powers, as well as the countries of the region, have significant interests, especially in concerning the free trade passing through the Red Sea and Gulf of Aden. Its annual value is estimated at approximately \$700 billion. The effects and consequences of the six-day Suez Canal blockage in March 2021 by the *Ever Given* container ship exposed the great strategic importance of the Red Sea as a transit route for oil and global trade.²⁸ From a geopolitical standpoint, there are multiple state interests involved in this region, and which underpin the close link between its two shores: the Arabian peninsula and the Horn of Africa. The increase in the number of new military ports and installations along the coastal regions of Sudan, Eritrea, Djibouti and Somalia highlights the critical relevance of the East African countries to the Gulf states and also to other foreign powers involved in the region, such as Russia, Turkey or China. At the same time, state players in the Horn of Africa are leveraging their strategic position to attract investment, and are enabling the world powers to strengthen their presence in this region.

This area, as well as the Gulf of Aden and the Persian Gulf have in the past year been at the center of international tensions. Tensions between Iran and the Gulf states has always underpinned the regional instability. However, following the United States' withdrawal in 2018 from the JCPOA nuclear agreement with Iran under the Trump administration, the covert wars between Israel and Iran and between the United States and Iran, which had until then taken place on land and in the air, have spread also to the waters of the Persian Gulf, the Gulf of Oman and the southern Red Sea. Besides these main rivalries, this battle must be viewed also as part of the struggle between the bloc of Shiite states, led by Iran, and the Sunni bloc in the Middle East,

²⁸ Suez Canal blockage: 4 of the biggest trade chokepoints, *Deutsche Welle*, March 27, 2021.

and the states belonging to the Gulf Cooperation Council – GCC.²⁹ An expansive article in the New York Times about the secret maritime war between Israel and Iran, which is intended to force more severe restrictions on Tehran, warned that the war "risks turning hot with a single mistake". The paper notes that since 2019, Israel has been attacking ships carrying Iranian oil through the eastern Mediterranean and the Red Sea, thereby opening up a new maritime front.³⁰ The most recent incident occurred at the end of July 2021 east of Oman, when the *Mercer Street* tanker came under attack. The tanker is operated by an Israeli-owned company; the attack was carried out using drones which were launched against it by a force of the Iranian Revolutionary Guards and killed one British and one Romanian citizen, both members of the tanker crew – a fact that ratcheted up the conflict by a notch.³¹

The Red Sea itself is rife with regional and international geopolitical barriers, and this is particularly acute at its choke points. The Straits of Hormuz have been and are still subject to Iran's proximity and threat. The war in Yemen and Iran's support for the Houthi rebels has subjected the Red Sea, especially its southern part, to geostrategic and geopolitical threats similar to those in the Persian Gulf.

The western shores of the Red Sea and the Horn of Africa have also become the focus of geopolitical changes: the ambition, on the part of the United Arab Emirates and Saudi Arabia on the one hand, and of Turkey and Qatar on the other, to achieve control over the Horn of Africa, has destabilized the region and added a dimension of insecurity in a region already synonymous with ungovernability. The rivalry between Egypt, Sudan and Ethiopia over the Nile waters has remained unresolved and presents potential for future disputes among these countries. Severe armed conflicts are continuing in Somalia, South Sudan, Sudan and Yemen, involving states from both sides of the Red Sea. This rivalry between the Middle Eastern players is the elevation of the strategic rivalry between the United States and China and Russia to a top priority in national security.

The Coronavirus pandemic and its impact on the international system

The Coronavirus outbreak in 2019 has created a sense of vulnerability and helplessness around the world, a fact which has altered everyday life with a speed and intensity

²⁹ A multilateral framework of littoral states along the Red Sea and Gulf of Aden, established by Saudi Arabia in 2018 in an effort to collaborate on security issues and improve stability in the Red Sea region.

³⁰ Israel's Shadow War with Iran Moves Out to Sea, *The New York Times*, August 3, 2021.

³¹ Tanker attack: UK and US blame Iran for deadly ship attack, *BBC News*, August 2, 2021.

that has not left any aspect of our lives unaffected. The impacts of the pandemic are far-reaching. They extend far beyond global health and reach into the economic, political and security spheres. The expectation is that COVID-19 will remain a threat to populations worldwide until the vaccinations and treatments which will be proven efficacious will achieve wide distribution throughout all segments of the populations worldwide. The economic and political implications of the pandemic will continue to crop up for many years to come.

The year 2021 has been the year in which the theoretical debates over Chinese ascendancy, the possibility of a Cold War between the United States and China, the inefficiency of the existing multilateral order, the denial of economic globalization forces, the splitting up of reasonable trade and technology regimes into a large-scale power conflagration – all these have become real operational challenges the world order and individual countries have been compelled to cope with in real time. Some of these trends were evident even before the pandemic hit the world but the pandemic has served as an accelerant, and they are persisting, albeit in different ways. It would be fair to say that the pandemic really did change the world around us quite substantially. The pandemic has affected international relations and has caused diplomatic tensions. It has also led to a UN Security Council resolution calling for a global ceasefire. It has raised the demand to rethink the existing approaches in international relations, with greater emphasis on issues such as health diplomacy,³² crisis politics,³³ and frontier politics. The diplomatic relations were impacted due to tensions around trade and the transport of medications, diagnostic tests and hospital equipment for COVID-19. Leaders of certain countries accused other countries of failing to contain the disease effectively, which resulted in uncontrolled spreading of the virus. Several countries, such as China and Russia, are offering medical equipment and vaccinations as a tool for improving their geopolitical status. Developing countries in Latin America and Africa are unable to procure sufficient materials for Coronavirus testing due in part to the fact that the United States and European countries are expending their resources to procure those same materials.

Now that two years have passed since the outbreak of the pandemic, mankind is more acutely aware of the suddenness and intensity with which unforeseen changes can occur in the world with no advance warning. The pandemic was a powerful reminder of the inadequacy of existing systems to provide alarms and advance

³² Fazal, Tanisha (2020). "Health Diplomacy in Pandemical Times". *International Organization*. 74: E78–E97

³³ Lipsy, Phillip (2020). "COVID-19 and the Politics of Crisis". *International Organization*. 74: E98–E127

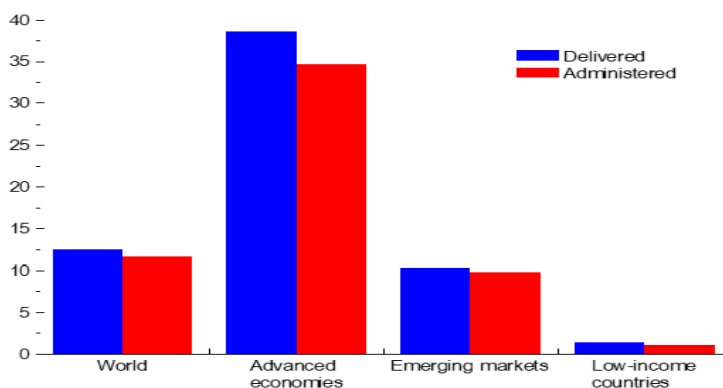
warning in similar situations and also of the lack of readiness to deal with similar crises in the future.

The pandemic exposed just how dysfunctional the international system really is. The UN Security Council provided the most glaring example of this. In the face of one of the greatest challenges mankind has ever faced, it was only on July 1 2021 that agreement was reached on Resolution 2532, which called for a 90-day "humanitarian pause" in armed conflicts around the world, with the exception of conflicts with specific terrorist groups. This was supposed to be an important resolution but in practice, it had negligible impact. There was only one solitary case where such an ongoing conflict took the resolution seriously and took steps to pause hostilities – the case of the Colombia National Liberation Army's conflict with the Colombian army. The United Nations declared that it recognizes that the COVID-19 pandemic is more than just a health crisis; it is an economic crisis, a humanitarian crisis, a security crisis and a human rights crisis. It has accentuated the severe fragility and inequality within and among countries, and that in order to emerge from this crisis, a holistic approach on the part of society, government and the entire world will be required – an approach driven by compassion and solidarity. In June 2021, the United Nations Secretary General launched his memorandum on a comprehensive response to the COVID-19 pandemic intended to save lives, protect societies and better recover. The memorandum noted that "Seventy-five years after the last world war, the world has found itself yet again in a global battle. This time, all of humanity is on the same side against coronavirus disease, or COVID-19".³⁴ The response is based on three principles: 1) a massive, coordinated, comprehensive healthcare response, directed by the World Health Organization (WHO), 2) a concerted effort to attend to the socio-economic, humanitarian and human rights aspects of the pandemic, focusing on saving lives, guaranteeing accessibility of vital services, a functioning food supply chain and safeguarding human rights, 3) a recovery process to emerge from the crisis, including the opportunity this process provides for dealing with the climate crisis, the inequality, exclusion, gaps in the social defense systems and other injustices exposed during the crisis.³⁵ This plan does not provide a solution for the tensions which have already developed around the geopolitical issue of the manufacture of the vaccines and their distribution, the trade and transport of medicines, diagnostic examination kits and hospital supplies for fighting the Coronavirus and the prioritization of vaccinating populations in countries with strong economies over

³⁴ United Nations Comprehensive Response to COVID-19: Saving Lives, Protecting Societies, Recovering Better, Executive Summary, June 2021, p.1.

³⁵ Annual Threat Assessment of the US Intelligence Community, p. 2.

third world countries (figure 1). In this context, voices among UN member states calling for a change in the United Nations and Security Council statutes have become ever more vociferous – for example the President of the General Assembly, Volkan Bozkir – however it does not seem that they will be receiving any backing, especially not from the permanent members of the Security Council.³⁶



Sources: Airfinity; and IMF staff calculations.
 Note: Latest data available are for July 6, 2021. Bars show the ratio of vaccine courses needed for full vaccination (two doses generally, but one dose for Johnson & Johnson and CanSino) either delivered or administered to population by WEO economy group.

Figure 1: Percentages of vaccinations in different groups of countries

The economic impact of the Coronavirus pandemic

It is difficult to estimate accurately the extent of the damage caused to the global economy by the Coronavirus, however there is a broad consensus among economists that it is going to have a severe negative effect (Figure 2). Early estimates predicted that if the virus goes global, most large economies would lose at least 2.9 percent of their GDP in 2020. This forecast has already been revised to a product loss of 4.5 percent (meaning relative to the global GDP which was \$87.55 trillion in 2019 – a drop of almost \$3.94 trillion).

The economic downturn due to the Coronavirus pandemic, along with conflicts and extreme weather conditions, have raised the level of food insecurity worldwide to its highest point in over a decade, a factor which increases the risk of instability. The number of people suffering from high levels of acute food insecurity has doubled

³⁶ Security Council reforms must reflect 21st century realities, says UN Assembly President, Peace and Security, *UN News*, January 21, 2021.

from 135 million people in 2019 to approximately 270 million in 2020, and this number is expected to increase to 330 million by the end of 2021.³⁷

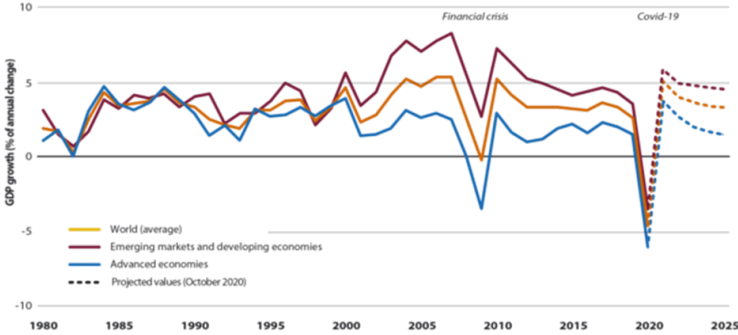


Figure 2: GDP fluctuations, 1980–2020

The economic damage caused by the COVID-19 pandemic is driven mostly by a drop in demand, meaning there are less consumers willing to purchase the goods and services on offer in the global economy. This dynamic is clearly seen in the industries that have been the worst-hit, such as travel and tourism.

As of August 2021, global economic growth is expected to be 5.8%, a sharp uptick from the December 2020 economic forecast (which foresaw 4.2% growth). This improvement has been made possible thanks to the distribution of the vaccinations in many of the developed economies. Another reason is the sizable extra budget allocated for this purpose in the developed economies.³⁸ The economic forecasts have dissipated among the countries since the April 2021 World Economic Outlook (WEO). The vaccination approach emerged as the main fault line along which global recovery divided into two blocs: those that can expect continued normalization of the business activity over the rest of the year (almost all the developed economies) and those that will still be grappling with recurring infections and increased mortality from COVID-19 (figure 3). Recovery, nevertheless, is not guaranteed even in those countries where current infection rates are very low, so long as the virus increases its impact on the non-vaccinated countries and creates new variants, more resistant to the vaccinations.³⁹

³⁷ Annual Threat Assessment of the US Intelligence Community, p. 17
³⁸ OECD Outlook, *Global prospects are improving but performance diverges strongly across countries*, Organisation for Economic Co-operation and Development – OECD, May 2021.
³⁹ *Fault Lines Widen in the Global Recovery*, World Economic Outlook Update, International Monetary Fund, July 2021.

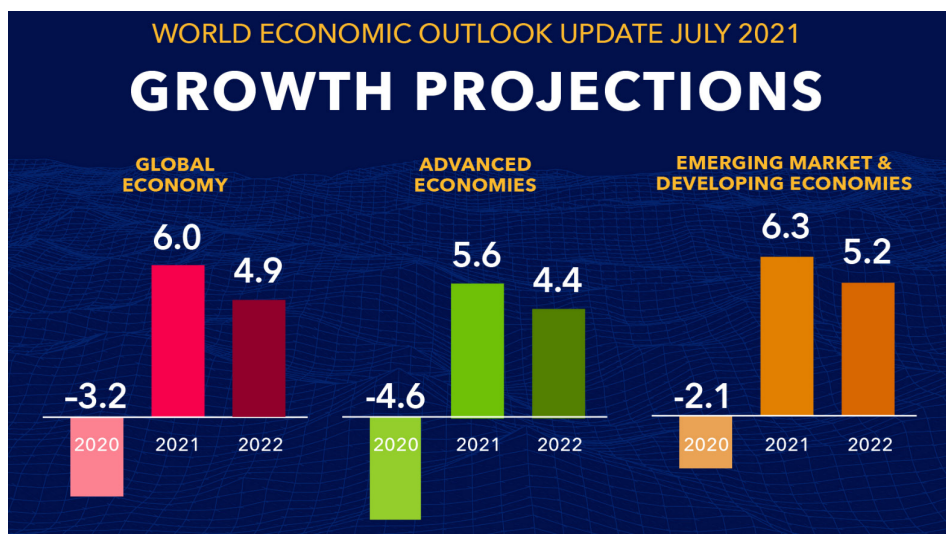


Figure 3: Global Recovery Projection

Global Trade

Global trade in goods grew by 2.1% in the first quarter of 2021, which is equivalent to an annual growth rate of 8.7%. The year-to-year growth in the same period grew to 4.3%. Larger growth is expected in the second quarter due to the sharp drop in the same quarter last year. The current rate of recovery generally matches the WTO's most up-to-date forecast from March 31, 2021, which foresaw an 8.0% growth in the trading of goods worldwide in 2021 and 4.0% in 2022. Unequal access to COVID-19 vaccinations continues to be the greatest threat to the economic concept since the failure to protect all people regardless of income leaves whole populations vulnerable to more waves of infection. Even though global trade is showing signs of withdrawal from the slump caused by COVID-19, economists warn that any recovery this year might be interrupted by the effects of a continuing or proliferating pandemic, which will result in pressure on many governments to focus on the internal economic stability of their countries.⁴⁰

The trade in goods in dollar terms of the USD also showed robust recovery during the first quarter – a 14% increase from 2020, due to the combination of a rise in quantities and higher prices. The sharp decline and the subsequent recovery since early 2020 reflect the trends in trade in manufactured goods, whereas in other

⁴⁰ Annual Threat Assessment of the US Intelligence Community, p. 17

product categories the contributions were smaller. The prices of basic commodities decreased during the first wave of the pandemic, however since then they have been rising steadily, adding to the rise in the fuels, mining products, and agricultural commodity sectors. In May 2021, prices had risen by 194% (compared to 2020) in fuels, 54% for metals, 45% for food and 26% for agricultural raw materials, according to the main commodity price data of the International Monetary Fund.⁴¹

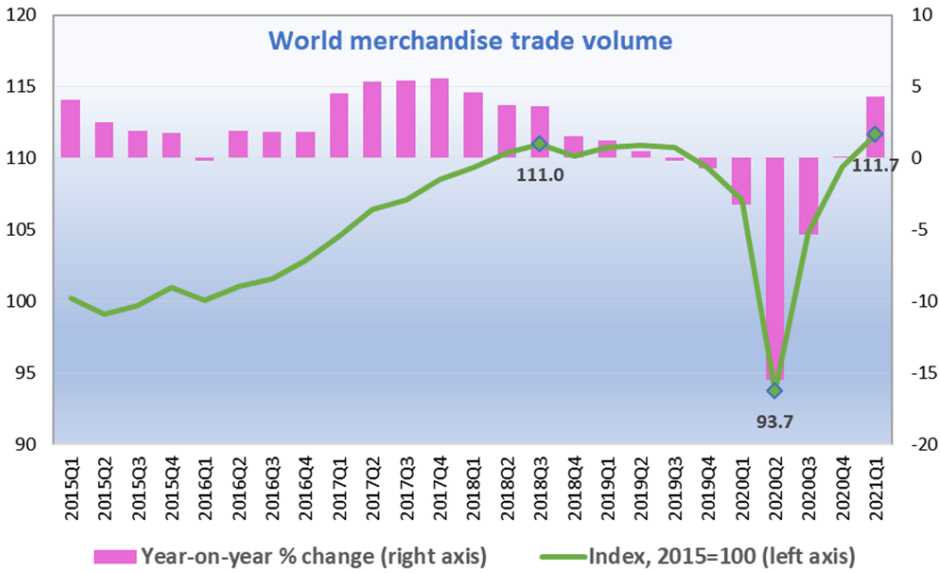


Figure 4: Global trade by volume, quarterly 2015–2021, Source: WTO and UNCTAD.

As mentioned earlier, the six-day blockage of the Suez Canal in March 2021 by the giant container ship the *Ever Given*, exposed the vulnerability of the important choke points (of which the Suez Canal is one) to malfunctions, accidents, terrorism and other scenarios whose impact on the world supply chain and their damage potential to the global trade and economy can be quite formidable. Several articles on this issue have even coined a new term – weaponisation of choke-points.⁴²

⁴¹ Merchandise trade posts strong gains in first quarter despite growing regional disparities, World Trade Organization (WTO), Economic Research and Analysis, June 24, 2021.

⁴² Phillip Medunic, A glimpse of the future: The *Ever Given* and the weaponisation of choke-points, European Council on Foreign Relations, April 23, 2021.

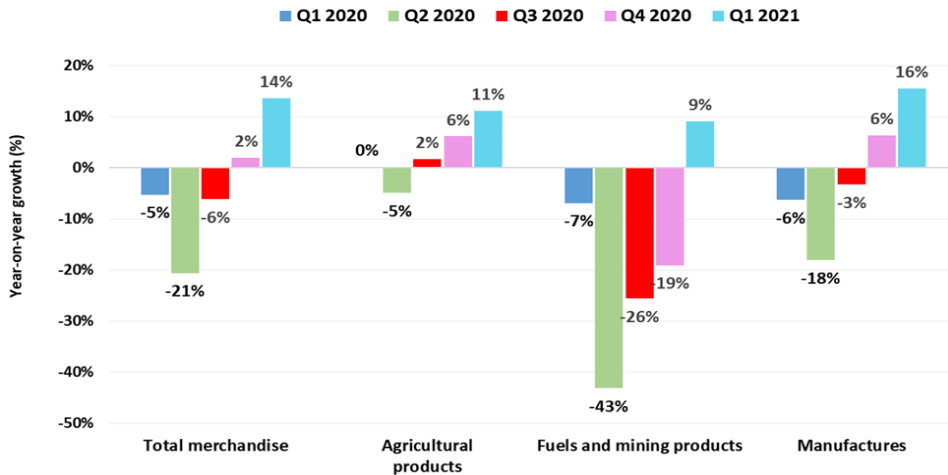


Figure 5: Merchandise trade values Source: WTO estimates.

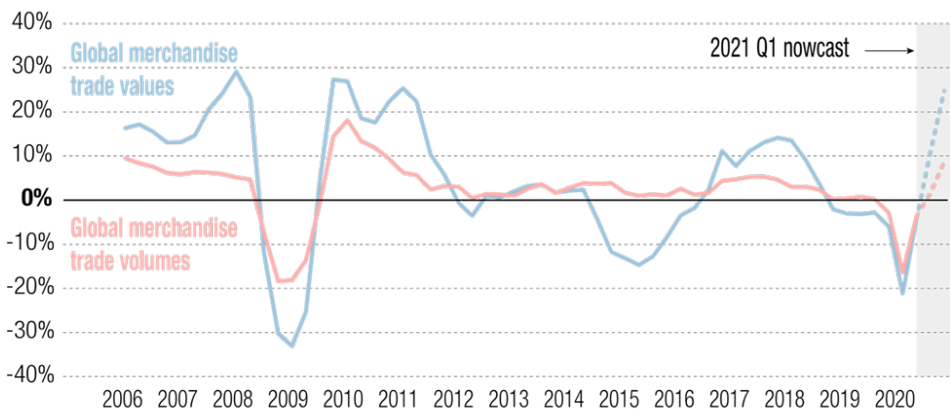


Figure 6: Recovery of global trade in 2021

China's trade surplus

China's trade surplus stood at \$56.58 billion in July 2021, compared with a surplus of \$60.5 billion the same month in 2020. This is the largest surplus since January against a backdrop of rising goods prices and despite reduced world demand due to the rapid spread of a new variant of the Coronavirus and extreme weather. The trade surplus with the United States increased in the first half of 2021 to \$200.32 billion compared with \$164.92 billion in the second half of 2020.⁴³

⁴³ China Balance of Trade, Trading Economics [Accessed August 23, 2021].

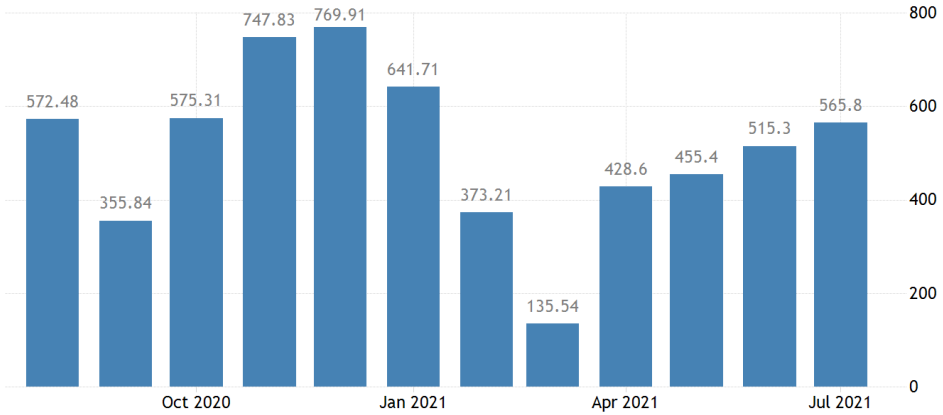
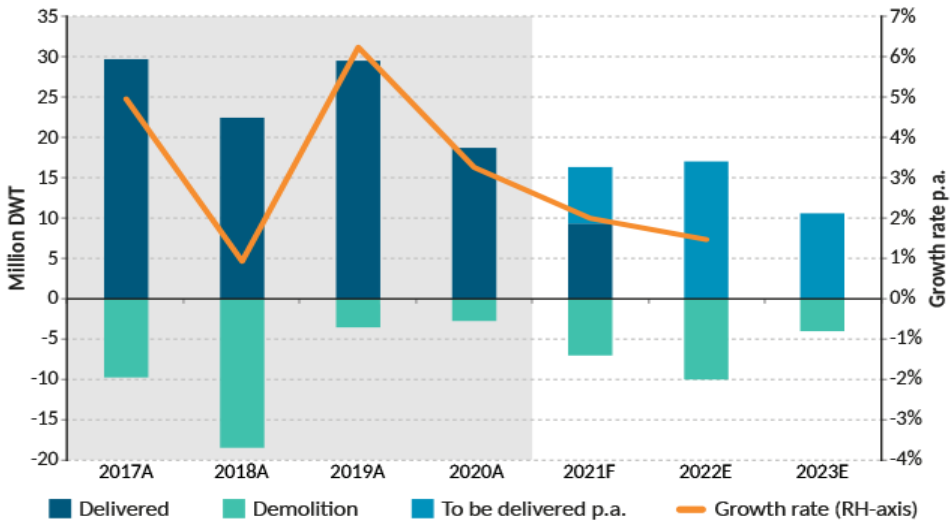


Figure 7: China's trade balance 2020–2021



Source: BIMCO, Clarksons

A is actual. F is forecast. E is estimate which will change if new orders are placed. The supply growth for 2021-2023 contains existing orders only and is estimated under the assumptions that the scheduled deliveries fall short by 10% due to various reasons and 25% of the remaining vessels on order are delayed/postponed.

Figure 8: Increase in crude oil tanker fleet 2017–2023

Demand for oil and the state of the tanker fleet: despite the unfavorable market conditions, crude oil tankers have proven to be a commodity worth building in the shipyards. In total, 44 new crude oil tankers were ordered by the middle of 2021. More than half of these (27) are of the Very Large Crude Carriers (VLCC) class with an average capacity of 303,000 draft weight tons (DWT), which are scheduled for delivery in the fourth quarter of 2022 and in 2023. Product tankers, on the other

hand, have proven themselves to a lesser extent and only about 36 were ordered in 2021, 28 of which are Medium Range Tankers.⁴⁴

Climate change and its environmental impact

The prevailing assessment worldwide today is that the impacts of climate change and the continued environmental degradation will cause a combination of direct and indirect threats, including threats to the economy, political instability, increased population displacement and new sources for geopolitical rivalries, which will be unfolding in the coming decade and beyond. The scientists warn that the rising air, land and sea temperature will cause more frequent, more varied extreme weather conditions including heat waves, droughts, and floods which will pose a direct threat to the interests of countries such as the United States, if the means for coping with these situations are not adopted. The degradation of the quality and the depletion of land, water and biodiversity resources will almost certainly pose a threat to infrastructures, health, water, food and security – in particular in many developing countries lacking the ability to adjust quickly to changes. This will increase the potential of conflict in the competition for scarce natural resources.

The new report published on August 9, 2021 by the team of climate scientists working on behalf of the United Nations, which was prepared by 234 scientists from 66 countries, is based on thousands of scientific studies and research done by scientists all over the world. It presented important information regarding the severity of the climate crisis engulfing mankind. The main finding in the report is that "human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years".⁴⁵ The importance of this report is in its eroding the ability to remain in denial of the severity of the situation – a position still held by institutions and organizations and also by many people around the world. The report has established broad understanding of the means necessary for preventing the crisis and the preparations that need to be made to cope with the impacts, however we are still having difficulties understanding rapidly enough how to change and what needs to be done. In order to make a real difference, already in the coming decade there will be a need for significant measures of transitioning to a low-carbon economy for energy production, farming practices which reduce methane gas emissions while substantially reducing meat consumption, and transport based on

⁴⁴ Peter Sand, *Tanker Shipping: Temporary Shocks Provide Little Support for Desperate Tanker Market*, *BIMCO*, June 2, 2021.

⁴⁵ The Physical Science Basis, Summary for Policymakers, *Climate Change 2021 The Intergovernmental Panel on Climate Change, IPCC AR6 WGI*, p. 8.

fossil fuel substitutes. At the same time, it will be necessary to develop cities better capable of withstanding extreme weather events, to protect beaches and preserve large ecosystems which will improve our resistance to the crisis and will absorb part of the greenhouse gases.

As for the maritime domain, the report mentions that between 2011–2020, the average ice coverage in the Arctic Ocean reached its lowest level since 1850 (with a high degree of certainty) at the end of the summer, and the ice coverage in the Arctic Ocean was the smallest in the past 1000 years (with a medium degree of certainty). This phenomenon is global, and practically all glaciers worldwide are receding since the 1950s more or less at the same rate.

The climatic arming has caused an average rise in sea levels following glacial melting and the warming of the ocean waters. The rise in seawater temperature explained 50% of the sea level rise in 1971–2018, while ice loss from glaciers contributed 22%, icesheets 20% and changes in land water storage – 8%. These two factors have been the main contributors to the global sea level rise in 2006–2018.⁴⁶

Cyber space

Cyber attacks aim at stealing data, influence populations and sabotage industry, including critical, physical, and digital infrastructures, and will continue to pose a threat to countries and global corporations around the world. Despite the improved capabilities of states and non-state players in cyberspace, the main concern in the western world is from Russia, China, Iran and North Korea. The growing use of cyberspace by states as a tool for national power, including the growing use by armies around the world, increases the likelihood of more damaging, more harmful cyber activity. As countries attempt to carry out ever-more aggressive cyber activities, the greater is the likelihood that civilian populations will be impacted and that other countries seeking similar outcomes will be emboldened. Authoritarian, non-liberal regimes around the world will increasingly exploit digital tools to monitor their citizens, to curtail freedom of expression, to increase censorship and to manipulate information to control their populations. Regimes will be carrying out more and more cyber hacks affecting citizens beyond their borders as part of broader efforts to find foreign populations and influence them. Over the past decade, hackers working in the service of their state have hacked into software networks and IT services and have assisted in the conduct of operations – espionage, sabotage, and prepositioning for a state of war.

⁴⁶ Ibid, p. 9.

Analysts have found that in the coming years, the global cost of cyber-attacks might total approximately \$600 billion per annum (approximately 0.8% of the world GDP).⁴⁷ If cybercrime worldwide was to be measured in terms of state economics, in 2021 they are expected to cause damage totaling six trillion USD – a monetary figure that places them as the third largest economy in the world after the United States and China. Cybersecurity Ventures expects that the global costs of cybercrime will increase by 15 percent in the next five years and will reach \$10.5 trillion per year by 2025, as opposed to three trillion USD in 2015.

In 2017, the Maritime Safety Committee of the International Maritime Organization (IMO) adopted rules (Resolution MSC.428 (98)) for maritime cyber risk management in safety management systems. The resolution encourages executives in shipping companies to ensure that cyber risks are dealt with properly in the existing safety management systems (as defined in the ISM code) no later than the first annual verification of the company's compliance document following January 1, 2021.⁴⁸ In October 2020 the organization's website itself was taken down for a few days due to a cyber-attack. The attack occurred several days after the giant shipping company CMA CGM belonging to Shipping Giant was hit by a ransomware attack.⁴⁹

In this age of Coronavirus pandemic, the greatest cyber threat lies specifically in the shipping and ports sector: the pandemic has accelerated the digitization, which was already underway around the world, due to people being instructed to work from home over the Internet. The shipping and ports sector was thus compelled to rely more and more on Internet communication. This meant that the ships themselves were required to remain online continually, increasing their vulnerability to cyber-attack. This situation became even more acute since a large proportion of the systems and computers on the ships are based on old, complicated operating systems, a fact that is detrimental to their immunity to cyber-attacks.

Immigration and Refugees

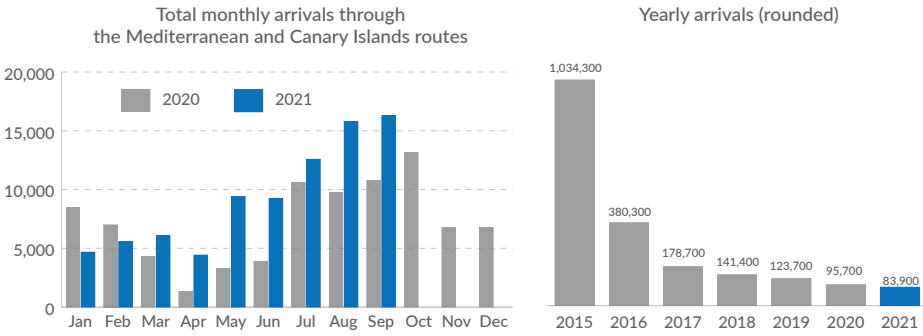
Immigration from the Middle East and North Africa to Europe has continued its decline since its peak in 2015 (1,032,048) and in August 2021 stood at 62,705

⁴⁷ Steve Morgan, *Cybercrime to Cost The World \$10.5 Trillion Annually By 2025*, *Cybercrime Magazine*, November 13, 2020.

⁴⁸ IMO 2021 Cyber Security Compliance for Maritime Information Center for the new IMO 2021 regulation, Resolution MSC.428(98).

⁴⁹ Mike Schuler, *Shipping Giant CMA CGM Hit by Ransomware Cyber Attack*, *gcaptain*, September 28, 2020.

migrants, 58,364 of whom arrived by sea while 1,183 lost their lives or went missing (figure 9). Most of the migrants arrived in Italy (36,830), Spain (19,236), Greece (5,124), Cyprus (1,190) and Malta (325) (figure 10).



¹ Dead and missing figures refer to the Mediterranean and Canary Islands routes. Information is compiled from a variety of sources, the quality and reliability of which can vary. While every effort has been made to ensure that all statistical information is verified, figures on some arrivals, as well as dead and missing at sea, represent an estimate. Triangulation of information and sources is performed on a continuous basis. Therefore, amendments in figures may occur, including retroactively.
² Includes sea arrivals in Canary Islands (Spain) via the Atlantic Ocean.
³ Includes sea and land arrivals in Spain via the Western Mediterranean route.
⁴ Includes sea arrivals in Italy and Malta.
⁵ Includes sea and land arrivals in Greece and sea arrivals in Cyprus.

Figure 9: Immigration to Europe, 2015–2021⁵⁰

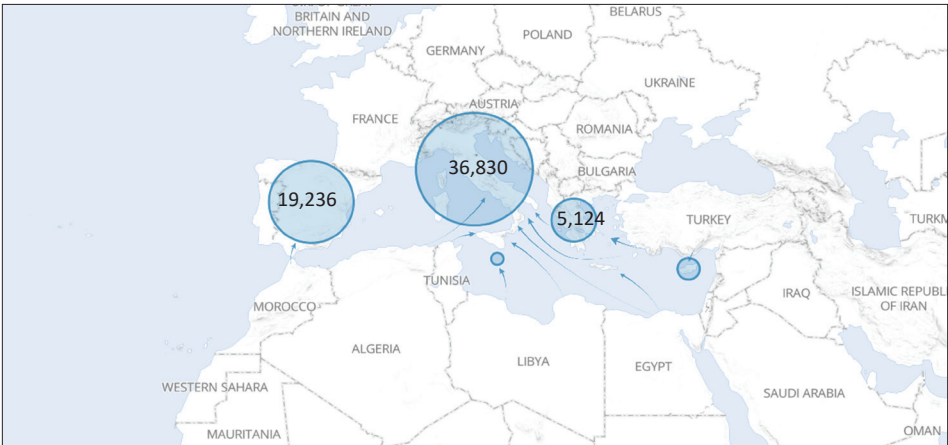


Figure 10: Immigration to select European countries

The restrictions on movement and the curfew imposed due to the COVID-19 pandemic impeded the migrant traffic. However, new conflicts in the Middle Eastern and North African countries (Lebanon and Libya for example) are likely to trigger

⁵⁰ Europe Situations: Data and Trends, Arrivals and Displaced Populations, Regional Bureau for Europe, September 2021.

new waves of migration. It is expected that maritime migration routes will continue to be the main routes for the migrants en route to Europe. At the same time, the situation in the Middle East remains volatile in all matters concerning refugees: in 2020 there were still approximately 5.6 million Syrian refugees due to the Syrian civil war registered in Syria's neighboring countries. This situation will cause the crisis to linger and will remain the world's greatest displacement crisis. A severe economic crisis, which has been exacerbated by the Coronavirus pandemic, will continue to affect the humanitarian condition of the displaced persons as well. Following the stabilization of the Assad regime, some of the displaced persons are expected to return to Syria, particularly to areas where relative stability has been restored,

Monthly sea arrivals

January 2018 to July 2021

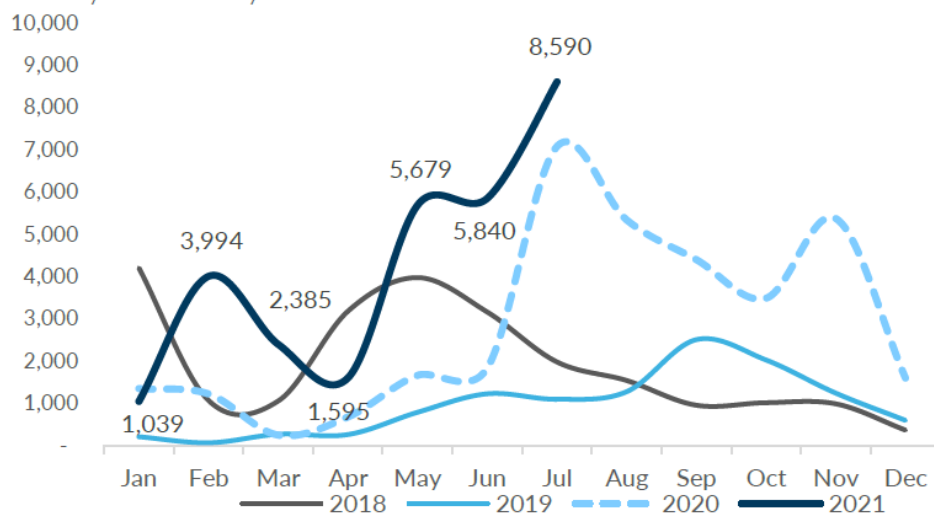


Figure 11 Distribution of arrivals in Italy by month, 2018–2021 (source: UNHCR July 2021)

subject to restrictions on borders, movement and travel due to the Coronavirus pandemic.⁵¹ Since mid-2020, close to 4 million refugees and asylum seekers have been staying in Turkey under temporary protection. Of these, 3.6 million are Syrians. The Coronavirus pandemic has exacerbated the already-difficult situation the refugees and of their Turkish hosts. From mid-2020, approximately 121 thousand asylum seekers have been in Greece.⁵²

⁵¹ UNHCR Global Appeal and Update 2021, *Regional Summaries, The Middle East and North Africa, Major Situations and Operations in the Middle East and North Africa in 2021*, p. 93.

⁵² *Ibid*, p. 90

In the first half of 2021, at least 1,146 people perished in their attempts to migrate to Europe, a substantial increase compared with the same period in 2020 (513) and 2019 (674). The Mediterranean Sea is the main arena in which 896 people drowned in their attempts to reach Europe during this time of year (January to June 2021) – a 130% increase compared with the same period in 2020 (table 1). The largest number of fatalities was recorded in the central Mediterranean migration route (741), compared with (149) that lost their lives in the route traversing the western Mediterranean. Six people died in the eastern Mediterranean en route from Turkey to Greece. In the same period, at least 250 people died in an attempt to reach the Canary Islands from West Africa via the Atlantic Ocean.⁵³ Thus, despite the fact that the percentage of migrants via the sea is significantly lower than the middle of the past decade, there is a marked increase in the number of migrants losing their lives at sea attempting to reach Europe.

Table 1: Number of fatalities in the migration route in the Mediterranean Sea, 2014–2020

Year	Reached Europe*	Dead and missing
2020	95,031	1,401
2019	123,663	1,335
2018	141,472	2,270
2017	185,139	3,139
2016	373,652	5,096
2015	1,032,408	3,771
2014	225,455	3,538

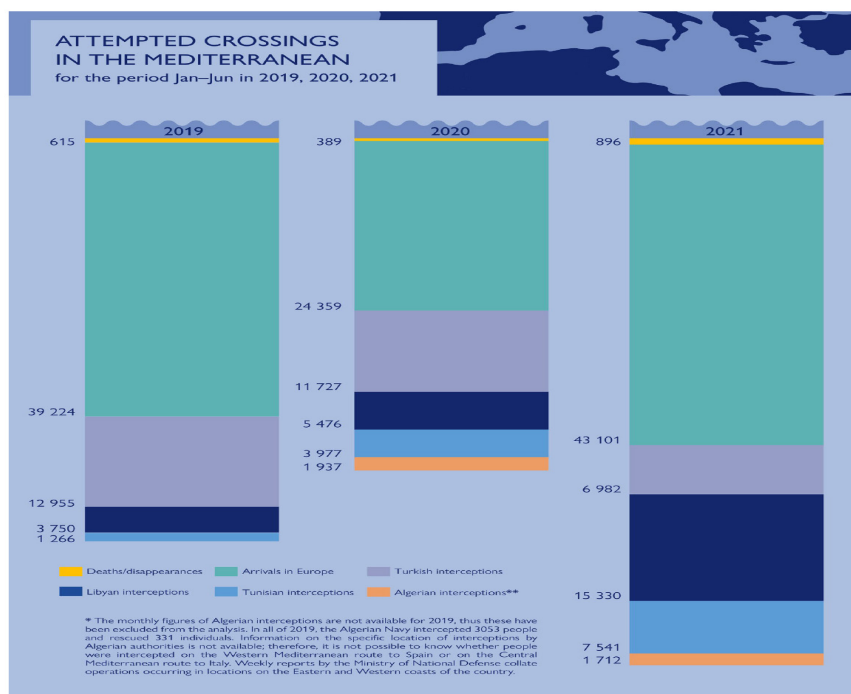
* Include sea arrivals to Italy, Cyprus, and Malta, and both sea and land arrivals to Greece and Spain (including the Canary Islands). Data are as of 31 December 2020 for all countries except Cyprus for which last available data are as of 31 August 2020.

The American withdrawal from Afghanistan in the summer of 2021 triggered yet another wave of refugees, most of whom are traveling overland toward Iran and Turkey. For the time being, Turkey is making it difficult for them to enter its territory.⁵⁴ Turkey has been hosting one of the world's largest refugee populations since 2016, when it signed an agreement with the European Union to assist in solving the refugee crisis – in exchange for money transferred to it from the European Union. According to estimates, almost five million refugees, mostly from Syria, are living in the country. They received a mixed welcome, under the best of circumstances, since xenophobia directed at anyone of Arab origin is widespread in Turkey. There

⁵³ Andrea Garcia Borja and Merna Abdelazim, [Migrant deaths on maritime routes to Europe in 2021](#), International Organization for Migration (IOM) and Global Migration Data Analysis Centre (GMDAC), p.4.

⁵⁴ [Turkey reinforces Iran border to block Afghan refugees](#), *The Guardian*, August 23, 2021.

is a fear among the Turkish population that following the United States' withdrawal from Afghanistan, the flow of refugees arriving in its territory will increase. President Erdogan seems to be using the refugees as a bargaining chip for his domestic and foreign policy: on the one hand he tells the West that Turkey is not prepared to be "Europe's refugee warehouse" while on the other hand claiming that Turkey needs to alter the agreement signed with the European Union in order to continue receiving refugees in its territory.⁵⁵



Source: Missing Migrants Project, Spanish Ministry of the Interior, Italian Ministry of Interior, Hellenic Coast Guard, Turkish Coast Guard, Libyan Coast Guard, FTDES, Algerian Ministry of Interior.

Figure 12 Attempted Mediterranean crossings to Europe, January–June 2019/20/21,
Source: Italy's ministry of interior and the Italian coastal guard

Terrorism and maritime terrorism

In 2021 the number of terror attacks worldwide declined, partly due to travel restrictions imposed to reduce the spread of the Coronavirus pandemic. However, in Southeast Asia, the Sulu-Celebes Sea connecting Borneo and Sulawesi with

⁵⁵ Sertan Sanderston, "Turkey turns against migrants as fears of Afghan refugee crisis grow". *Info Migrants*, September 7, 2021.

Mindanao via a lengthy archipelago, has become a hotbed of criminality, terrorism and piracy.⁵⁶

ISIS and al Qaeda have remained the most formidable Sunni terror threats to the West, and in terms of their intentions, they would like to carry out terrorist attacks inside the United States and its allies, or against American military installations outside the United States. The Lebanese organization Hezbollah might launch attacks against Israel, and possibly against American targets in case the situation in Lebanon should deteriorate. While the American forces were leaving Afghanistan, two suicide attacks were launched on August 26 near the Hamid Karzai International Airport in Kabul. This was one of the worst attacks against American and western targets in the country in the last decade. The Islamic State in Khorasan Province, (ISKP) organization, a branch of ISIS in Afghanistan, claimed responsibility for the combined attack that killed at least 60 people including 13 American servicemen and injured another 140. Following the United States' and NATO countries departure from Afghanistan, the Taliban militia that wrested control over the country might become a critical link in the international jihadist movement, stoking hostility against non-Sunni Muslims and against modernity as well. Afghanistan under the Taliban might once again become a supplier of terrorists to carry out terrorist attacks worldwide, terrorists that will be in possession of technological knowledge and will even (whether or not this will be known to the authorities) be providing them with a safe haven.

On January 5, 2021, the leader of the Al Shabaab, Abu Obeida, called upon his followers to intensify their attacks against American and Israeli targets as well as against French targets due to its "crimes" against the Prophet Mohammed's honor. The organization marked the anniversary of the attack it carried out in the Simba refugee camp in Kenya, and stressed that this was revenge for American crimes against Muslims in Somalia. The organization's leader added that this was also part of a series of attacks under the banner of "Jerusalem will not be Judaized", following the Trump administration's decision to move its embassy in Israel to Jerusalem.⁵⁷ One must remember that since 2019 the organization has been launching attacks against African Union bases, Somali government installations, officials and the security forces, the United States and European Union forces and against targets in neighboring Kenya and Ethiopia. The Red Sea is one of the world's most important trade routes – a conduit for the global trade between Europe and Asia, and it can

⁵⁶ Aminuddin Albek, *Understanding and Combating Piracy in the Sulu Sea*, *Royal Australian Navy, Seapower Soundings*, Issue 21, 2021.

⁵⁷ Al-Shabaab terror group calls to attack Israeli, American, French targets, *Cleveland Jewish News*, January 5, 2021.

also serve as a target for the activities of terrorist organizations that know that if this route is disrupted, or should it come under threat, the impact on the global economy will be extremely significant. European countries call for protection of the trade routes in the Red Sea and Gulf of Aden are vital interests of the global superpowers, as well as of all of the countries in the region.⁵⁸

Extraordinary maritime terrorist attacks were carried out in 2021 by forces of the Iranian Revolutionary Guards as part of the covert maritime battle that has been raging in the past two years between Israel and Iran in the Red Sea and in the Mediterranean Sea. 2021 marked a turning point in terms of the Iranian response. They chose to use the naval forces of the Revolutionary Guards and targeted commercial ships with only indirect links with Israel (not under Israel's flag and not registered in Israel). Thus, the naval branch of the Iranian Revolutionary Guards launched several maritime terrorist attacks in 2021: On February 25 2021, forces of the Iranian Revolutionary Guards attacked the *Helios Ray*, a large vehicle ferry for transporting cars, owned by Rami Unger, which was sailing under a Bahamas flag en route to Dammam in Saudi Arabia. Limpid mines were attached to the ship above the waterline and none of the crew were hurt. Damage to the ship was minor. On March 24, the container ship *Lori*, owned by Panamax, and which is managed by the Israeli company XT, came under attack off the Omani coast. The vessel was on its way from Tanzania to India when it was detained for three hours before being allowed to continue on its journey. The attack caused no severe damage, there were no injuries, and the ship continued to its destination in India. On April 13, the vehicle ferry *Hyperion Ray*, belonging to Israeli businessman Rami Unger was attacked by Iranian Revolutionary Guards forces east of Fujairah in the United Arab Emirates. The attack was apparently retaliation for the attack against the ship *Saviz*. On the night of July 29/30, 2021, the Japanese oil tanker *Mercer Street*, owned by Zodiac Maritime – managed by the Israeli Eyal Ofer was attacked by Iranian drones near the coast of Oman. This attack was exceptionally severe since two crew members were killed (of British and Romanian nationality). The tanker was being escorted by the American aircraft carrier *USS Ronald Reagan*. An investigative crew boarded the attacked ship to document and investigate the incident. This extraordinary attack triggered exceptionally severe diplomatic response by the United States and Britain. A team from the US Central Command, which investigated the attack, concluded that the severe damage to the tanker was the result of an attack by a third drone

⁵⁸ Shaul Shay, *Djibouti the next target of Al-Shabaab*, International Institute for Counter Terrorism, IDC Herzliya, April 2021, p. 9.

on July 30. This drone was armed with military-grade explosives, which caused the death of the two crew members.⁵⁹



Figure 13: Tankers attacked off the shore of Oman, BBC

Piracy and Maritime Robbery

The most recent report on global piracy, issued by IMB, lists 68 incidents of piracy and armed robbery against vessels – the lowest number since 1994 – compared with 98 incidents in the same period in 2020. In the first six months of 2021, IMB's Piracy Reporting Centre (PRC) reported 61 cases in which pirates succeeded in boarding vessels, four attempted attacks, two cases of fire being opened against vessels and one vessel hijack.

Despite the overall decline in the number of reported incidents, violence against crews has continued where 50 crew members were kidnapped, three were threatened and taken hostage, two were attacked, one was injured and another killed in the first six months of 2021 (figure 14). Despite the drop in the number of reported incidents, the IMB PRC continues to warn against complacency since in 91% of all reported cases, the pirates succeeded in boarding the vessels.⁶⁰

⁵⁹ U.S. Central Command Statement on the Investigation into the Attack on the Motor Tanker Mercer Street, Press Released, Tampa Florida, August 6, 2021.

⁶⁰ Piracy and armed robbery incidents at lowest level in 27 years, but risks remain to seafarers, IMB cautions, ICC Commercial Crime Services, July 12, 2021

In the website's map (IMB Piracy & Armed Robbery Map 2021), two cases in the Horn of Africa and Gulf of Oman are marked as attempts by pirates to wrest control of merchant vessels: the first took place on January 24, 2021 when a merchant vessel sailing east of Djibouti noticed a boat with armed men on board equipped with boarding ladders. The ship's crew fired several warning shots, which caused the boat to back off. The second incident occurred near the Straits of Hormuz on March 22, 2021, when the officer on watch on a bulk carrier noticed a boat approaching at high speed. At 40 meters he noticed three armed masked men. The ship contacted the nearby European contingent, which sent a warship to assist. After about twenty minutes, the speed boat backed away. The warship continued to escort the ship until it was out of danger.⁶¹

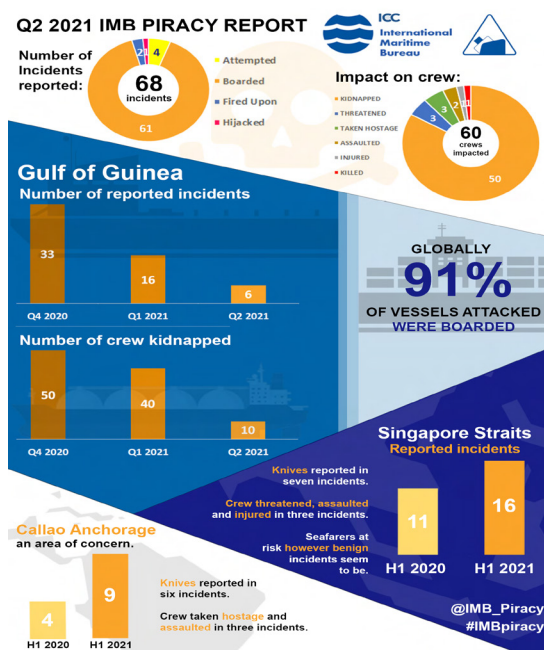


Figure 14: Reported piracy incidents and their distribution

⁶¹ IMB Piracy & Armed Robbery Map 2021 [Accessed August 23, 2021].

Main Navies – Trends and changes

We shall turn to review the changes and trends in the world's largest navies compared with the previous report from 2020. We shall focus on the operational arenas, the operation strategy and the Building Navy Force Structure plan of each one of them. In the review of each navy, a special section will be dedicated to its activity in the eastern Mediterranean and the Red Sea – a region which constitutes the main interest of the Maritime Policy & Strategy Research Center.

United States Navy

The United States Navy is undoubtedly the most powerful navy in the world, although in recent years it faces a challenge from the Chinese Navy. Before reviewing the trends and changes of the US Navy, it is worth analyzing the political and defense goals dictated by the new US administration.

At the time of writing this report, the Defense Security Strategy document, signed by the new Defense Secretary – retired General Lloyd Austin – has not yet been released. It should be remembered that only in July 2020 did Dr. Mark Esper, the Secretary of Defense under the Trump administration, issue the ten highlights he perceives in the activity of the Department of Defense.⁶²

Austin assumed office in January 2021 and he is the first African-American to hold this position. Austin is a retired general from the United States Army. He has considerable experience with the American army, having filled various roles in Afghanistan and in Iraq, where he participated in the American invasion from Kuwait to Baghdad. In 2010 he assumed the role of Commander of all of the American forces in that country. Three years later he was appointed commander of the American Central Command (CENTCOM) – a role that gave him control over the operations in both Afghanistan and Iraq. Austin retired from the military in 2016.

In his hearing before the senate, Austin promised to publish a new national defense strategy document in 2022, which would update the 2018 version written by the then-defense secretary Jim Mattis. This document was a milestone in the American national defense strategy because it mentioned the United States' defense focus on China, which is becoming a rival power.⁶³

⁶² US Department of Defense, *Implementing the National Defense Strategy: A Year of Successes*, July 2020.

⁶³ Paul McLeary, *Austin Pledges New National Defense Strategy; Commits To Strong Civilian Leadership*, *Breaking Defense*, January 19, 2021.

Upon assuming his position, Austin specified the three highlights and priorities he intended to dictate: national defense, cultivation of the human resources, and successful teamwork. In the national defense, Austin specified defeating the Coronavirus pandemic, prioritization of China as the main challenge the United States must deal with, coping with existing threats (Russia, Iran and North Korea), to revitalize and transform the Pentagon into a more modern organization and to deal with climate change. In cultivating human resources, Austin specified the need to expand the talented manpower in the Pentagon, to build the Department's resiliency and preparedness, to ensure responsible security leadership. Successful team work included strengthening the collaboration with the United States' allies and friends, working together with the American nation, and building unity within DOD.⁶⁴

In July 2021, in a memo issued by the Secretary of Defense, he adds **four main principles for the American space policy**, all urgently needed for improving safety and stability in space: "operating with due regard to others, limiting long-lasting space debris, avoiding harmful interference, and improving the stability of the domain by improving communications (notably, not just with allies)". These four principles are urgently needed to improve the security and stability in space.⁶⁵

The Department of Defense's budget request for 2022 stands at \$705,939 billion – a \$9,978 billion increase compared with the 2021 budget.⁶⁶ In its approval of the budget, the House Appropriations Committee stressed the following issues:

- Safeguarding the United States' national security, safeguarding the United States' advanced manufacturing base, support for jobs and economic growth, investment in research and development
- Closure of the detention facility in Guantanamo, which cancels the budgetary gimmick of overseas covert operations and which restricts the United States' involvement in Yemen
- Advancement of democracy by resisting China and investing efforts in defending the Indo-Pacific region as a free, open region
- Getting Afghan citizens that faithfully served the United States out of Afghanistan safely – citizens that might find themselves in grave danger following the withdrawal of American forces

⁶⁴ Terri Moon Cronk, *Austin Outlines His Top Three Priorities on Defense, People, Teamwork, US Department of Defense*, March 5, 2021.

⁶⁵ Benjamin Silverstein, *What Is the Pentagon's New Guidance on U.S. Space Policy?* Carnegie Endowment for International Peace, July 28, 2021.

⁶⁶ *Appropriations Committee Releases Fiscal Year 2022 Defense Funding Bill*, House Committee of Appropriation, June 29, 2021.

- Support for working families by requiring contractors to pay a minimum wage of \$15
- Coping with the climate crisis through historic investments in clean energy and adapting climate to protect facilities, readiness and global security
- Dealing with gender violence through allocation of resources for dealing with sexual assault in the military, confronting extremist ideologies including white supremacy.

Some of the issues highlighted mark a new agenda for a democratic administration, although in all matters concerning policy vis-à-vis China – the ultimate goal remains the same.

Budget of the Department of the US Navy for 2022

The Budget of the US Navy for 2022 as submitted to Congress stands at \$211.7 billion – a \$3.8 billion (1.8%) increase over the 2021 budget. This budget is divided into various issues as follows: operations and maintenance are 34% of the total budget, procurement and manpower are 27% (each) of the total budget, research and development 11%, and infrastructure – 1% (figure 15). The 2022 procurement budget is \$2.7 billion smaller than the previous year's budget.⁶⁷ According to the Department of the Navy, the budget supports President Biden's interim national defense strategy, is in line with the naval strategy of the joint services and it reflects a common effort to maintain the United States' edge at sea. The Department of the Navy notes that "ultimately, the strength of our Navy is measured by our ability to control the seas and to project power". For this the navy considers as important its ability of forward deployment. The budget provides combat power for the deployment of 296 vessels in the 2022 budget. It is worth noting that according to the original Building Navy Force Structure plan, the navy's order of battle was supposed to be of 310 vessels in order to achieve an order of battle of 355 vessels in 2034 (which was specified in the naval plan for 2020) in order to deter and be decisive in reference scenarios of adversaries such as Russia and China (see figure 16 and table 2). The previous Secretary of the Navy Kenneth J. Braithwaite even attempted, late in the Trump administration, to distribute a strategy document detailing the direction that the Heads of Service (Navy, Marines and Coast Guard) had formed together in order for the service to fulfill its missions.⁶⁸ In response to the strategy that was published by

⁶⁷ The Department of the Navy's (DoN) Fiscal Year 2022 (FY22) President's Budget submission, America's Navy, Office of Information, March 28, 2021.

⁶⁸ An integrated U.S. Navy, U.S. Marine Corps, and U.S. Coast Guard team, "Advantage at Sea, Prevailing with Integrated All-Domain Naval Power", December 16, 2020.

the Heads of Service, eight consecutive articles appeared in the journal *Maritime Strategy on the Rocks*, which examined various aspects and implications of the naval strategy for the three services that had recently been published.⁶⁹

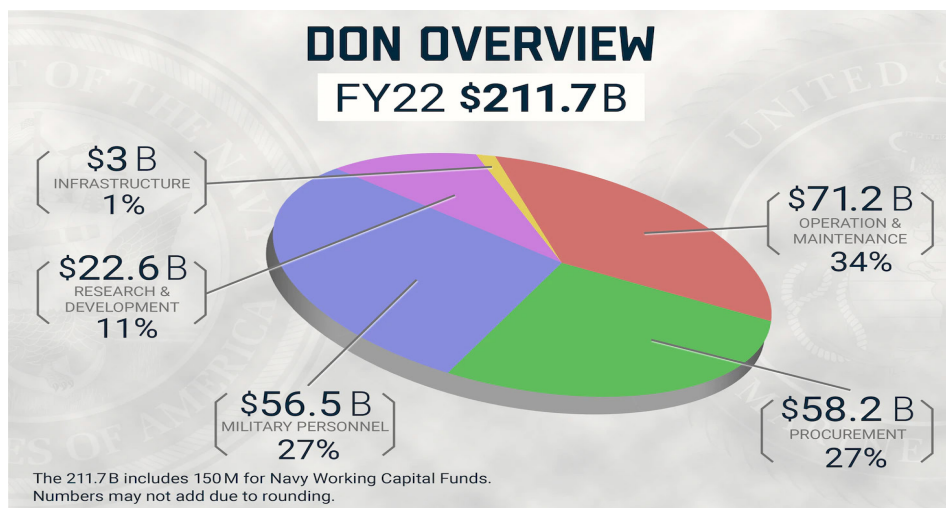


Figure 15: Department of the Navy budget for 2022 as submitted to Congress

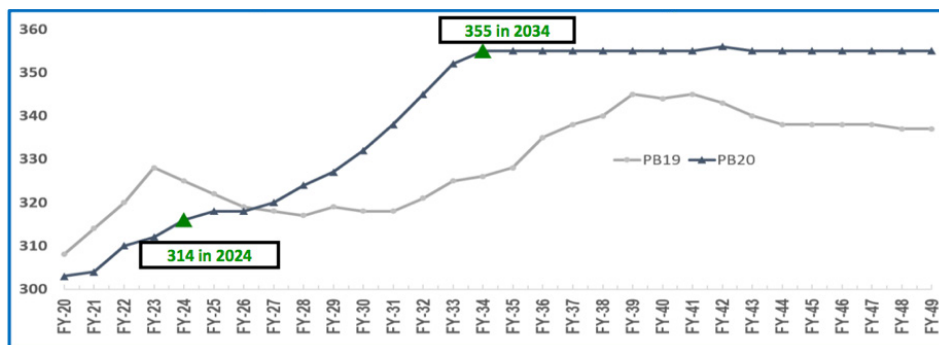


Figure 16: The US Navy's plan to reach 355 vessels by 2034

The commander of the US Navy, Admiral Mike Gilday, commented on this target and said that "we do have an investment strategy that incrementally gets us to a more capable or a more lethal fleet, but not necessarily a bigger fleet, unless we saw a rise in the top line [of the 2022 budget]". Gilday added that "I still think that 355 is a good

⁶⁹ Jonathan Caverley and Sara McLaughlin Mitchell, "A liberal Case for Sea Power?" *War on the Rock, Commentary*, February 25, 2021.

target, but the reality is that we can't really afford to have a Navy bigger than one that we can sustain [...] **Based on our current budget, I believe the analysis shows that we can afford a fleet of about 300 ships**" (my emphasis, SC).⁷⁰

Table 2: Force building plan according to the 2022 budget vs. the navy target of 355 vessels

Table 6. Projected Force Levels Resulting from FY2022 30-Year Shipbuilding Plan

	CVNs	LSCs	SSCs	SSNs	SSGN/LPSs	SSBNs	AWSs	CLFs	Supt	Total
355-ship goal	12	104	52	66	0	12	38	32	39	355
FY22	11	89	31	51	14	4	31	30	35	296

The budget allows for operation of approximately 11 aircraft carriers and approximately 31 amphibious vessels serving as the base for our leading groups and for amphibious teams. The budget request states, "our budget reflects our resolve to compete, deter, and – if necessary – defeat our rivals, while accelerating the development of a more lethal fleet and having the Navy and Marine Corps generate an integrated all-domain naval power. Only by working as a team and taking care of our people will we be able to defend the nation in the years ahead".⁷¹

In FY 2022, the combat fleet is supposed to receive 17 vessels: three destroyers, one Zumwalt model destroyer, three nuclear attack submarines (SSN), five littoral combat ships (LCS), an amphibious vessel – a landing platform dock (LPD), a new refueling ship, a ship for expeditionary fast transport (T-EPF) and a tow and towing, salvage and rescue ship for operations in the open ocean (T-ATS). While 17 ships will be added to the order of battle, 14 ships are going to be decommissioned. The Department of the Navy stated that in view of the budgetary constraints, the US Navy downgraded its order of battle in order to enable greater investment in assets that will give it a stronger, more agile and lethal force. Regarding the aerial platforms operated by the US Navy, it will complete the procurement of aircraft from several series, and will finance the operation, maintenance and training for nine naval air wings and three Marine flights.

This means that the US Navy requested a budget that would improve its operational readiness for the short term through investment in the maintenance of ships and

⁷⁰ Caitlin Doorknobs', "Navy's top admiral defends ship cuts in proposed 2022 budget, explains strategy", *Stars & Stripes*, July 20, 2021.

⁷¹ Fiscal Year 2022 Budget Request, Office of the undersecretary of Defense. (Comptroller)/Chief Financial Officer, *Defense Budget Overview*, United States Department of Defense, May 2021, p. 119

aircraft, but it reduces the procurement and force buildup, and once again halts the plans to enlarge the Navy. According to a study that was done under previous Secretary of Defense Mike Asper, it was determined that the US Navy has to enlarge its contract for the procurement of nuclear attack submarines from two per year to three submarines, in order to enlarge its attack submarine fleet to 70 submarines. Currently the attack submarine fleet stands at only 50 submarines and the US Navy recently admitted that the industrial base (the two existing shipyards) cannot cope with this capability in their present state.⁷²

Another fact worth emphasizing is the decommissioning of the two Littoral Combat Ships *Little Rock* and *Detroit*, which were commissioned in 2016 and 2017, which were developed and built for a specific operational need, but encountered severe realization problems in all matters concerning the drive systems (excessive requirements? S.C.). Despite this, the US Navy will continue operating six littoral combat ships in 2022, four of them in the western Pacific Ocean, and two more in Central and South America.

The budget request for research and development of the US Navy is geared toward greater innovation so as to deliver future capabilities in the short and long timeframes. R&D funding increased by 13% for the Navy and 9% for the Marines in comparison with the 2021 budget, with the development of the advanced prototype components (ACD + P) and development and demonstration of systems (SD&D) accounting for the bulk of the money. Research and development is vital for provision of future technologies that support innovative capabilities in the field of shipbuilding (including Columbia Model submarines), flight (F-35), weapons (Maritime Strike Tomahawk) and experimental technology (conventional rapid attack), unmanned and cyber technology. These technologies are critical to retaining the competitive advantage of the US Navy.

In view of the US Navy's inability to increase its order of battle, the new Secretary of the Navy, Carlos Del Toro, addressed the issue and noted that the US Navy needs to resist requirements creep for their ships in mid-construction, which result in their prices increasing and in particular in the case of the strategic submarines which are the US Navy's number one priority (the Columbia class submarines – SSBN-826). Del Toro stressed that the defense industry also needs to pitch in for the task and hold down costs in the course of the projects. Del Toro noted that these added costs cause the Navy's failure to meet its Building Navy Force Structure goals. He drew attention

⁷² Megan Eckstein, "US Navy FY22 budget request prioritizes readiness over procurement", *Defense News*, Budget, May 28, 2021.

to China's competition with the United States all over the world and said that for this reason the United States has to double its efforts in this competition for control over advanced technologies. This past year China has succeeded in adding 22 warships to its order of battle – both surface combatants and submarines – and it has continued to increase its land-based nuclear force. Del Toro also noted China's entry into the field of hypersonic weapons, artificial intelligence and machine learning.⁷³



Figure 17: The Independence-variant littoral combat ship USS Gabrielle Giffords

In view of new concept of operations modes with which the US Navy has to contend, particularly regarding littoral warfare, the Navy is committed – in addition to changes in the concept of operations – to define and develop suitable weapons for these challenges. One of these warfare scenarios is the operation of fast, small craft operating in swarm modes in confined water areas such as the Straits of Hormuz. Among the developments that are intended to help the US ships cope with such a scenario is the Optical Dazzling Interdictor, Navy (ODIN) – a laser weapon system that enables the ship to engage unmanned vessels or aircraft. The system belongs to the family of laser-guided energy weapons, including a relatively low-power laser intended to work as a dazzler for blinding using electro-optics and infrared. This can serve to confuse infrared seekers or imaging of incoming weapons, such as anti-ship cruise missiles, diverting them from their course. This can also neutralize cameras used for intelligence gathering purposes, for surveillance and reconnaissance (ISR)

⁷³ John Grady, "SECNAV Del Toro Tells Industry to Hold Down Costs, Resist Requirements Creep," *UNSI NEWS*, August 30, 2021.

on other ships, aircraft and unmanned aerial vehicles (UAV's). In this context, it must be noted that on May 16 2020, the US Navy announced that in a trial carried out on the Navy ship *Portland* (LPD 27), a solid-state laser system with a power rating of approximately 150 kW succeeded in neutralizing a UAV, and that this is one of the new energy weapons the US Navy is developing for warfare in scenarios of this kind.⁷⁴

The effect of the Coronavirus pandemic on the US Navy's activity

On August 9, 2021, the US Secretary of Defense announced in a memo that as of mid-September 2021 the anti-Coronavirus vaccination would become mandatory for all personnel serving in the United States security forces including Navy and marines personnel.⁷⁵ Already in March 2021, some 45% of all US Navy personnel had received their first dose of the vaccination, where the estimate was that 70% had responded to the call to get vaccinated. By mid-July 2021, approximately 40,000 Navy personnel had contracted the virus and there were 13 fatalities.

An American task force headed by the aircraft carrier USS *Harry S. Truman* Strike Group, with nearly 5,000 crew members on board, completed a tour in the Indian Ocean and Gulf of Oman between November 2019 and June 2020. and had returned to its home port at Norfolk, Virginia without any one of the crew members having caught the virus. The medical preparations and prophylactic measures taken are described in the military journal *Military Medicine*.⁷⁶ This matter is especially noteworthy considering the unscheduled docking of the aircraft carrier USS *Theodore Roosevelt* into Guam in March 2020 in the face of increasing Coronavirus morbidity, the comments made by the Acting Secretary of the US Navy regarding the *Roosevelt's* captain and the public uproar that brought about the captain's resignation and termination of service. The Coronavirus also caused US Navy warships to break seetime records, with the destroyer the *USS Stout* remaining at sea for 208 consecutive days.

US Navy Activity in the Eastern Mediterranean

Ever since President Obama's announcement of his "Pivot to Asia" policy in 2011, the US Navy's activity and involvement in the eastern Mediterranean has been drastically

⁷⁴ Ryan White, "How the U.S. Navy can defeat Iran's swarm attacks?", *Naval Post*, May 29, 2021.

⁷⁵ Secretary of Defense, *Message to the Force, Memorandum for all Department of Defense Employees*, August 9, 2021.

⁷⁶ Veronica E. Bigornia, U.S. Navy Aircraft Carrier Prevents Outbreak at Sea in Midst of COVID-19, *Military Medicine*, 186, 7/8:178, 2021, p. 1.

scaled down, with the Sixth Fleet operating only 14 vessels in August 2021 (table 3).⁷⁷ It is also worth noting that since the United States has reduced its dependence on Middle Eastern oil, the geo-economic and geopolitical importance of the region for the USA has diminished considerably.

Table 3: Number of vessels deployed by the United States fleets worldwide

Fleet Forces	3rd Fleet	4th Fleet	5th Fleet	6th Fleet	7th Fleet	Total
1	4	4	22	14	66	111

The Biden administration began defining the main points of its policy toward this region, however it does not seem the administration will make any radical reversals of policies installed in the Obama and Trump days. The State Department recently appointed Richard Norland as its special envoy to Libya, tasked with coordinating with the Government of National Unity (GNU) the stabilizing measures for the situation in Libya and for securing the general elections in December 2021. Nevertheless, at the time of writing, the administration has not yet formed its policy and has not begun engaging with the countries responsible for the instability in the region, primarily – Turkey. Even if the relations between Biden and Erdogan are frostier than they were between Trump and Erdogan, and even if there are occasional flare-ups between the USA and Turkey, these two NATO allies share more important strategic interests (particularly vis-à-vis Russia and China) which could lead to meaningful collaboration in the region.

Since April 2021 Greece and Turkey have been maintaining a political dialog to solve some of their problems. At the same time, this process, which should later be accompanied by negotiations, does not appear promising at the moment. Turkey has announced new demands which the Greek government cannot accede to, such as the demand to demilitarize the eastern Aegean islands, despite the fact that Greece too is a NATO member and makes no territorial claims against Turkey. Failure of the talks could once again ratchet up tensions between the two sides where competing interests in energy, combined with new naval capabilities (especially of the Turkish navy) could result in an environment making a showdown inevitable.⁷⁸

The East Mediterranean Gas Forum (EMGF), which consists of the energy ministers of Egypt, Italy, Israel, Greece, Cyprus, France and the Palestinian Authority (and which to a certain extent is also an axis of resistance to the Turkish moves), held its most

⁷⁷ USNI News Fleet and Marine Tracker: Aug 30, 2021, *USNI News*, August 30, 2021

⁷⁸ Emmanuel Karagiannis, "The Coming Naval Arms Race in the Eastern Mediterranean", *RUSI*, July 22, 2021.

recent ministerial meeting in Cairo on March 9, 2021, where the participation of the United States as an official observer in the forum was approved, after it had been absent from it in previous meetings. The forum's member states decided to establish the forum in September 2020, as an intergovernmental organization seeking to promote the export of natural gas from the eastern Mediterranean.⁷⁹ Even though the United States does not use the political dimension of its maritime strategy in the eastern Mediterranean (using naval forces for political ends), it does use other political means in its efforts to retain its status as a world power in the eastern Mediterranean. With this in mind, its joining the forum, albeit as an observer, is of great importance.

The United States and NATO took no operative measures when the Crimean Peninsula was annexed by Russia in 2014. As a consequence, these bodies feel a certain obligation toward the Ukraine – an obligation which is expressed, among other ways, in the number of operations and exercises that NATO forces are holding in the Black Sea region. The United States and Ukraine are holding their annual Sea Breeze exercise along the Black Sea shipping routes. In March 2021, a task force, under the command of *USS Monterey CG 61* saw action, escorted by *USS Thomas Hudner – DDG 116* – in a routine patrol in collaboration with other NATO forces in the area. The Sixth Fleet spokesman noted that these patrols reflect the United States' support for the national security interests in Europe, the increased cooperation in this arena and it was also a show of presence of the Sixth Fleet. In July 2021, an even larger exercise was held in the Black Sea with participation from 32 navies of NATO member states and Black Sea states – a maneuver that placed the emphasis on the operational collaboration (interoperability). During the exercise, the Russians accused the naval force of transgressing Russian territorial waters, an accusation that was rejected by the commander of the Sixth Fleet.⁸⁰

Against the backdrop of rising tensions in the eastern Mediterranean, the Sixth Fleet and the Israeli Navy conducted a combined maritime security patrol in March 2021, in which the modern Ticonderoga class (CG-61) missile cruiser *USS Monterey – CG 61* and Israeli missile boats model *Saar 4.5* took part. According to the participants, the joint patrol was intended to "enhance interoperability between the maritime nations

⁷⁹ Matthew Sais, [The Abraham Accords hold the key to Biden's East Med policy](#), *Atlantic Council*, April 6 2021.

⁸⁰ Megan Eckstein, ["Six questions with the US Navy's 6th Fleet commander"](#), *Defense News*, August 9, 2021.

through various communication and command and control scenarios between the two navies."⁸¹



Figure 18: U.S. Navy's deployed carrier strike groups and amphibious ready groups throughout the world as of Aug. 30, 2021 (USNI News)

The Chinese Navy – People's Liberation Army Navy – PLAN

The rising importance of the Chinese maritime interests, of which we have reported in previous situation assessments, has spurred the Chinese navy into further growth in the frequency of its operations, their duration and range beyond the Chinese shores. This activity is consistent with the emphasis placed on action in the maritime domain according to the White Paper the Chinese issued in May 2015, entitled *Defense on the High Seas*.⁸²

The congressional report from August 2021 regarding the modernization in the Chinese navy and its implications for the capabilities of the US Navy, deals with several issues related to the force building in the Chinese navy and its operational strategy.⁸³ The report emphasizes that the Chinese navy is undoubtedly the largest in East Asia, and in recent years it has surpassed the US Navy in terms of number of warships at its disposal (but not necessarily surpassed qualitatively), a fact that

⁸¹ "U.S., Israeli Navies Conduct Combined Maritime Security Patrols in the Mediterranean", America's Navy News, Office of Information.

⁸² Blasko j. Dennis, *The 2015 Chinese Defense, White Paper on Strategy in Perspective: 14 Maritime Missions Require a Change in the PLA Mindset*. *The Jamestown Foundation*, May 29, 2015.

⁸³ *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, US Congressional Research Service, updated August 3, 2021.

makes the Chinese navy the largest in the world, numerically.⁸⁴ The Chinese navy's vessels, aircraft and weapon systems are modern and more highly capable than those of the early 1990s. At present they are comparable, in many aspects, to those of modern western navies. "Chinese naval ship design and material quality is in many cases comparable to USN ships." The report also stated that the "China is quickly closing the gap in any areas of deficiency".⁸⁵ In case of an armed conflict between the countries, the Chinese navy is perceived as a significant challenge for the US Navy, and in particular in all matters concerning achieving control in "blue waters" regions in the western Pacific Ocean – a challenge the US Navy has not faced since the end of the Cold War. Accordingly, the report says that China wants its navy to continue to be built so that it will be able to operate with an Anti Access, Area Denial – A2/AD strategy and to deter the United States from intervening in a conflict if and when one should occur in the South China Sea, around Taiwan or in any other scenario, and should it fail to do so, it will delay or diminish the effectiveness of the actions of American forces that will be seeking to intervene in the conflict. In addition, the Chinese navy will be required to secure the Chinese shipping routes, including defending against piracy, evacuation of Chinese citizens from foreign countries when necessary and humanitarian assistance and disaster relief in cases of accidents or natural disasters.

Although the Chinese naval modernization effort has significantly improved its naval capabilities, the current estimate is that the Chinese navy is limited in its capabilities in the following areas: anti-submarine warfare (ASW), long-range target attacks, ability to train a large number of crewmembers for its new ships, command cohesion and lack of combat experience.⁸⁶ China is aware of these disparities and is working to close them, or overcome them.

As for China's multi-layered defense concept for its shores – this has been covered in last year's review, pages 65–66.

⁸⁴ Alex Hollings, "Just How Big Is China's Navy? Bigger Than You Think," *Sandboxx*, July 28, 2021.

⁸⁵ Unclassified ONI information paper prepared for Senate Armed Services Committee, subject "UPDATED China: Naval Construction Trends vis-à-vis U.S. Navy Shipbuilding Plans, 2020–2030," February 2020, p. 3. Provided by Senate Armed Services Committee to CRS and CBO on March 4, 2020.

⁸⁶ The use of a dual command structure in the crews of larger Chinese ships, which consists of a captain and also a political officer, has also been cited as a source of trouble in all matters concerning the effectiveness of the command in certain tactical situations.

Table 4: The various classes of vessels in the Chinese and US Navies since 2005

Year of DOD report	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020 change from 2005
Ballistic missile submarines	1	1	1	1	2	2	2	2	3	3	4	4	4	4	4	4	+3
Nuclear-powered attack submarines	6	5	5	5	6	6	5	5	5	5	5	5	5	5	6	6	0
Diesel attack submarines	51	50	53	54	54	54	49	48	49	51	53	57	54	47	50	46	-5
Aircraft carriers	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	+2
Cruisers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	+1
Destroyers	21	25	25	29	27	25	26	26	23	24	21	23	31	28	33	32	+11
Frigates	43	45	47	45	48	49	53	53	52	49	52	52	56	51	54	49	+6
Corvettes	0	0	0	0	0	0	0	0	0	8	15	23	23	28	42	49	+49
Missile-armed coastal patrol craft	51	45	41	45	70	85	86	86	85	85	86	86	88	86	86	86	+35
Amphibious ships: LSTs and LPDs	20	25	25	26	27	27	27	28	29	29	29	30	34	33	37	37	+17
Amphibious ships: LSMs	23	25	25	28	28	28	28	23	26	28	28	22	21	23	22	21	-2
Total of types above (does not include other types, such as auxiliary and support ships)	216	221	222	233	262	276	276	271	273	283	294	303	317	306	335	333	+117
China Coast Guard ships	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	185	240	248	255	n/a
Total U.S. Navy battle force ships (which includes auxiliary and support ships but excludes patrol craft)	291	282	281	279	282	285	288	284	287	285	289	271	275	279	286	296	+5
Total U.S. Navy battle force ships compared to above total for certain Chinese ship types	+75	+61	+59	+46	+20	+9	+12	+13	+14	+2	-5	-32	-42	-27	-49	-37	-112

Source: Table prepared by CRS based on 2005-2019 editions of annual DOD report to Congress on military and security developments involving China (known for 2009 and prior editions as the report on China military power), and (for U.S. Navy ships) U.S. Navy data as presented in CRS Report RL32665, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke.

Notes: n/a means data not available in report. LST means tank landing ship; LPD means transport dock ship; LSM means medium landing ship. The DOD report generally covers events of the prior calendar year. Thus, the 2019 edition covers events during 2018, and so on for earlier years. Similarly, for the U.S. Navy figures, the 2019 column shows the figure for the end of FY2018, and so on for earlier years.

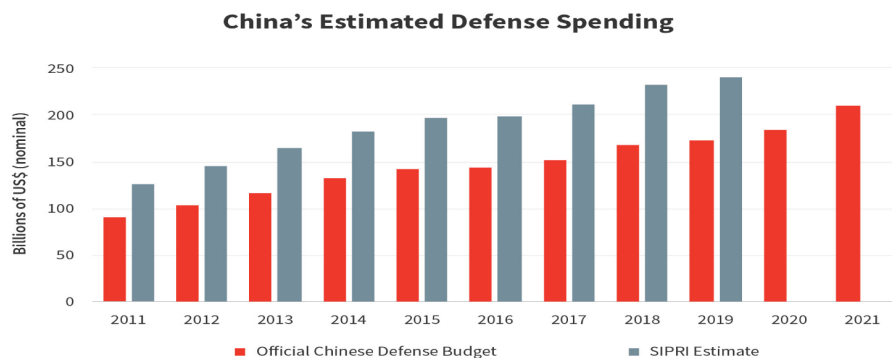
Table 4 presents the quantitative advantage the Chinese navy has over the US Navy, although this does not reflect the qualitative advantage of the American order of battle in almost every area.

In addition to modernization of the Chinese navy, China has scaled up its coast guard quite substantially in recent years. China's coast guard is undoubtedly the largest of all East Asia countries. China also operates a large naval militia that consists of a large number of fishing vessels, as witnessed at the start of the dispute over the Exclusive Economic Zone with the Philippines. China relies primarily on the naval militia and its coast guard to claim and defend its maritime claims in the waters near its shores, where the navy operates on the horizon as a potential backup force.

The Force Building Plan of the Chinese Navy

This part of the report provides a brief review of the components of the development and modernization efforts being made in recent years in the Chinese navy. There are no precise data regarding the Chinese navy's budget and it is also evident that within China's defense spending, there is a difference between the numbers quoted by the Chinese government and those estimated by the Stockholm International Peace Research Institute – SIPRI. Whatever the case may be, the impression is that over

the course of the second decade of the 21st century, China's defense spending is in a continual upward trajectory (see figure 19).



Note: SIPRI estimates for 2020 and 2021 not available at time of writing.
Sources: Chinese Central Government; Stockholm International Peace Research Institute (SIPRI).

 ChinaPower

Figure 19: China's estimated defense spending

Anti-surface combatant missiles

China operates two kinds of land-based ballistic missiles capable of hitting vessels: DF-21D, an anti-ship ballistic missile (ASBM) with a range of approximately 1,500 km (meaning more than 910 nautical miles), and an intermediate range ballistic missile DF-26 (IRBM), road-transportable, with a maximum range of 4,000 km (2,160 nautical miles). A Pentagon report notes that it is capable of precision conventional and nuclear targeting of land-based targets as well as conventional attacks against marine targets. A newspaper report from November 2020 said that in August 2020 a successful trial was carried out on two types of missiles against moving targets in the South China Sea. The missiles hit the target vessel, which was cruising south of the Paracel Islands.⁸⁷ At the end of 2020, Admiral Philip Davidson, commander of the Indo-Pacific Command, for the first time acknowledged that the Chinese had successfully concluded a test launch of an anti-ship ballistic missile and that China was also developing Hypersonic Glide Vehicles which, when integrated in missiles, will make them very difficult to intercept. Such missiles, when integrated with Naval Command & Control systems, will enable China to attack aircraft carriers and other US Navy ships operating in the Pacific Ocean. The US Navy has not encountered

⁸⁷ Andrew Erickson, "China's DF-21D and DF-26B ASBMs: Is the U.S. Military Ready?" *Real Clear Defense*, November 16, 2020.

precision ballistic threats with good penetration chances in the past, and they also note that this weapon is a "game changer weapon".⁸⁸

China also possesses a very large stockpile of anti-ship cruise missiles (ASCM) of Russian and Chinese manufacturing, including several advanced, high-capability models such as the Chinese YJ-18. The relatively long ranges of the Chinese cruise missiles are a cause for concern for the American Navy in all matters related to the superiority of the American marine cruise missiles in different parameters, such as for example their range.⁸⁹

Most of the submarines in the Chinese submarine fleet are attack Diesel-electric submarines (SSS), non-nuclear driven. However, China operates a small number of nuclear drive (SSN) attack submarines and a smaller number of nuclear-driven ballistic missile submarines (SSBN). It is assumed that the number of nuclear attack submarines (SSNs) and ballistic submarines (SSBNs) will increase in the coming years (table 5).

Table 5: Numbers of Chinese and US Navy Battle Force Ships, 2000–2030

	2000	2005	2010	2015	2020	2025	2030
Ballistic missile submarines	1	1	3	4	4	6	8
Nuclear-powered attack submarines	5	4	5	6	7	10	13
Diesel attack submarines	56	56	48	53	55	55	55
Aircraft carriers, cruisers, destroyers	19	25	25	26	43	55	65
Frigates, corvettes	38	43	50	74	102	120	135
Total China navy battle force ships, including types not shown above	110	220	220	255	360	400	425
Total U.S. Navy battle force ships	318	282	288	271	297	<i>n/a</i>	<i>n/a</i>

Source: Table prepared by CRS. Source for China's navy: Unclassified ONI information paper prepared for Senate Armed Services Committee, subject "UPDATED China: Naval Construction Trends vis-à-vis U.S. Navy Shipbuilding Plans, 2020-2030," February 2020, 4 pp. Provided by Senate Armed Services Committee to CRS and CBO on March 4, 2020, and used in this CRS report with the committee's permission. Figures are for end of calendar year. Source for figures for U.S. Navy: U.S. Navy data; figures are for end of fiscal year.

Note: "n/a" means not available.

China today has two aircraft carriers, from whose decks fixed-wing aircraft are deployed. On takeoff they are assisted by a ski ramp. The last of the two (the *Shandong*) was commissioned for active duty in the summer of 2021.⁹⁰ By the end of

⁸⁸ Christian Davenport, "Why the Pentagon Fears the U.S. Is Losing the Hypersonic Arms Race with Russia and China," *Washington Post*, June 8, 2018.

⁸⁹ Dennis M. Gormley, Andrew S. Erickson, and Jingdong Yuan, *A Low-Visibility Force Multiplier, Assessing China's Cruise Missile Ambitions*, Published by National Defense University Press for the Center for the Study of Chinese Military Affairs, Institute for National Strategic Studies, Washington, D.C., 2014.

⁹⁰ Minnie Chan, "China's Shandong Aircraft Carrier Ready for High Seas Test, Insider Says," *South China Morning Post*, April 8, 2021.

the decade, the Chinese are expected to complete the construction of their fourth aircraft carrier, which will be similar in size to the American aircraft carriers and will be equipped with braking mechanisms (catapults). All the Chinese aircraft carriers are conventionally powered. Despite their importance, experts believe these aircraft carriers will not be the main force builder in case of military action against Taiwan, because Taiwan's proximity to mainland China enables the use of Chinese air power from Chinese land bases.

China's Activity in the Middle East

China is continuing to deepen its involvement in the Middle East and in the east Mediterranean, using its "bulging wallet" to secure influence over primary allies in the region as a means for advancing its global aspirations. Even as the United States disengages from the Middle East, there are those in the American foreign policy community that believe the area will be among the places where a great power rivalry will unfold between Washington and Beijing. These analysts point out that China's investment in the region, its bidirectional trade with regional powers, its military base in Djibouti and its strengthening ties with Iran will transform China into a formidable adversary of the United States in the region.⁹¹ The marine base in Djibouti, which was officially opened in 2017, was originally developed to support China's anti-piracy mission off the Somalian coast in the Gulf of Aden, but has expanded over time and now includes capabilities which can serve as a logistical supply base for its blue-water fleet, such as its large new class 075 amphibious warship or the aircraft carriers it has begun using.⁹² Nowadays China is the main buyer of oil in the Middle East since 72% of all the oil consumed in China comes from imports. Since oil consumption in the rest of the world is in decline and is set to diminish even further, China's oil imports are increasing in importance for the Middle Eastern oil producers, meaning that China's geopolitical importance is rapidly growing.

China has already developed comprehensive strategic partnerships with Saudi Arabia, Egypt and the United Arab Emirates, while its influence in Iran has grown considerably following the signing of a 25-year cooperation program with Tehran.⁹³

⁹¹ Steven A. Cook and James Green, "China Isn't Trying to Dominate the Middle East But U.S. Retrenchment Might Allow It To", *Foreign Affairs*, August 9, 2021.

⁹² Vinayak Bhat, "Construction fast-tracked at China PLA's first overseas base in Djibouti", *India Today*, October 30, 2020.

⁹³ "China challenges US position as most important partner for Middle East, *Business Standard*", *Business Standard*, June 14, 2021.

Chinese foreign minister Wang Yi visited Syria, Egypt and Algeria in July 2021 and met with senior officials of the Arab League. This was Wang's second visit to the Middle East this year, following his visit in March to six countries: Saudi Arabia, United Arab Emirates, Oman, Bahrain, Iran and Turkey. In addition to trade issues, the visits dealt with three other major issues: promoting the distribution of the Chinese vaccines for COVID-19, Chinese investments as part of the "Belt and Road initiative" and the Israel-Palestinian conflict. China tends to raise the latter issue in various international forums and in meetings with Arab leaders. Chinese declarations show that it regards the Palestinian issue to be at the heart of the troubles in the Middle East, and that sustainable peace and security in the region depends on solving this problem. Accordingly, the issue was mentioned in all the minister's meetings and action plans were even introduced in two of them. In Saudi Arabia in March, Wang introduced a five-point plan for achieving peace and security in the Middle East. The Chinese Foreign Minister said that China intends to raise this lingering dispute in the UN Security Council, to support the two-state solution and to invite peace activists from both sides for talks. In his visit to Egypt in July, he raised three ideas for achieving the two-state solution: improving the stature of the Palestinian Authority, supporting unity between the Palestinian factions and encouraging the renewal of the peace talks based on the two-state solution. Unfortunately, these trends in the Chinese foreign policy in the Middle East were only belatedly understood by Israeli decision-makers despite the fact that position papers had been issued in recent years by the Maritime Policy & Strategy Research Center at the University of Haifa.⁹⁴

In March 2021, China and Iran signed an agreement which, according to their Foreign Ministers, is intended to facilitate a strategic partnership that should last over the next quarter-century. The details have not yet been made public although the assumption is that China, in contravention of American sanctions, will buy oil from Iran and will invest heavily in development of the energy infrastructures in Iran. No doubt the sanctions have "starved" Iran of foreign investment, and the economic horizon China offers it will provide it with desperately needed breathing space. On the Chinese side, this most recent extension of China's huge infrastructure project – the Belt and Road Project – forges the ties Beijing needs to continue its expansion as a global power.⁹⁵

⁹⁴ Shaul Chorev, "Summary of the Strategic Evaluation and Policy Recommendations", Maritime Strategic Evaluation for Israel 2018/19, p. 293.

⁹⁵ Jeremy Bowen, "China sets sights on Middle East with Iran co-operation deal", *BBC News*, March 31, 2021.

During August 2021, during the evacuation of the American and NATO forces from Afghanistan, the Russian ambassador to Tehran Levan Dzagaryan, announced that Russia, Iran and China would be holding joint marine exercises in the Persian Gulf in late 2021 or early 2022. The exercises will be carried out with military vessels from the three countries taking part and will focus on securing navigation and fighting piracy.⁹⁶ The announcement of the joint exercise came after a joint declaration by the United States, the United Kingdom and Israel that accused Iran of a drone attack on the *Mercer Street* oil tanker on July 29, 2021, threatening that this attack would have its implications.

On September 1 2021, the Haifa Bayport Terminal (Namal HaMifratz) was inaugurated. It is operated by the Chinese SIPG (Shanghai International Port Group) Company and will operate container ship loading and unloading. The port was inaugurated after 15 years of planning and construction. This is one of the largest infrastructure projects ever undertaken in Israel. It involved investment of over 5.5 billion Shekels in infrastructure and operating equipment. The port covers an area of 840 Dunams (230 acres) in the sea and was opened for business after being six years in construction. The US government has in the past expressed its concern over the construction of vital infrastructures in Israel by Chinese companies, let alone operating them, and this cannot be disregarded. Then Secretary of State Mike Pompeo even traveled to Israel in May 2020 to warn the then-Prime Minister Benjamin Netanyahu against the win, by the Chinese Hutchinson Company, of a tender for the construction of the Sorek 2 desalination plant. The message was heard loud and clear in Jerusalem and the Joint Committee of the Ministries of Finance and Energy and the Water Authority awarded the concession to a consortium of the IDE desalination company and Bank Leumi.

This year there was no sailing of Chinese navy ships into the Mediterranean, nor were there any Chinese maneuvers there. However, some researchers claim that China is using the global supply chain as a highly efficient weapon system, enabling it to control a different dimension of the maritime domain without having to resort to its combat fleet.⁹⁷

The Russian Navy

Despite its economic situation, Russia continues sending out messages of its intention to safeguard the Russian navy's status as one of the world's most powerful

⁹⁶ "Russia, Iran and China to hold joint drills in Gulf -RIA", *Reuters World*, August 23, 2021

⁹⁷ Christopher R. O'Dea, "How China Weaponized the Global Supply Chain", *National Review*, June 20, 2019.

and equipped with highly advanced weaponry. This was expressed, among other places, in President Putin's speech on the Russian Navy Day held on July 25, 2021.⁹⁸

Over the past year, the Russian navy has increased its activity in the Arctic region, expanded its presence in Africa and the Middle East, and has consistently challenged NATO activity throughout Europe. It is estimated that the Russian navy nowadays has approximately 360 ships of all classes in service. The large ships continue to be replaced with smaller ships such as corvettes and frigates. Corvettes of the Karakurt and Stereguschiy models are intended to support the larger frigates, which are equipped with guided cruise missiles of the Admiral Gorshkov and Admiral Grigorovich models. Many of these ships are smaller in size and armament than those in NATO service, however new technology and weapons, in particular Model Kalibr cruise missiles, which were put into service in 2015, compensate for these disadvantages. These cruise missiles, which can be both submarine-borne and ship-borne – ships that operate in the Caspian Sea. They are capable of hitting targets throughout Europe and the Middle East. The Russian submarine force currently consists of 59 submarines, including 12 nuclear ballistic missile submarines (SSBN) and nine attack submarines (SSGN). Russian strategists regard the Russian submarine fleet to be the main attack force capable of defeating the United States Navy. The four Borei Model ballistic submarines and the one Yasen Model attack submarine are supposed to replace the old models currently in the order of battle.⁹⁹

Since the start of the most recent wave of reforms in the Russian armed forces in 2009, the Russian leadership is sending the message that the Russian navy's crisis period was over, and that it is returning to its past glory, and is capable of undertaking missions befitting a superpower's navy. On Navy Day, which was marked on July 25, 2021, President Putin said that "We will continue to boost the potential of the Russian navy, develop its bases and infrastructure, arm it with state-of-the-art weapons", and that "A strong and sovereign Russia needs a powerful and well-balanced navy".¹⁰⁰ Putin also announced that Russia had begun a process of construction of two nuclear-powered submarines, armed with intercontinental ballistic missiles, two Diesel-powered submarines and two corvettes, which will be

⁹⁸ Alexander Nicholson. "Putin Touts Russia's Hypersonic Nuclear Weapons at Naval Parade", *Bloomberg*, July 25, 2021.

⁹⁹ Benjamin Brimelow, "Russia's Navy is making a big bet on new, smaller warships loaded with missiles", *Insider*, April 1, 2021.

¹⁰⁰ Vladimir Isachenkov, "Putin launches construction of new nuclear subs and warships", *The Associated Press, DefenseNews*, August 23, 2021.

built at the Severodvinsk Shipyards in St. Petersburg and the Komsomolsk-on-Amur Shipyards.

Russia has prioritized its military modernization path, which is gaining top priority, because its relations with the West have recently hit a new low following the annexation of the Crimean Peninsula in 2014. Russia is trying to recover its permanent naval presence in parts of the world in which the Soviet Union had such presence during the Cold War. The Russian navy already has a permanent presence in the Mediterranean, which among other things relies on the naval base in the Port of Tartus in Syria, which Russia has enlarged and which is actually the only facility Russia has beyond its own territory.¹⁰¹

Looking ahead, in its current force-building drive, the Russian navy is not expected to reach the size of the Soviet navy in the late 1970s, however recent developments show that the navy is upgrading its capabilities and that it will not be the ramshackle fleet it was in the 1990s following the collapse of the Soviet Union.

The Russian Navy's Force-Building Plan

The Russian navy benefitted from a larger budget in 2020 than the other military branches. This fact enabled it to develop and build new ships and submarines and to develop precision attack capabilities after years of restricted budgets. By the end of 2021, Russia will be bringing six new submarines into service – three of them nuclear-powered, the (world's largest) battleship – the nuclear-powered Model Kirov and christened *Admiral Nakhimov*. Russia also plans to begin the sea trials of its only aircraft carrier, the *Admiral Kuznetsov* by the end of 2022. The *Kuznetsov* has been under repair since it was damaged in 2020 in a fire caused by welding works, which killed two shipyard workers and injured 14 others.¹⁰² The Russian shipyards prefer to build smaller ships with greater fire power, which mostly can be modified modularly, or for multi-purpose combat, enabling them to be used flexibly. Additionally, the Russian navy has focused on developing weapon systems with longer ranges and greater accuracy. This being said, it is worth noting that most of the large Surface combatants in the Russian navy are more than 30 years old. They occasionally undergo various renovations to extend their service life since the Russian shipyards have difficulty in building ships with a draft exceeding 7,000 tons.

¹⁰¹ See the annual situation assessment 2020/21 – the chapter by Ido Gilad, "Russian Navy - Major trends in 2020 and Their Implications for the Middle East", pp. 112–127.

¹⁰² Benjamin Brimelow, "Russia's Navy is making a big bet on new, smaller warships loaded with missiles". *Business Insider*, April 4, 2021.

As a result, Russia relies more and more on heavily-armed frigates for its surface warfare. These ships are equipped with vertical launch systems for Kalibr-model cruise missiles, anti-submarine missiles and Zirkon-model hypersonic anti-ship missiles (capable of achieving 8 MACH and still in its trial stages). However, and despite the considerable resources invested on this, Russian industry, ever since its disengagement from Ukraine in 2014, is having difficulties setting up the industrial base for the engines of its cruise missiles. The Russian submarine fleet is continuing to grow and Russian industry is making progress in its manufacturing capabilities and in building up its new capabilities – for the nuclear-powered ballistic submarine fleet, for the submarines armed with cruise missiles, and for its conventional attack submarines.¹⁰³

In the reports by the Maritime Policy and Strategy Research Center in 2019 and 2020, we wrote about the progress made in the development of a new Russian Poseidon torpedo, which is the largest torpedo ever developed by any country. This is an autonomous nuclear-powered torpedo, armed with a nuclear warhead (possibly a 2-megaton warhead). The torpedo has a diameter of approximately 2 meters and is over 20 meters in length, making it 30 times larger than a regular torpedo. It is intended to destroy potential enemy naval bases and to become part of the Russian nuclear deterrent. The torpedo, which is intended to carry a nuclear warhead and a conventional warhead, is expected to enter into service in 2027 and to be launched from the new K-329 Belgorod submarine. As of the writing of this report, the Russian navy is continuing to develop the torpedo. Images taken from the Maxar satellite in August 2021 confirm the presence of a special trial ship, the *Akademik Aleksandrov*, which is intended to serve as the trial and launch platform of the Poseidon, during the stage preceding the conducting of submarine trials. The ship was located in a base in the Dvina River estuary on the White Sea. Work on the new dock began in 2018 and a substantial part was completed in 2020. The trial ship was spotted there in July-August. Not far from this site is the Severodvinsk site. This is where many of Russia's most advanced submarines are built and it is already closely linked with Poseidon. The ships and submarines taking part in the preliminary trials are already at this base. The *Sarov B-90* submarine, which was launched in 2007, will apparently be performing the trials of the Poseidon nuclear-headed torpedo (see Figure 20).¹⁰⁴

¹⁰³ "Russian Armed Forces: Capabilities, Navy", *In Focus*, Congressional Research Service, June 30, 2020, p. 2.

¹⁰⁴ H. I. Sutton, "New Satellite Images Hint How Russian Navy Could Use Massive Nuclear Torpedoes", *USNI News*, August 31, 2021.

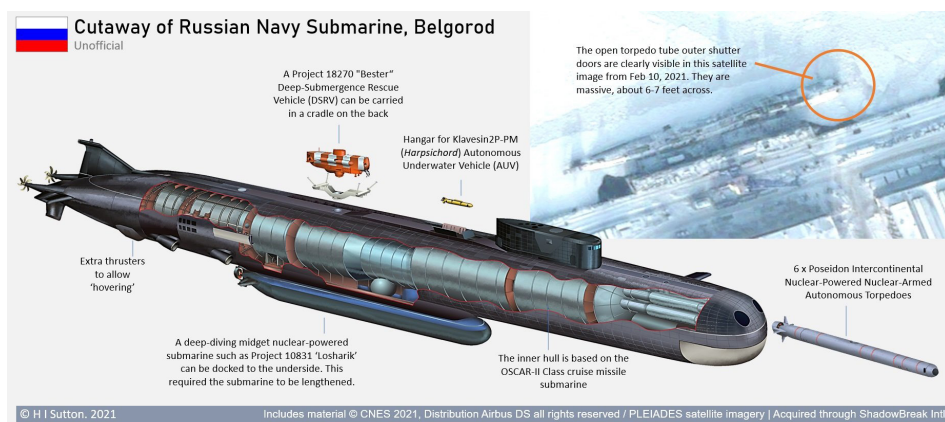
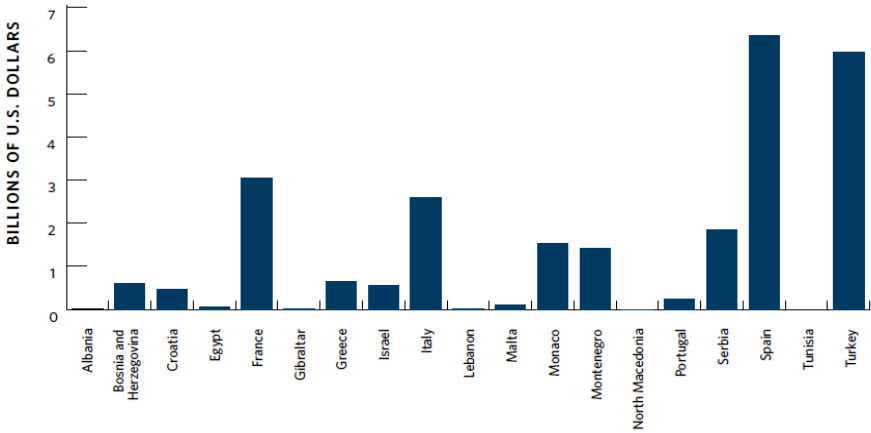


Figure 20: Cutaway of the Russian Belgorod Submarine that is supposed to carry out the trials on the new torpedo

Russian Navy Activity in the Eastern Mediterranean and Black Sea and its Operational Doctrine

Russia's strategy in the Mediterranean forms an integral part of the broader strategy applicable to the European arena, which has been identified by the Russian political echelon as the main arena in which its foreign policy's victories and obstacles will be played out. Europe's dominant position in the Russian foreign policy agenda is an outcome of its strategic culture, which is shaped by geography, historical heritage, and its worldview which views the West as a threat to Russia's internal political order. A recent Carnegie Endowment report notes that it is impossible to understand Russia's current posture in the Mediterranean without viewing it in a broader context and against the background of its long-time involvement in the region, including during the Cold War. Russia's posture in the Mediterranean is largely intended to safeguard its accomplishments in Syria and to defend Russia against the aerial and maritime threats against its territory its leaders perceive from NATO. They try to achieve this through an Anti Access/Area Denial (A2/AD) strategy, inter alia from its bases in Syria. It is possible that Russia's long-term aim is to dominate the Mediterranean, although under the current circumstances they make do with denying NATO possible courses of action and to an extent to supplant the United States/NATO as a mediating, power-wielding force in the region.¹⁰⁵

¹⁰⁵ Eugen Rumer, Richard Sokolsky, "Russia in the Mediterranean: Here to Stay", Carnegie Endowment for International Peace, May 2021. https://carnegieendowment.org/files/Rumer_Sokolsky_Russia_in_the_Med_Updated.pdf [Accessed September 7, 2021]



SOURCE: Bank of Russia. NOTE: This excludes Cyprus.

Figure 21: Russia's direct investments in Mediterranean states (excluding Cyprus) in 2020

The Russian navy in the eastern Mediterranean is based primarily on the Black Sea fleet, ranging in size between 8 and 15 ships of different kinds. The Russians make sure they conduct one exercise per year in the eastern Mediterranean as a minimum. The Russian bases in Syria extend the Black Sea fleet's capabilities in the eastern Mediterranean: recently Russia has scaled up the infrastructures of its air base in Khmeimim to accommodate heavy bombers and has even built a new runway. The Russians held large-scale maneuvers in the eastern Mediterranean in mid-June 2021 involving several warships, two submarines and long-range Tupolev-class bombers (Tu-22M3) along with other fighter aircraft. The supersonic Tu-22M3 aircraft, capable of carrying nuclear weapons, have first been deployed in Syria as a show of increasing Russian military muscle in the eastern Mediterranean. In the course of combat activity of the new British aircraft carrier *HMS Queen Elizabeth* in the Eastern Mediterranean (before it continued on its voyage to the Indian Ocean, F-35 aircraft were sent from it for attack missions against Islamic State (ISIS) targets in Syria. Armed Russian aircraft tracked the activities of the British task force.

A naval force, based primarily on NATO countries (but not only), conducted a maritime exercise named Sea Breeze 2021 in June and July 2021, which involved thirty-two countries. The exercise was conducted under United States Navy and Ukraine navy leadership. 5,000 soldiers, 32 ships, 40 aircraft and 18 special forces participated in the exercise. Tensions escalated between Russia and a British-American force which did a show of the flag patrol in the Black Sea. The Russians deployed to the Khmeimim air base a squadron of MiG 31 aircraft armed with Kinzhal hypersonic missiles that have a range of approximately 2,000 km. The Russians claimed that one

of its warships fired warning shots on June 23 and a fighter aircraft dropped bombs near the British destroyer *HMS Defender* to force it to exit a zone near the Crimean Peninsula which Russia claims is part of its territorial waters.¹⁰⁶

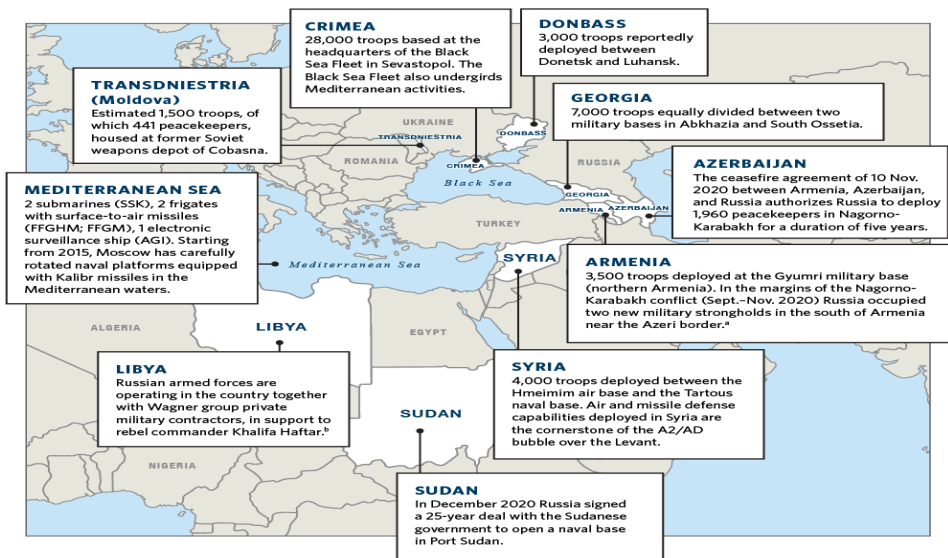


Figure 22: Division of the offshore territories in the Crimean Peninsula region

Before the exercise got underway, the destroyer concluded a visit to the Port of Odessa in Ukraine and was en route for a similar visit to the Port of Batumi in Georgia but the question arising from this incident is: why did the Royal Navy decide to sail close to the Crimean Peninsula coast? Russia, as we know, has claimed the Crimean territorial waters as its own ever since it annexed the peninsula in 2014, however the West, including Britain, does not recognize the annexation and therefore as far as they are concerned these waters belong to the Ukraine. Moreover, maritime law states that ships have the right to cross the territorial waters of another country using the right of innocent passage. In the past Russia has already recognized that this right stands both for merchant ships and for warships and, in fact, the Russian navy ships usually pass through British waters in the English Channel, exercising

¹⁰⁶ Vladimir Isachenkov, "Russia launches Mediterranean drills amid rift with Britain", *AP News*, June 25, 2021.

their right of innocent passage. Western experts claim that the difference between Russia's bellicose public allegations concerning the passage and its actual response to the passage of the British destroyer highlight both Russia's caution regarding potential military conflict with NATO and recognition of the limits of its capabilities.¹⁰⁷ Russia expressed its dissatisfaction with the recent exercises the Americans and NATO initiated in the Black Sea and instructed its forces to conduct a simulation of an attack exercise in a scenario where enemy vessels penetrate its maritime waters using a strategy of area denial, where all this was done to emphasize that the area comes under the Russian sphere of influence.¹⁰⁸



a <https://www.reuters.com/world/russian-military-armenia-reinforce-areas-near-azeri-border-agencies-2021-05-03/>, last accessed May 27, 2021.

b <https://www.africom.mil/pressrelease/32887/russia-deploys-military-fighter-aircraft-to-l>, last accessed May 27, 2021.

NOTE: Unless otherwise indicated, all figures are taken from IISS Military Balance 2021.

Figure 23: Russia's presence in and around the eastern Mediterranean Basin

Part of the Russian strategy in the Mediterranean is driven by the need to gain a foothold in countries where new energy developments are taking place. In Egypt, Russia bought 30% of the offshore gas field Zohar from the Italian Eni company. This is a central gas extraction field in the eastern Mediterranean, and in Libya, Russia is

¹⁰⁷ Dmitry Gorenburg, "The HMS Defender Incident: What happened and What Are the Political Ramifications?" *Russia Matter*, July 1, 2021.

¹⁰⁸ Abraham Mahshie, "Russia Simulates Bombing Exercise in Black Sea as NATO, US Forces Exercise", *Air Force Magazine*, July 6, 2021.

taking a major gamble for the possibility of acquiring concessions. Russia's recent military support for the forces of General Khalifa Haftar in the east and south of the country, and the red line from Sirte to Al Jufrah, which was drawn by the Russian expeditionary force to Libya in 2020 have an energy dimension which is no less important than its strategic dimension.

As for a Russian toehold in the Red Sea, the Trump administration exerted political and economic pressure on Sudan not to sign off on rights of anchorage for Russian warships in Port Sudan. Following these pressures, Sudan's Foreign Minister Mariam al-Mahdi, announced that Russia's proposal from 2020 to build a Russian port at Port Sudan was under consideration by the legal authorities in the country, putting a temporary stop to the Russian initiative that made headlines in 2020.

Finally, as stated in the previous year's Maritime Strategic Evaluation for Israel, the Mediterranean will continue to play a key role in the Russian navy's strategy due to its strategic importance as an access point to South Europe, the Middle East and North Africa. As far as Russia is concerned, the Mediterranean embodies the greatest rivalry between Moscow and Washington. By building up its naval forces, Russia hopes to deny NATO access to the region, to defend Russia's southern flank, and to assist as a patron of its present and potential client states in the region. The upkeep of a naval presence in the Mediterranean is a more effective strategy for the Russian navy than the attempt to compete with the US Navy on the high seas ("blue waters") since Russia has neither the resources nor the global ambition to challenge American supremacy around the world, nor the ability to compete against the US Navy in traditional power projection missions. Yet, its ambition, which is also a holdover from the Soviet period, to continue with its status projection in the region will persist, through port visits, regular exercises to project the image of a superpower. At the same time, the enlargement of the Mediterranean fleet (as part of the Black Sea fleet) is a limited, attainable target, even if it closely dovetails with the goals of the Russian foreign policy in the region.

The North Atlantic Treaty Organization (NATO) Forces

The transition of power in the United States has brought with it a strengthening of its commitment toward the NATO countries – a fact that was expressed in the first meeting between the Secretary of Defense, retired General Lloyd Austin, and the NATO Secretary General. Austin stressed the United States' belief that NATO is the substantial forum underpinning trans-Atlantic security and reaffirmed strong support for the NATO 2030 initiative of Secretary General Jens Stoltenberg, which

is intended to keep the treaty militarily strong, to strengthen it politically and to provide it with a more global status.¹⁰⁹

As part of the Qatar Agreement with the Afghan Taliban, the United States and its NATO allies agreed to withdraw from Afghanistan in exchange for a Taliban promise not to allow al Qaeda or any other extremist group to operate from areas under its control. During 2021, the number of NATO soldiers in Afghanistan was reduced from 100,000 to 10,000, the latter all being evacuated in a humiliating, hasty retreat before the end of August 2021. At the time this chapter is being written, it seems the effects of this withdrawal on NATO's naval forces is very limited.

The European Union's Naval Strategy is out of date and according to the plan, by March 2022 the European Union is expected to present its compass for security and defense, which should provide a clearer guideline as to what kind of "maritime player" the EU wishes to be. This is a challenging task, especially when there is limited political agreement as to the maritime security role of the EU, and there is uncertainty as to how far it ought to operate geographically, while there are immediate threats closer to home. In an article by Daniel Fiott, editor of the journal of the European Union Institute for Security Studies (EUISS), he notes that "The EU and its member states will find it increasingly difficult to sustain the rules-based order and the Union's own economic prosperity without a sizeable and consistent investment in maritime power". In his opinion, "The politics of the EU's approach to maritime security is conditioned by questions of geographical priorities and how to balance 'soft' and 'hard' maritime risks", and that "The Strategic Compass should set measurable targets that lead to a higher and more credible EU naval presence, and it may even instigate a shift in the way the EU thinks about maritime security more broadly".¹¹⁰

The activity of the NATO forces in the Mediterranean included Operation Sea Guardian, which is supposed to cover the entire range of NATO's maritime security (MSO). As of now, the operation has three secondary missions: building maritime security capabilities, supporting maritime situation awareness and combatting maritime terrorism. A secondary operation was included as part of the operation, named Sophia Operation. This is a European Union operation regarding information sharing, logistical support and implementation of Resolution 2357 of the UN Security

¹⁰⁹ John F. Kirby, "Readout of Secretary of Defense Lloyd Austin's Meeting With NATO Secretary General Jens Stoltenberg". *US Department of Defense Release*, June 7, 2021.

¹¹⁰ Daniel Fiott, "Naval Gazing, The Strategic Compass and the EU's maritime presence", *Brief*, 16, July 2021, p. 1.

Council (the arms embargo on Libya). From time to time conflict arises between the forces participating in this operation – for example as was the case in July 2020 when France notified NATO it was ending its involvement in a maritime operation in the Mediterranean until after examination of the causes and after drawing conclusions from the incident between French and Turkish warships.¹¹¹

As for the patrol missions to prevent arrival of refugees from the North African coast in Europe, the International Organization for Immigration mentions that the sharp increase in the number of fatalities at sea was due to a decrease in the number of maritime patrols conducted by the NATO forces in recent years, which has led to a rise in the number of deaths.¹¹²

Between August 3 and 16, the Sixth Fleet carried out a large-scale exercise in the Mediterranean, where the last such exercise was carried out in 1981 at the height of the Cold War. The exercise included various scenarios. It combined forces both in and outside the Sixth Fleet's area of responsibility, and it provided prestigious training on sea and on land against a challenging adversary. Approximately 36 warships took part in the exercise, ranging from aircraft carriers to submarines, and also some 50 units which integrated in the exercise virtually. The exercise was commanded from on board the *Mount Whitney* command ship.¹¹³ The spokespeople of the forces that participated in the exercise noted the rise in superpower tensions and in this case between Russia and the United States, tension that causes the execution of exercises that improve the joint operations of the NATO forces, but which also send a message of commitment on the part of the United States toward its NATO allies.

NATO Forces Activities in the Black Sea has increased dramatically in 2021 and has included a large number of exercises and operations. On March 18, 2014, Russia officially annexed Crimea and the majority of the international community does not recognize this annexation, instead viewing Crimea as Ukrainian territory. The West, spearheaded by the United States and the European Union, imposed economic sanctions on Russia. NATO granted Ukraine the status of an Enhanced Opportunities Partner in June 2020, a status which is granted to countries like Sweden, Finland, Georgia, Austria and Jordan. This status means that Ukraine will have access to more programs and collaboration and information sharing exercises, including conclusions which are published when the exercises end. It must be noted that the naval forces of

¹¹¹ "France suspends role in NATO naval mission over tensions with Turkey", *France24*, July 1, 2020.

¹¹² Lorenzo Tondo, "Migrant boat capsizes off Libya, killing 57, as regional toll for 2021 nears 1,000", *The Guardian*, July 27, 2021

¹¹³ "Mount Whitney and Sixth Fleet Underway for LSE", July 27, 2021

the United States and NATO from time to time carry out routine patrols in the Black Sea as part of the freedom of navigation activity in the region. In addition, NATO forces have ramped up their presence in the region and they frequently carry out naval exercises as a show of military support for Ukraine and to prevent additional unilateral measures from Russia. In April 2021 Russia announced a six-month closure of several regions in the Black Sea to foreign warships (from April 24 to October 24), the period during which NATO usually carries out its maneuvers in the region.¹¹⁴ The Russians noted that the restrictions would apply to the region along the Crimean coastline between Sevastopol and Gurzuf, a region which is near the Kerch peninsula, and a small area near the western tip of Crimea. In addition, Russia announced in early April that it was beginning to evacuate most of its forces from the Crimean Peninsula as part of its desire to reduce the level of friction between it and Ukraine. Despite this, the state of relations between Russia and Ukraine remains tense.

In the section discussing the Russian navy, the Sea Breeze 2021 exercise the took place in June-July 2021 is discussed at length.

On July 2, NATO members Greece, Romania and Turkey took part in air defense exercises in the Black Sea. The United States maintains a permanent presence in the Black Sea countries in order to deter the Russian aggression. The Crimean Peninsula, which was annexed by Russia in 2014, is merely 200 kilometers away from NATO shores. Additionally, NATO maintains, on a permanent basis, 200 American soldiers and two fighter aircraft in continual readiness in the Mihail Kogălniceanu airbase in Romania (whose operation is financed by the United States).

The activity of the NATO naval forces in the Baltic Sea and Atlantic Ocean included several activities, the main one being the annual BALTOP 50 maneuver, which was carried out between June 6 and 18, 2021 led by the United States with participation of the Standing NATO Maritime Group 1 (SNMG1) and the minesweeper force of the Standing NATO Mine Countermeasures Group 1 (SNMCMG1). The exercise was intended to improve the interoperability and the level of operational readiness between the naval, air and amphibious ground forces of the participating countries. In addition, the exercise's goal was to deter possible aggression from potential threats and to allay the concerns of the regional allies and its partners in the context of NATO's undisputed commitment to defend them. Forces from 16 countries took part in the exercise, including 40 ships, 60 aircraft and 4,000 soldiers. The exercise's

¹¹⁴ For more on the maritime dimension of the dispute between Russia and Ukraine, see: Shaul Chorev, "Key Naval Fleets – Trends and Changes", *Maritime Strategic Evaluation for Israel 2020/21*, pp. 78–80.

scenario focused on a naval response to a crisis looming in the Baltic Sea region with multinational naval units carrying out combined operations which include maritime control and freedom of navigation operations. The air forces that took part in the exercise assisted the naval forces in providing air cover, building a maritime area picture and supporting amphibious operations.¹¹⁵

New British Naval Strike Group



Figure 24: Makeup of the British Strike Group

With the completion of the building of the new British aircraft carrier, *HMS Queen Elizabeth*, and with the completion of its sea trials, the British have assembled a new strike group consisting of Royal Navy destroyers and frigates (see figure 24), which have been joined by two NATO allies vessels: the American destroyer, *USS The Sullivans* and the Dutch *HNLMS Evertsen*. The group began its 28-week tour in June 2021, during which time it will travel 26,000 nautical miles from the Mediterranean to the Red Sea, from the Gulf of Aden to the Arabian Sea, and from the Indian Ocean to the Philippines Sea, etc. During this tour, the group is going to call at ports in India, Japan, South Korea and Singapore and in the South China Sea region. The British proudly emphasize that this is the largest group Her Majesty's Navy has managed

¹¹⁵ "NATO Standing Naval Forces Participate in the 50th Iteration of Exercise BALTOP", June 21, 2021.

to assemble in a generation.¹¹⁶ On July 6, the strike group passed through the Suez Canal en route to the South China Sea and the Western Pacific Ocean. This is the first time since 1997 that Britain exercises a naval force in this region. The last time a British task force operated there was the visit to Hong Kong prior to the handover of the former colony to the People's Republic of China on July 1, 1997.

There is no doubt France and Britain are the two main countries in NATO (except for the United States) which are capable of activating strike groups of any significant size. This is also the reason why when the British exited the European Union, it was important for the French that Britain remain a NATO member.

The Indian Navy

India stresses the role of its navy in protecting its natural wealth, keeping its trade routes open in order to develop economically and to maintain its international standing in the world. Accordingly, India is compelled to build and operate a large, powerful navy which must remain in a high state of readiness so that in the event of a security crisis, or in case of natural disasters such as floods, droughts, cyclones, earthquakes or other hazards – it would be capable of fulfilling its missions efficiently and safely.

Building the Naval Force

The Indian navy is one of the world's largest. Its order of battle consists of 10 destroyers, 13 frigates, 17 submarines and one aircraft carrier.¹¹⁷ India is expected to launch a second submarine – SSHN Arihant class for its strategic fleet and also a second aircraft carrier (which has been designed and built in India) this year. However, in India plans are one thing, the execution is quite another and there may well be delays in this plan.

In order to address the imbalance with the Chinese navy (which is the reference navy), the Indian navy plans to acquire several new, advanced vessels, in particular submarines (both nuclear and conventionally powered). Two new Arihant model submarines are in different stages of construction and are scheduled to be added to the Indian navy by 2025. Three submarines, larger than the Arihant (model S-5) are in the pipeline for construction in the second half of the decade. The Indian

¹¹⁶ "UK Carrier Strike Group 2021: Who's Joining HMS Queen Elizabeth On Deployment"? *Forces Net*, May 23, 2021.

¹¹⁷ Benjamin Brimelow, "A year after a showdown on 'the roof of the world,' India is gearing up to take on China at sea", *Insider*, June 3, 2021.

navy is preparing for the construction of six nuclear attack submarines and by 2025 to replace the leased SSN *INS Chakra* submarine with a newer Russian submarine model Akula – class SSN.

By the end of the decade, the Indian navy is scheduled to complete the construction of seven improved stealth frigates, of the Nilgiri-Class and four frigates of the Admiral Grigorovich class, to be built by Russian shipyards and two by Indian shipyards.

The Indian navy is building a new naval base, which is being developed as part of the Varsha Project (*INS Varsha*). The new base is supposed to be the home base of the submarine fleet and of the new nuclear ships. It has been planned to be located at a radius of approximately 200 km from Visakhapatnam, the headquarters of the Indian Navy's Eastern Fleet Command at a site named Rambilli, which is 50 km away from Visakhapatnam (see Figure 25).



Figure 25: The new Indian Naval Base

The Indian Navy's budget

Since its budget has been diminishing in recent years, the Indian navy has diluted its plans to maintain a force of 200 warships down to 175, and has scaled back its long-term procurement budget. However, the Indian navy budget for 2021 was \$4.55 billion, representing an increase of close to 22% compared with the \$3.73 billion in 2020. The increase enables the Indian navy to acquire, through the U.S. Foreign Military Sales program, 10 tactical UAVs MQ-9 class Reaper made by the American company General Atomics. In addition, the Indian navy is in the process of acquiring information from other countries in an effort to identify a possibility of leasing weapons as a mechanism that will bridge the gaps.¹¹⁸

The budget earmarked for maintenance of the Indian navy's warships and submarines in 2021 stands at \$3.19 billion compared with \$3.13 billion in the previous budget.

Activity

This year we have decided to direct our attention to the Indian navy's activity in the western Indian Ocean – the Gulf of Aden, Horn of Africa, and the Red Sea.

In 2015, Indian Prime Minister Narendra Modi launched his diplomatic initiative for the Indian Ocean, named Security and Growth for all the Region. The vision is to build broad trust and advance mutual respect for the maritime laws and to peacefully resolve disputes between the region's countries. In fact, this initiative was also a response to the Chinese Belt and Road Initiative, and the failure to respect the international rulings on all matters concerning sovereign territorial water boundaries in the South China Sea region.

The Gulf of Aden and the Gulf of Oman form the western sector of the Indian Ocean and are in fact included in this initiative even though its more pressing targets were countries like Sri Lanka and the Seychelles Islands, where the Chinese penetration was more immediate and conspicuous. Thus, for example, as part of this initiative, India built and delivered two patrol boats to the Seychelles Coast Guard in April 2021.

As the importance of the Red Sea for international trade increases, the Indian navy's activity in the western region of the Indian Ocean and in the Red Sea has increased. More and more navies are increasing their activity in the Gulf of Aden region and in

¹¹⁸ Amrita Nayak Dutta. "Faced with budget crunch, Navy could relook at long-term modernisation plans, lease vessels," *ThePrint*, March 12, 2021.

the Red Sea. With regard the Indian navy, the previous review already noted that in 2018 India signed an agreement with Oman giving India access and use of the Duqm Port, which is intended to serve the Indian navy when it conducts operations in the western region of the Indian Ocean. This is, among other things, an expression of the importance India attaches to protecting its shipping routes, and in particular in all matters of energy imports from the Gulf States, which make up the lion's share of the energy the developing Indian economy needs. In May 2021, India extended two pivotal defense pacts with Oman, her oldest strategic partner in the region. This strengthens the assessment that New Delhi is bolstering its defense partnership in the western Indian Ocean region against a backdrop of the increasing Chinese presence there.

In April 2021 a three-day naval wargame was carried out in the Arabian Sea between a French navy task force and the Indian navy. The wargame was conducted against the backdrop of the growing unease with the increasing Chinese presence in the Indian Ocean region. The wargame consisted of the French task force led by the *Charles de Gaulle* aircraft carrier and a strike force of the Indian navy, which included the guided missile stealth destroyer *Kolkata*, the guided missile frigates *Tarkash* and *Talwar* a refueling and supply ship, a *Kalvari* class submarine and long-range patrol aircraft class P-8I. The two parties stressed the shared interests and commitments to security in the Indian Ocean.¹¹⁹ It should be noted that the French task force made its way through the Suez Canal just a few days before the *Ever Given* blocked it, a fact indicative of the problematic nature of deploying navies via choke points susceptible to being blocked.

India independently carries out anti-piracy operations in the Gulf of Aden. In June 2021 the Indian frigate *Trikand* participated in a joint wargame with European Union forces stationed west of Somalia as part of the EU NAVFOR Somalia – Operation Atalanta. Besides the *Trikand* frigate from the Indian navy, other participants were the Italian frigate *Carabiniere*, which served as the flagship of the game, the Spanish frigate *Navarra*, the French frigate *Surcouf* and the amphibious attack helicopter carrier *Tonnerre*. The exercise included sending of helicopters on naval missions such as search & rescue, and overpowering exercises on suspicious ships. In August 2021, the *Trikand* participated in another joint wargame with the German frigate *Bayer* in the Gulf of Aden.¹²⁰

¹¹⁹ "Indian and French navies begin three-day wargame in Arabian Sea", *The Economic Times, News*, Apr 26, 2021.

¹²⁰ Dipanjan Roy Chaudhuri, "India-EU conduct conduct naval exercise to uphold rules-based order in Indo-Pacific region", *The Economic Times*, June 21, 2021.

The Indian frigate *INS Tabar* entered the Red Sea in early September 2021 and crossed the Suez Canal en route to the Egyptian naval base in Alexandria. After its visit in the naval base, the frigate conducted a joint exercise with the Egyptian frigate *Alexandria*. For the Egyptian navy, the exercise formed part of its joint training program with global peers in order to improve its people's combat capabilities, to enable it to overcome shared challenges and to guarantee maritime security and regional stability. The exercise included a broad range of maritime operations and combat exercises, including coping with an asymmetrical threat environment and joint maritime security operations.

After completing its visit to Alexandria, the frigate crossed the Suez Canal again southwards. On its way, on September 10, 2021, it conducted an exercise together with two Sudanese navy ships. The Sudanese guard ships *Almazz* and *Nimer* took part in the exercise, which was carried out close to the navy base at Port Sudan together with the Indian navy frigate *INS Tabar*. The official Sudanese news agency (SUNA) reported that the exercise was carried out as part of the Sudanese armed forces general command's program, "aims to strengthen the exchange of experiences with the armed forces of brotherly and friendly countries, especially the navy". The Indian Navy spokesman noted that the exercise is part of the Indian Navy's routine deployment and that the collaboration with the Sudanese Navy in the Red Sea was "maiden maritime partnership exercise".¹²¹

In November 2020, and as part of the Indian government's humanitarian aid mission, the Indian navy ship *Airavat* entered Port Sudan with a shipment of 100 tons of food for the people of Sudan. This mission is consistent with India's Prime Minister Modi's vision for security and growth for everyone in the region – a strategy named SAGAR, which attributes importance to India's relations with its maritime neighbors, especially in the context of China's entry into the Indian Ocean and the Red Sea as part of its Belt and Road Initiative.

Finally, the India navy will continue to try and position itself as an ocean-oriented fleet with strategic capabilities and as a navy that has maritime power that will try to deter its traditional rival China from acquiring influence in the Indian Ocean region. Despite the United States' continuing attempts to make a close ally out of India and to sever it from its traditional ties with Russia, India will try to persist in maintaining diversity in its procurement sources, and its collaborations with countries like Russia, in the spirit of the policies of the Non Alignment Movement (NAM). India will also maintain

¹²¹ "Sudan and India conduct naval training exercise in Red Sea", *Sudan News Agency (SUNA)*, September 12, 2021.

its membership in the Quad security dialog, which is a strategic dialog between the United States, Japan, Australia and India, taking place through talks between the member states on the one hand, and on its network of strategic relationships it has developed in recent years with the United States on the other hand. This matter will be reflected also in India's maritime strategy, which is updated from time to time.¹²²

The Turkish Navy

In the Center's situation assessment for 2020–2021, a comprehensive paper was included, entitled - "The Turkish Navy – Its strengthening process and operational doctrine".¹²³ Therefore, this review will only cover developments and changes that have taken place in the past year vis-à-vis the comprehensive paper.

This past year has been characterized by severe tensions between Turkey and France following a clash between the two countries' navies in the Eastern Mediterranean in the summer of 2020, the escalating tensions that might erupt into open hostilities between Turkey and Greece with respect the demarcation of the boundaries of the two countries' Exclusive Economic Zones, including the dispute over Cyprus' Exclusive Economic Zone. To this one should add the shock in certain European capitals, in particular in Paris, from Turkey's successful intervention in Libya, which has added another dimension to the already-long list of grievances between the two parties. Turkey's assertiveness and its military moves in Syria or, more recently, in its assistance to Azerbaijan in its battle against Armenia, in which territories which had belonged to Azerbaijan were taken back from Armenia, Turkey's close ties with militant Islamic groups in Syria and the latter's use of Turkey's military operations are triggering a harsh, albeit not always rational or justified, response on the part of some of its allies in NATO.

As time goes by it transpires that Turkey's operations in the eastern Mediterranean is more and more derived from an ambitious legal and geopolitical doctrine, which is based on a claim of sovereignty over a vast maritime territory – the "Blue Homeland", or Mavi Vatan in Turkish.¹²⁴ This strategy was developed by several admirals who

¹²² Shishir Upadhyaya, *India's Maritime Strategy – Balancing Regional Ambitions and China*, Routledge, June 30, 2021

¹²³ Shlomo Guetta, "The Turkish Navy – Its Strengthening Process and Operational Doctrine", in Shaul Chorev and Ehud Gonen (eds.), *Maritime Strategic Evaluation for Israel 2020/21* (Haifa: Maritime Policy and Strategy Research Center, University of Haifa, 2021), pp. 168–186.

¹²⁴ Omri Eilat and Ayal Hayut-Man, "The Turkish Maritime Doctrine – 'The Blue Homeland'", in Shaul Chorev and Ehud Gonen (eds.), *Maritime Strategic Evaluation for Israel 2020/21* (Haifa: Maritime Policy and Strategy Research Center, 2021), pp. 187–195.

were aware of the strategic importance of the maritime domain, and which was endorsed and adopted by the military, the political establishment, the economic establishment and the intellectual elites in Turkey.¹²⁵ The strategy was adopted by President Recep Taip Erdogan. It afforded him the opportunity to consolidate his alliance with nationalist movements and to provide a legal framework for his operation in Libya. Among other things, the adoption of this strategy increased the importance of the Turkish maritime forces (Türk Deniz Kuvvetleri), which have become ever-more involved in the roll-out of this policy and its derivatives, including their involvement in conflicts throughout the Eastern Mediterranean.

The Turkish Government's defense spending is planned to grow between 2019 and 2025, reflecting the Turkish Government's prioritization of the Turkish defense industries, and in particular the naval defense industry. Turkey's defense spending reached a record in FY 2020 totaling \$14.8 billion – a 6.5% increase over the previous year (see figure 26). This growth trajectory is expected to continue and reach \$17.5 billion by 2025.¹²⁶

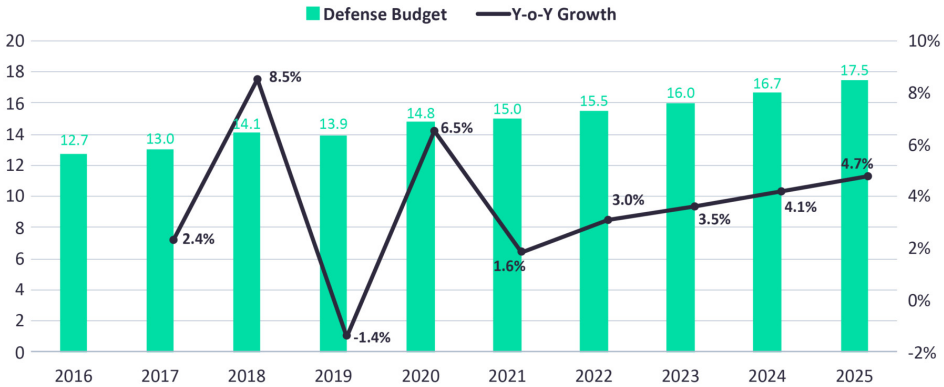


Figure 26 Turkey's defense spending, 2016–2025

Following the sanctions imposed by the United States on Turkey due to its acquisition of an S-400 air defense system from Russia, the local solutions for the force building of the Turkish navy have been brought forward as the main solutions for the growth of its force. Accordingly, the Turkish defense industry was also prioritized to support

¹²⁵ Aurélien Denizeau, "Mavi Vatan, the 'Blue Homeland' The Origins, Influences and Limits of an Ambitious Doctrine for Turkey", *Études de l'Ifri, Ifri*, April 2021, p. 6.

¹²⁶ Turkish defense spending remains top priority for government in 2021 despite COVID-19 impact, *GlobalData*, Aerospace Defense & Security Intelligence Center, Mar 3, 2021.

the navy and to upgrade its fleet and the weapon systems it uses. Therefore, this shift of reliance on developments from the Turkish industry was intended to transform the Turkish navy into a world power-class navy, similar in size to Britain or France. This is seen in the construction of the amphibious helicopter-carrier assault ship *Anadolu TCG*, whose construction began in 2016 and whose sea trials began in 2021. It is intended to enter into service in 2022. The *Anadolu* is a multipurpose amphibious assault ship that can, to an extent, be regarded as a miniature aircraft carrier intended to operate at the head of a Turkish strike force in the Aegean Sea, Black Sea and Mediterranean regions, as well as in the Indian Ocean and the Atlantic Ocean.¹²⁷ In the inauguration ceremony of the first Turkish-built frigate, the *Istanbul*, on January 23, 2021, the Turkish President declared that the entry into service of the amphibious attack ship the *Anadolu* is a sign that the Turkish navy will extend its operations into the oceans.¹²⁸ One must bear in mind that the Turkish navy is the "primary victim" of the sanctions the United States imposed on Turkey following its acquisition of Russian S-400 air defense systems. The Navy had planned to operate F-35B (capable of vertical take-off and landing) from on board its new assault ship, the *Anadolu*, thereby turning it into a light aircraft carrier.



Figure 27: The amphibious assault ship Anadolu

In the coming two years, the Turkish navy is expected to obtain two large landing craft (LST), which will be the largest ships in the world of this class. Over the coming decade the Turkish navy will be receiving frigates (I Class), corvettes (Ada Class) and destroyers (TF-2000 Class). The plan to build Istanbul-class frigates includes the building of four frigates to replace the old Yavuz class frigates. The first ship was delivered to the Turkish Navy in early 2021. The rest are going to be delivered by the

¹²⁷ "TCG Anadolu Multipurpose Amphibious Assault Ship", *Naval Technology*, June 1, 2021.

¹²⁸ Tayfun Ozberk, "Analysis: The Future Of The Turkish Navy", *Naval News*, February 15, 2021.

mid-2020's. The Golcuk Naval Shipyard is supposed to complete the construction of six Class 214 (Piri Reis class) submarines by the mid-2020's. The half-life renovation program for the Barbaros class frigates and the 209 class submarines built in German shipyards (Preveze Class Submarines), are supposed to enable them to remain in service until the mid-2030's. The Turkish navy's development program also includes a prototype of an unmanned surface vehicle (ULAQ), which is being developed locally (AUSV).

At the end of May 2021, the Turkish navy kicked off its Sea Wolf exercise, which continued through to June 6 and was intended to examine the operational level of the naval forces. The exercise also included collaboration with the air and ground forces. 25,500 crew members, 132 ships, 10 submarines, 43 aircraft, 28 helicopters and 14 UAVs took part in the exercise, which practiced field warfare, anti-submarine warfare, electronic warfare and finally, maritime search and rescue exercises and manpower saving scenarios. At the end of the exercise, some of the participating ships paid visits to 22 Mediterranean ports.

Despite Turkey's tensions with its NATO allies, in particular the United States and France, Turkish naval and air forces participated in a NATO exercise in early July 2021 in the Black Sea, which was intended to improve the interoperability of the Alliance, to practice air-to-sea communication and to build stronger relationships between the allies. Forces from Greece, Romania, a NATO AWACS aircraft, three frigates from the NATO 2 (SNMG2) group and the Italian navy's flagship also took part in the exercise. After the exercise had been completed, the forces joined the Sea Breeze 2021 exercise, which has been described in the section on NATO operations in the Black Sea. The participation of Turkish forces in these NATO exercises reflects a desire on both sides to maintain the treaty framework, despite Turkey's image as the alliance's "bad boy".

Turkey, which up until the late 1990s was an importer of navy ships and submarines from foreign shipyards, and which based its surface fleet on American Hazard Perry Class frigates, is gradually becoming an exporter of ships and combat systems, a fact which is also conducive to upgrading its political positioning. The Istanbul shipyards recently completed the building of the first of two MILGEM-class corvettes. In the delivery ceremony held in mid-August 2021 at the Istanbul shipyards, and which was attended by Turkish President Erdogan and Pakistani President Dr. Arif Alvi, the two leaders noted that "these ships will bolster Pakistan Navy's capabilities towards maintaining peace and security in the Indian Ocean Region (IOR)". The Turkish shipyard is helping the Pakistani shipyards in Karachi to set up the production line

in which four additional corvettes of this class will be built for the Pakistani navy.¹²⁹ This aspect of collaboration has to be viewed against the broader perspective of the strengthening relationship between Turkey and Pakistan, including the reference to the challenges both countries are bound to cope with after the completion of the United States' and NATO's withdrawal from Afghanistan.

The Egyptian Navy

According to the Global Firepower Index for 2021, the Egyptian navy is ranked seventh in the world.¹³⁰ This ranking reflects Egypt's desire to become the most powerful Naval power in the Eastern Mediterranean and in the Red Sea Basin. According to this paper's author, the ranking is based on the types and quantity of ships owned by the ranked navies, and disregards other aspects such as the quality of the combat systems, the quality of their operation etc., however the paper does point out a clear, undeniable trend, and that is of a navy, which in recent years has received exceptionally copious resource investment on the part of the Egyptian government, as part of an understanding of its importance in the emerging geopolitical and geo-strategic challenges in the Middle East.

The Force Building Plan of the Egyptian Navy

Egypt, which in the 1980s and 1990s began its procurement of American weapon systems (and in the case of the Egyptian navy frigates from the Oliver Hazard Perry class) to replace its ship order of battle which was based on the Soviet arsenal), has changed direction and, due to political reasons, has begun diversifying its defense procurement, including that for the Egyptian navy, as will be described below.¹³¹

Egypt has become one of only five countries in possession of Mistral-class amphibious assault ships built for it in France: the *Gamal Abdel Nasser* and the *Anwar El Sadat*. Ships of this class enable Egypt to carry out amphibious operations far from its territory throughout the Red Sea (primarily) and in the Mediterranean.

In April 2021 the Egyptian navy received the second frigate built for Egypt in the Bergamini-class FREMM at the Fincantieri shipyard in Italy. These two frigates were

¹²⁹ "Pakistan's first MILGEM class corvette launched in Istanbul", *Naval Technology*, August 17, 2021.

¹³⁰ "2021 Egypt Military Strength", *Naval Forces, Global Fire Power*.

¹³¹ Further details on the Egyptian Navy are available in Shlomo Guetta's paper, "The Egyptian Navy – Its Origins and Its Future (Is It on Its Way to Becoming a 'Green Water' Navy?)" in Shaul Chorev and Ehud Gonen (eds.), *The Maritime Strategic Evaluation for Israel 2019/20* (Haifa: Maritime Policy & Strategy Research Center, 2020).

originally intended for delivery to the Italian navy, however in view of the opportunity to supply them in the Egyptian navy's procurement program, the Italians decided to change the sequence of deliveries (the first was delivered to the Egyptian navy in December 2020).¹³² Besides this, the Egyptian navy is also procuring frigates from this series named Gowind 2500, and with the Egyptian name El Fateh, which are being built for Egypt by the French shipyard Naval Group Lorient and assembled in the Alexandria Shipyards in Egypt. The fourth frigate of this series, which has been built entirely in Egypt, was delivered to the Egyptian Navy in a ceremony held on January 1 2021 at the Alexandria Shipyards. It is indicative of the importance Egypt attributes to the building of a national infrastructure for construction of advanced ships for the Egyptian navy.¹³³ This issue was expressed in the words of President al-Sisi at the opening ceremony of the Navy Base "July 3" (see below). Al-Sisi raised the Egyptian flag on 47 rigid-hulled inflatable boats (RHIB) for the Egyptian navy's special forces, which have been built in Egypt and commissioned in the service of the special units' personnel of the Egyptian navy.

At the start of this decade, Egypt built four missile boats of the Ambassador MK III class in the United States, from the American manufacturer VT Halter Marine. The ships were completed between 2013 and 2015. With a length of 63 meters and 600 tons displacement, upon delivery they were equipped with sea-to-sea missiles type RGM-84 Harpoon, and they are also equipped with a 76 mm cannon made by the Italian company Oto Melara and a Vulcan Phalanx anti-missile weapon system. One of the ships took part in an Egyptian task force which consisted of four ships, and which sailed on March 26, 2015 through the Suez Canal to Yemen to support the operation, led by Saudi Arabia, against the Houthi rebels.¹³⁴ In 2021, the US Congress approved equipping them with Super Rapid RIM-116 missiles, which is a light, rapid-response "fire and forget" missile intended to destroy anti-ship cruise missiles, air-to-sea missiles and land-based anti-ship missiles, especially in a state of asymmetrical warfare.

In early August 2021 the fourth submarine, of the 209/1400 class, was delivered to the Egyptian navy. Mohammed al-Kanani, head of the Military Studies Unit in

¹³² The FREMM is a multi-purpose European frigate designed by the Fincantieri and Naval Group for the Italian Navy, France and a model for export. There is a series in France named Aquitaine, while in Italy they are named Bergamin. There is also an anti-submarine, air and surface version in the series.

¹³³ Nathan Gain, "Egyptian Navy Commissions First Locally Built El Fateh-Class Corvette" *Naval News*, January 7, 2021.

¹³⁴ "Four Egyptian warships en route to Gulf of Aden", *Aharam Online*, March 26, 2015.

the Cairo-based Arab Forum for Analyzing Iranian Policies, said that "Egypt is developing its submarine fleet to maintain its place in the region's naval power balance". He added that this was not the last word in the procurement process and that "As many countries in the region are boosting submarine capabilities [...] Egypt will not be satisfied with four submarines from Germany". According to al-Kanani, this can be explained by the fact that it operates "two fleets: the Northern Fleet in the Mediterranean and the Southern Fleet in the Red Sea, with the growing challenges and threats to secure navigation [as well as] combat terrorism and arms and terrorists smuggling."¹³⁵ The current contract between Egypt and the German shipyards include an option to order two more submarines.

Organization of the Egyptian Navy for its Missions

In January 2017, the Egyptians decided to split the Egyptian navy in two: the northern fleet and the southern fleet. The area of operations of the northern fleet covers the Mediterranean region and its mission is to secure Egypt's strategic northern and western fronts. The southern fleet is in charge of the Suez Canal and the Red Sea, and is responsible for securing the eastern and southern front. The split has improved the performance and flexibility of several commands of the naval forces and has provided a new perspective on the Egyptian force building, which is based on the nature of the operations assigned to each fleet, defined by the operational region's geopolitical context.¹³⁶

The northern fleet is intended to deal with the growing geopolitical conflicts in the Eastern Mediterranean region over maritime regions and to protect the energy resources extracted from the sea. Its main mission is to defend Egypt's economic interests, especially the newly developed gas fields. In addition, the northern fleet is in charge also of controlling the flow of illegal immigration from North Africa to Europe.

The southern fleet deals mostly with deterring the security threats arising from the political instability in Yemen and the Horn of Africa, where Iranian-backed terrorist organizations and militias are continually harassing shipping and blocking vital maritime chokepoints. In this sense, the southern fleet of the Egyptian navy plays a decisive role in securing international shipping and trade between Asia, Africa and Europe via the Red Sea and the Suez Canal.

¹³⁵ Agnes Helou, "Egypt receives fourth German S-44 submarine at Alexandria base", *DefenseNews*, August 3, 2021.

¹³⁶ Dalia Zaida, "The Egyptian Navy's Journey from Surviving to Thriving", *Majalla*, July 9, 2021.

In early July 2021 Egyptian President al-Sisi inaugurated the "July 3 Naval Base" at the Port of Gargoub, on Egypt's northwestern Mediterranean coast approximately 70 km west of Marsa Matrouh. The giant new navy base, which covers an area of 2650 Dunam (approximately 650 acres), has been named "July 3" to mark the end of the Muslim Brotherhood regime headed by President Morsi, in 2013. Senior delegations from neighboring Arab countries took part in the inauguration, including Sheikh Mohammed bin Zaid al-Nahyan, the Crown Prince of Abu Dhabi and Deputy Supreme Commander of the United Arab Emirates Armed Forces; and the President of the Libyan Presidential Council, Mohamed al-Menfi. The new naval base is the third naval base, and the fourth Army base, built in the past five years. Other military bases are: the Berenice Naval Base on Egypt's southern border with Sudan on the Red Sea, the main naval base at Port Said on the southeast of the Suez Canal, and the famous army base Mohamed Naguib at Marsa Matrouh on the Mediterranean. The "July 3" base is the largest military base of its kind in Africa and the Middle East, and the mission of the forces operated from it is to secure the El-Dabaa Nuclear Power Station under construction by the Russian concern Rosatom. In September 2018, the Egyptian navy hosted the military exercise of the American Central Command, The Bright Star, in which naval, air and land forces from Egypt, United States, Britain, France, Greece, Italy, Saudi Arabia and Jordan took part, in addition to 16 observer countries.



Figure 28: The new Egyptian naval base at Gargoub

The "July 3" naval base is intended to play a decisive role in strengthening Egypt's political and military cooperation with Libya, thereby bringing to an end the Turkish and Russian military intervention there. The participation of the provisional Libyan President, al-Menfi, at the opening ceremony in Gargoub, only reinforces this assumption. As far as the senior Egyptian administration is concerned, Libya represents the strategic security depth on Egypt's western border, and the stationing of Turkish soldiers, and foreign mercenaries under the separate command of Turkey and Russia, on Libyan soil, are a source of concern.

The Egyptian navy uses the diplomatic dimension of the naval strategy, conducts joint exercises with various navies without aligning itself with any one of the blocs. Thus, in October 2020, Egyptian and Russian naval forces took part in a joint exercise in the Black Sea, Friendship Bridge, while in July 2021 Egyptian navy personnel took part as observers in the Sea Breeze 2021 exercises in the Black Sea, "shoulder to shoulder" with navy and air force soldiers from 32 other countries, an exercise which was managed by the United States' Sixth Fleet. In the Red Sea arena as well (the southern fleet), Egyptian navy forces and their American peers carried out a joint naval training exercise in August 2021. The Egyptian frigate *Sagem Taba* and the Ticonderoga class guided missile cruiser *USS Monterey* took part in the exercise. Before setting sail, the forces held joint briefings in the Egyptian Naval Base in Berenice. The naval exercises included securing supply lines and trade routes against new threats, which are one of Egypt's main concerns in the Red Sea en route to the Suez Canal.¹³⁷

The exercises are a continuation of the Egyptian navy's plan to hold exercises with friendly countries. This policy is also a result of the reservations the American administration had expressed regarding the military coup of 2013, which removed Egypt's elected President Morsi and replaced him with General Abed al Fattah al-Sisi. Further evidence of this Egyptian policy is the building of the nuclear power station in western Egypt by the Russian concern Rosatom.

The Iranian Navy

The Iranian navy and the Revolutionary Guards fleet have been an influencing factor, both directly and indirectly, on the events in the maritime arena in the Middle East, and in particular in the Persian Gulf en route to Bab-el-Mandeb. The effect has been direct, or via proxies the likes of the Houthi rebels in the Yemen region.

¹³⁷ "Egypt, US participate in Red Sea maritime transit training", *Egypt Independent*, August 17, 2021.

Accordingly, in the annual assessment, we have chosen to include a special chapter by Colonel (Res.) Shlomo Guetta and Major Motti Elharar, which reviews this issue.¹³⁸

Iran's strategy in the Persian Gulf and in the Gulf of Oman is one of Anti Access, Area Denial (A2/AD), which seeks to prevent the opponent from entering or operating in areas it regards to be essential to its security and sovereignty. In realizing this strategy, Iran relies primarily on the Iranian navy (its two branches), its geo-strategic location, and the Straits of Hormuz, which is one of the world's most important choke points of oil supply. This Iranian strategy is based on multi-layered naval defenses built on multiple platforms and weapons which, when operated in an integrated manner, are intended to create a saturated situation picture for the enemy forces operating in the region. Iran emphasizes asymmetrical tactics, such as sending swarms of small vessels (see below), land-to-sea missiles, marine mines, underwater craft, drones and ballistic missiles. In Yemen, Iran provides military support to the Houthi rebels against the coalition headed by Saudi Arabia, which allows Tehran to apply indirect pressure on Saudi Arabia without engaging in direct military conflict. The missiles the Houthis launch against targets in Saudi Arabia and attacks against the Saudi-led coalition's ships are evidence of the fact that Iran is prepared to supply the Houthis with more advanced, more lethal weapons.

Iran operates two naval forces: the Islamic Republic of Iran Navy and the navy of the Islamic Revolutionary Guard Corps, which was established only in 1985 following instructions from Khomeini to set up the Iranian Revolutionary Guards. There are certain overlaps between the two navies, but they are distinct in their training methods and in the way they conduct battle. The Revolutionary Guards corps has a large stockpile of fast, small attack weapons and it specializes in asymmetric hit and run tactics. It is more similar to a naval guerilla force, and it maintains a broad range of weapons for purposes such as coastal defense, and cruise missiles and mines for use against ships. The Revolutionary Guards Navy in the modern era are the outstanding representatives of the small boat swarm tactics, which combine speed, a large number of boats, coordinated maneuvering, low radar signature and concealment. So, on May 10, 2021, a swarm of 13 boats of the Islamic Revolutionary Guard Corps (IRGCN), conducted unsafe, unprofessional maneuvers near ships of the United States Navy, which crossed the Straits of Hormuz.¹³⁹

¹³⁸ Shlomo Guetta and Motti Elharar, "The Development of the Iranian Naval Arm in Recent Years and the Implications for Israel and the Middle Eastern Countries" [current volume]

¹³⁹ Ryan White, "How the U.S. Navy can defeat Iran's swarm attacks"? *Naval Post*, May 29, 2021.

As for the Iranian navy: already in 2016 it announced that it was seeking to develop operational capabilities on the high seas, including in the Atlantic Ocean, and indeed in May 2021 the Iranian navy sent two of its ships on a long voyage around the Cape of Good Hope. The ships that were sent on this mission were the converted tanker *Makran* and the *Sahand* missile frigate. Its objectives were not made public, and there was even a concern that their final destination was Venezuela or Syria, however later on the vessels crossed the la Manche Channel and arrived for the Russian Navy Day, which took place in July 2021.

Regarding force building, the Iranian navy was strengthened in June 2021 by a destroyer named *Dena* and a minesweeper named *Shahin*. In the delivery ceremony held at the Port of Bandar Abbas, the then-president Rouhani spoke and noted Iran's intention to develop its navy for operations on the high seas (a statement that was reinforced by the departure of the converted tanker *Makran* and the *Sahand* missile frigate on their long voyage). On the other hand, the Kilo-class Iranian submarine force has been suffering from serviceability issues in recent years. In January 2021 three of the four submarines were spotted in drydock in the Bandar Abbas region.¹⁴⁰

Since the beginning of 2021, there has been an escalation in the covert battle Iran and Israel are waging against each other, which has earned the moniker The Shadow War. In the maritime domain, since 2019 tit-for-tat attacks have been carried out against commercial shipping, where neither Israel nor Iran have claimed responsibility for any of them. The targets have included Iranian tankers transporting oil bound for Syria; an Iranian ship opposite the Yemeni coast, which served as a floating base for the Islamic Revolutionary Guards, the dominant military force in the country; and these were answered by Iranian attacks against freight ships owned by or linked to Israelis, including a car ferry which was attacked in February 2021.¹⁴¹

In April 2021 the Iranian *MV Saviz* was hit. It had been anchored for several years west of the Yemeni coast, where it was serving as a logistical base providing Iranian support for the Houthi rebels. Foreign sources attributed this attack to Israel and associated it with the Shadow War that has been raging for several years between Israel and Iran, ranging from strikes in Syria, attacks on shipping, and attacks on the Iranian nuclear program. The Iranian navy lost one of its largest ships on June 2 – the *Kharj*, which sank in the Gulf of Oman after having been hit by a fire that raged on

¹⁴⁰ H. I. Sutton, "Iran's Best Submarines Have Been Out of the Water for a Month", USNI News, January 31, 2021.

¹⁴¹ Daniel Avis, "Understanding the Shadow War Between Israel and Iran", *Bloomberg*, August 4, 2021.

board for several hours. The *Kharj* was apparently involved in a string of mysterious explosions which occurred in the Gulf of Oman on several merchant ships (tankers) in 2019, which had been caused by limpet mines that had been attached to the hulls of the ships by Iranian divers.¹⁴²

The maritime battle ratcheted up a notch with a deadly drone attack on June 29-30, 2021 on the tanker *Mercer Street* in the Gulf of Oman, which was being operated by an Israeli company. Iran denied involvement, however threats of revenge were heard from Israel. Two crew members died in the assault – one from Britain and one from Romania. This aroused warnings of possible retaliation from Britain, which had lost a crew member, and from the United States, which had created a naval force together with allies in 2019 to help protect the shipping routes in the Middle East. The American Central Command, which investigated the incident, announced that the attack had been carried out by Iranian UAV's, fragments of which were found on the tanker.¹⁴³ In a speech at the Herzliya Anti-Terrorist Conference, Minister of Defense Lieutenant General (Ret.) Benny Gantz stated that "one of the most significant tools Iran has developed is its system of unmanned aerial vehicles". He disclosed the name of the base at Kashan (north of Ispahan), where Iran trains terror operatives to fly UAV's which, according to Gantz, "is the keystone of Iran's terror export network in the region".¹⁴⁴ Iran continued to challenge Israel and the international community through responding to Hezbollah Secretary General Hassan Nasrallah's request, which was made due to the dire straits of the Lebanese economy. He asked Iran to send fuel to Lebanon via Syria. The Iranians sent one of their tankers from the port of Bandar Abbas in Iran, which crossed via the Suez Canal, circled Cyprus from the west and arrived unimpeded at the port of Baniyas in Syria on September 13.

As part of the diplomatic component of Iran's maritime strategy, its navy holds joint exercises with other navies, where the most important of all was with the Russian and Chinese navies at the end of December 2019, and another one which is expected to take place in early 2022 (figure 29). The exercises reflect the formation of a Russian-Chinese axis supporting Iran politically at the height of the period in which it is being pressured to return to the nuclear agreement and it is subject to economic and political sanctions by the West.

¹⁴² "Two new warships join the Iranian navy", *The Times of Israel*, June 14, 2021.

¹⁴³ "U.S. Central Command Statement on the Investigation into the Attack on the Motor Tanker *Mercer Street*," Press Release, August 6, 2021.

¹⁴⁴ Yoav Zeitoun and Nina Fuchs, "Gantz discloses: this is the base in which Iran trains terror operatives to fly UAV's", *Ynet*, September 12, 2021 [Hebrew].



Figure 29: Planned naval exercise of Iran, Russia and China

Finally, over the past several decades, the combined influences of international sanctions and a continuing US presence in the Persian Gulf have restricted Iran's ability to develop and also to be interested in developing a powerful navy capable of projecting its interests abroad. As a result, Iran has chosen to develop the naval branch of the Revolutionary Guards and to focus them on asymmetric warfare and operational tactics which have been described above, such as swarm tactics. The prevailing feeling is that the United States is not interested in continuing its involvement in the Middle East, and its hasty retreat from Afghanistan opens a unique opportunity for Iran to fill this vacuum and build a navy capable of operating on the high seas. The acquisition of the tanker *Mekran* and its conversion into a "mobile maritime base" capable of carrying helicopters, small boats and spec ops forces, as well as the construction of new warships such as the destroyer *Dena*, indicate a new trend toward modernization of the aging IRIN navy as an unavoidable measure for realizing a Shiite crescent led by and surrounding the regional adversaries of Iran.

Conclusion

The recent year saw the continuation of changes in the characteristics of global power and its nature, and the world became more competitive and multi-polar. The naval aspect of this power was emphasized by the key global powers, either in the force buildup plans of the various navies, or in their operational strategies. The trend of geopolitical and geo-economic changes that we have witnessed in the recent decade, such as China's growing power and assertiveness in the global system, the growing importance of the Indo-Pacific Region for the global welfare and security, the development of new markets, and the growth of the world's middle class continued and intensifies this past year.

This past year, the systemic competition intensified between countries and between state and non-state actors. This occurred over international rules and norms. Blocs of influence and competing geo-political and economic values have formed. This competition had impacted the security, economy, and institutions that are the foundations of the way of life of citizens in various countries. It also included continuing deliberate attacks on democratic systems by authoritarian countries and other actors with dubious intentions. This also blurred the fine line between war and peace, as countries use a growing set of tools to fail other countries and force their hand.

Another trend that continued this year was the fast technological changes through new technological breakthroughs, and the digitization of these technologies, which then continued to shape societies, economics, and the relations between the citizen, the private sector, and the state. The forecast is that science and technology will bring considerable advantages and social welfare to countries and their citizens, but will also be a field of growing systemic competition. In the maritime domain, the technological developments increased the examination and development of unmanned platforms and raised awareness to the role of the human factor in 'operating' these devices (Man-Unmanned Teaming).

Global challenges like climate change, global health hazards (like COVID-19), illegal capital, and security and terror issues, will continue to threaten the common security and prosperity and will require international cooperation to deal with them. Among the global challenges, climate change and biodiversity loss will be the most significant to the world's resilience, and need urgent action. The maritime domain is very sensitive to these changes, thus countries must form plans to deal with these challenges, including by activating their respective navies and coast guards.