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Scenarios for Russia's use of its military potential from occupied Crimea

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CONTENTS

Contents	3
Introduction	4
Overview of the security situation	6
Main Scenarios for Russia's use of its military power from Crimea	10
Amphibious operation against Ukraine	10
Forcible resumption of the Dnieper water supply to Crimea	14
Transformation of the Sea of Azov into a Russian lake	17
Russian forceful expansion into the Mediterranean	21
Conclusions and recommendations	24
Recommendations to the Ukrainian authorities	26

INTRODUCTION

The Black and Mediterranean Seas are vital areas for Russia that are relevant to all aspects of its geopolitical ambitions. Russia traditionally fulfils these ambitions with an emphasis on military means. Russia's involvement in numerous wars over the past few centuries clearly confirms this. Immediately after the collapse of the Soviet Union, Russia began implementing its strategy to regain control of the newly-independent states that used to be other Soviet republics. This culminated in the Russian occupation of Crimea in 2014 – the first case of a European country seizing European territory since World War II. Russia's interest in the peninsula was primarily related to the possibility of restoring a huge Russian military base on the peninsula. Russia aims at the guaranteed military control of the peninsula and the marine environment around it, as well as the restoration of the former military hegemony of the USSR in the Black Sea region and beyond.

The current maritime policy of Russia is defined by the document “Fundamentals of the State Policy of the Russian Federation in the Field of Naval Operations for the Period Until 2030” dated July 20, 2017. To realize its huge ambitions, the Kremlin will continue to build up the joint group of armed forces in Crimea, maintain and upgrade its combat readiness, and combine the potential of this force with those in other regions, in particular in the Caspian Sea. The goal of these efforts is to create a military force to act against NATO Naval Forces.

This paper considers possible scenarios for Russia's use of its military potential in Crimea in the Black, Azov, and Mediterranean seas. An analysis of the latest Russian naval military exercises in this region shows that they are aimed at establishing, strengthening, and maintaining a sustainable naval influence on coastal states, as well as aiming their military power in the direction of the Atlantic Ocean, primarily against NATO members and individual countries of the alliance, especially the United States and Great Britain. As a re-

sult, the military balance in the Black Sea and Mediterranean regions has changed dramatically over the past 6-7 years, which significantly undermines regional security.

The scenarios listed below were chosen from among several others because they were considered the most likely, based on an analysis of Russia's military plans. The scenarios were worked out by summarizing information from open sources on the experience of recent Russian naval exercises in the Black and Mediterranean seas. However, when considering possible scenarios, only the military component was taken into account. We deliberately excluded the influence of purely political factors (sanctions, pressure from partners, etc.) on the development of certain scenarios, since the political component can change quickly but it would be short-sighted to rely on its influence without taking military preparations into account.

Several scenarios were chosen as priorities, from the seizure of infrastructure facilities that are vital for Russia (which,

in particular, provide access to water from the Dnieper river) to the seizure of a significant part of the territory of Ukraine.

The “Black Sea scenario” is based on a potential large-scale amphibious operation conducted by Moscow on the coast of southern Ukraine. This operation is the most dangerous for Ukraine. Most likely, it would be carried out as part of a strategic armed offensive by Russia along the entire border of Ukraine that touches Russia and Belarus in order to annex south-eastern Ukraine as part of the so-called “Novorossiia” project. This operation may be preceded by a Russian naval blockade of the north-western part of the Black Sea along with the seizure of the Ukrainian Serpent Island located in that part of the Black Sea.

The “Azov Sea scenario” provides for Russia's implementation of the so-called “Anaconda” strategy, with the goal of suppressing the maritime economy of

Ukraine in the Sea of Azov. This scenario aims at blocking Ukraine's access to the Sea of Azov. This scenario is the most likely one, and its latent implementation is already underway.

The military scenario of actions in the Mediterranean Sea describes the potential implementation of the Kremlin's geopolitical interests in the naval sphere in that region, in particular in order to contain NATO forces in the region. This scenario also provides for Russia's support for frozen conflicts in the Middle East and North Africa which are beneficial to it.

This study aims to facilitate the visualization of Russia's military ambitions and provide separate proposals for countering them to both the Ukrainian authorities and their partners. Understanding Russia's capabilities and intentions will help Ukraine, its partner countries, and NATO to develop their defence strategies and coordinate joint efforts.



OVERVIEW OF THE SECURITY SITUATION

With Ukraine gaining independence in 1991, Russia lost control of a significant part of the Black and Azov seas. Many of the coastal infrastructure facilities of the Soviet Black Sea Fleet (BSF) were placed under the jurisdiction of Ukraine and Georgia. The waters and coasts of Bulgaria and Romania stopped de facto belonging to Russia. The deployment of the Russian Black Sea Fleet in the Ukrainian Crimea (one of the best military bases in terms of location and physical and geographical conditions) was also under threat. But, using its advantages of the moment and its initiative, Russia was able to first “gain a toehold” in Crimea due to the presence of the former Soviet Black Sea Fleet, which remained there until the time of its division in 1997. After 1997 Russian forces became legal tenants of military bases on the peninsula.

In the early 1990s, the Black Sea Fleet experienced significant decay. Of the more than 800 surface ships and submarines in the Black Sea fleet at the collapse of the USSR, no more than one-tenth of the ships and one submarine were still there by the mid-1990s. After the division of the Soviet Black Sea Fleet, Russia received most of the ships and vessels, but these vessels were mostly obsolete and worn out.

For a quarter of a century the Turkish Navy was dominant in the sea. Its combat capabilities were at least 2x greater than the capabilities of the Russian Black Sea Fleet. The high technological efficiency of the Turkish Fleet, which was significantly modernized at the beginning of the 21st century, and its integration into the NATO information exchange system made it qualitatively superior to the Russian fleet, which was made up of disintegrating ships that looked like outdated monsters of the Cold War. The Russian economy was in decline and could not count on new military equipment, but still the Russian military kept a

tight hold on the Crimean land in anticipation of better times.

The military fleets of other Black Sea countries, although relatively small, have been actively cooperating with NATO since the mid-1990s. In 2004, Bulgaria and Romania became members of the Alliance. Ukraine and Georgia, in turn, actively cooperate with the Alliance as partners in the framework of the Partnership for Peace program. These countries, each having about 20-30 total combat units in their surface fleets, were able to cooperate with NATO ships and provide a certain amount of counteraction to the Russian Black Sea Fleet.

Such an imbalance of forces to the advantage of NATO in the Black Sea clearly did not meet the expectations of the Russian Federation.

2014 changed many things. Immediately after the occupation of Crimea, its intensive militarization began. During the 7 years of the occupation of Crimea, the leadership of

the Armed Forces of the Russian Federation have systematically strengthened Russian naval capabilities in the Black Sea, new Russian surface ships, planes, helicopters, and missile systems were delivered to the region, and coastal defence capabilities were increased. Crimea has again acquired the features of an “unsinkable aircraft carrier”, which the peninsula lost after the collapse of the USSR. By 2020 the balance of power in the Black Sea region has already changed to the advantage of Russia, but the correlation of forces still depends on how much of its Navy that Turkey will have in the Black Sea at any particular time.

The greatest attention should be paid to analysing the nature of the exercises of the Russian Black Sea Fleet, which since

2016 began to involve joint tactical forces (JTFs) along with practice missile firings. During these exercises, the objectives of destroying NATO naval groups with missile strikes were simulated by the JTF's ships and coastal missile battalions in cooperation with tactical and strategic aircraft and elements of Russian missile defences. In addition, amphibious landings of battalion-sized tactical groups on unprepared coastlines are regularly practiced, mainly at the Opuk marine landing range near Feodosiya in the Crimea. At the same time, the combined forces of the Russian fleet have developed the coordination of their activities with attack aircraft, helicopters, and special forces. The tactical setups of these exercises were very similar to the action scenarios discussed in this paper.

Table 1. Comparison of the military fleets of countries in the Black Sea in 2020.

	Russian Federation	Ukraine	Turkey*	Bulgaria	Romania	Georgia**
Cruiser	1	-	-	-	-	-
Frigate	5	1	16	4	3	-
Corvette	15	-	10	3	7	-
Submarine	7	-	12	-	1	-
Patrol/guided-missile craft	17	15	35	-	3	16
Minesweeping vessel	11	1	11	12	5	-
Landing - ships - cutters	10	1 3+10	31	-	-	-

* Including the fleet in the Mediterranean Sea

** Georgia currently has only a maritime coast guard



In addition to purely military activities, Russia is implementing a strategy of “creeping expansion” in the waters of the Black Sea, as well as creating and spreading obstacles to freedom of maritime navigation. A relatively new tool of Russian strategy is to manipulate the provisions of the 1974 International Convention for the Safety of Life at Sea (SOLAS-74) and abuse the International automated service for the delivery of navigational and meteorological warnings and urgent information to ships (NAVTEX). Russia declares unreasonably large areas of the sea prohibited for navigation, allegedly for combat training and firing. In addition, Russia continues to detain vessels from different countries at the entrance to and exit from the Kerch Strait on the way to Ukrainian

ports on the Sea of Azov: Berdyansk and Mariupol. These hybrid actions have the signs of short-term aggressive blockading actions. They are aimed at collecting the necessary information to support further active actions at sea and have a very negative impact on maritime navigation.

It is important to note that Russia sees Crimea not only as a core element of its dominance in the Black Sea region (including the Sea of Azov), but also as a critical base for its geo-strategic influence in the Eastern Mediterranean, the Middle East, and North Africa.

Russia is rebuilding its military capabilities in the Mediterranean Sea. For this purpose, the Russian military and na-

val base in Syria in the port of Tartus is being developed. According to the new agreement between the Russian Federation and Syria (dated 2017), the lease of the base was extended for 49 years. New facilities are being built to base and maintain ships and submarines of the 5th Mediterranean Squadron. The possibility of opening other bases of Russian troops in Syria for long-term Russian use, in particular at the Khmeimim Air Base (near the Port of Latakia) is also being considered. In 2021, Russia and Syria began negotiations on the creation of a Russian military base near Palmyra.

There is a permanent grouping of the surface forces of the Russian Navy (5th Operational Squadron) in the eastern Mediterranean region, which now includes up to 15 surface ships and submarines on a rotational basis.

Of course, the forces built up by Russia in recent years are aimed at performing certain military tasks. The main scenarios for such actions will be discussed below. The sea flank remains the least protected area in southern Ukraine. Although Ukraine’s naval capabilities were reinforced by coastal defence forces, naval infantry and small armoured boats, the military capabilities of Ukraine are significantly inferior to the Russian ones.

The most optimal way to strengthen this potential is to develop a maritime surveillance system, as well as build capabilities that will deny access to the proximal maritime zone (Sea Denial) and protect ports and navigation close to the coast of Ukraine (Sea Control). At the same time, it is necessary to develop a basing system on the coasts of the Black and Azov seas for the Ukrainian fleet.

Until 2014 the Ukrainian fleet was mainly concentrated in the Crimea. The basis for countering the aggression of the Russian Black Sea Fleet by Ukraine should use the tactics of asymmetric strikes against the most vulnerable enemy forces. The area for such actions in the next five years is the north-western part of the Black Sea and the northern coast of the Sea of Azov. The most achievable useful tools to accomplish this, given the resources available, is building up the fleet's surface forces with small-sized, high-speed and manoeuvrable boats that can ensure the performance of the above-mentioned tasks near the coast (out to 200 miles). Their high utility and compliance with NATO technical standards can give them additional opportunities to defeat a stronger enemy, including according to the scenarios defined in this paper.

MAIN SCENARIOS FOR RUSSIA'S USE OF ITS MILITARY POWER FROM CRIMEA

Scenario of an amphibious operation of the Russian Federation against Ukraine

An amphibious operation conducted by Russia on Ukraine's southern coast is the most dangerous scenario for Ukraine. The goal of such an operation would be to seize the Black Sea coast of Ukraine and the territories of its southern regions. Such an operation would require the most powerful military task groups from Russia. If such an operation would be carried out, Russia is likely to conduct it against the background of a large strategic offensive of the Armed Forces of the Russian Federation along the entire line of its state border with Ukraine, and also from Donbass and possibly from Belarus.

Historical experience shows that in the north-western part of the Black Sea, which washes the coast of Ukraine, there are a number of key places where amphibious operations could be conducted. The sea coast of Ukraine has a significant number of amphibious-accessible sections, of which several main amphibious directions can be discerned today. The total length of amphibious-accessible destinations is up to 70 km, which is 6.9 percent of the length of the seacoast.

Such places include:

1) The sandy coast between the Karkinit Bay and the Kinburn Peninsula, which has favourable physical and geographical conditions for amphibious operations. Amphibious actions in this area can be aimed at cutting water supplies for the needs of water management and the farms of the Kherson region through the Krasnoznamenensky Canal, which is an arm of the North Crimean Canal;

2) The Odesa port hub (the Odesa, Chernomorsk, and Pivdenny ports) and the Ochakov port. Together with the port economy, these ports provide up to 18-20% of Ukraine's gross domestic product. Special attention should be paid to Ochakiv, a key Ukrainian sea-river hub connecting the Black Sea with the internal waterways of Ukraine and the ports of Mykolaiv and Kherson. Given the history of Ochakiv, it historically had and still has sacred significance for Moscow, no less than Sevastopol and Crimea;

3) Serpent Island, which has a favourable physical and geographical position just outside the Danube delta area of the Black Sea. It should be noted that after the Second World War, the Soviet authorities ultimately insisted that Serpent Island should go to the Soviet Union. According to Soviet plans, this was necessary to gain control over navigation of the Danube and the surrounding airspace in the interests of ensuring the operations of the strike aircraft of the 24th Air Army of the Supreme High Command of the USSR;

4) The sandy coast of Southern Bessarabia. Amphibious actions in this area can be used as parts of combined actions with the Russian military contingent in Transnistria aimed at isolating the Odesa port hub, depriving Ukraine of access to the Danube, gaining control over the southern part of this important European waterway, etc.

These places have a number of amphibious-accessible sections of the coast that could have the capacity for landings of companies and squadrons (except for places 1 and 4 from the list above, where the capacity allows for the conduct of layered amphibious actions of brigade-sized units). In the area of the Odesa port hub, coastal cliffs predominate, which prevent the enemy from conducting large-scale landings on an unprepared coast. At the same time, the fact that certain Ukrainian state ministries and agencies own certain sections of Ukrainian territory with access to the coast and even private ownership of critical territory will complicate the early preparation and effective conduct of a defence of the coast against amphibious landings.

To conduct an amphibious operation in the Black Sea, the Russian Federation can engage up to 64 warships and boats (including 9-10 amphibious boats), up to 300 aircraft and 250 helicopters, 9-12 battalion tactical groups; and a total missile salvo strength of up to 92 high-accuracy long-range missiles. The overall ratio of forces of the parties at sea will be from 1:7.4 in favour of the enemy, and taking into account an anti-amphibious defence – 1:3.8.

Most likely, in amphibious actions, the enemy will rely on the principle of surprise and will act on two or three of the most important areas simultaneously. During

such an operation, covert/hybrid and overt subversive reconnaissance, sabotage, informational, psychological, cyber, and other actions of special enemy units will be used. At the same time, Russia can apply the principle of force if the amphibious group of the Black Sea Fleet of the Russian Federation is augmented with support from the Caspian Flotilla, as well as airborne and other troops of the Armed Forces of the Russian Federation. At the same time, the enemy will operate in most or all possible amphibious areas, as well as in ports. In order to deeply destabilize the situation at the initial or decisive phase of such an operation the enemy can use high-precision weapons against the Naval Forces of the Armed Forces of Ukraine, anti-amphibious defence facilities, and Ukrainian critical infrastructure. In addition, an amphibious operation based on the principle of surprise can transform into an operation based on the principle of force. Such an operation can include an amphibious operation in the south of the Kherson region, which, if carried out, will be carried out using both covert and overt force operations from several directions. In particular, the enemy may resort to sudden amphibious actions to cut off the supply of water for southern Kherson through the Krasnoznamenensky Canal, followed by blackmailing the Ukrainian authorities to give the occupied Crimea access to water. At this time, demonstrative actions of offensive groups of Russian troops near the isthmuses of Crimea and amphibious actions in the Sea of Azov might be conducted. Russia may also intensify actions in the Mariupol direction aimed at breaking through and carving out a land corridor to Crimea (some of these options can be used as diversions to distract the attention of the Armed Forces of Ukraine). The scenario of Moscow's forcible resumption of

the Dnipro potable water supply to Crimea is described below in greater detail.

There are at least two possible directions of advance for amphibious actions: coastal – to cut the passage to/from the Bug-Dnipro-Limansky canal and capture the territories between the Karkinitsky Bay and the Kinburn Peninsula; and seaward – to capture Snake Island and/or land in Southern Bessarabia, as well as to conduct certain operations in the area of the Odesa port hub, including diversionary operations. Taking into account the experience of exercises of the Black Sea Fleet of the Russian Federation in recent years, it is likely that Russia could employ amphibious forces by dividing the amphibious group into an airborne assault echelon on helicopters/aircraft and forces using high-speed means of landing combined with further echelons on landing ships and boats. Given the existence of a single coastal main road in this area, the enemy will resort to actions aimed at blocking, cutting and, in general, stopping the advance of Ukrainian troops into the anti-amphibious defence zone of the seacoast. This operation would be sustained by marine minefields/barriers, as well as navigation units, hydrographic units, and other support units.

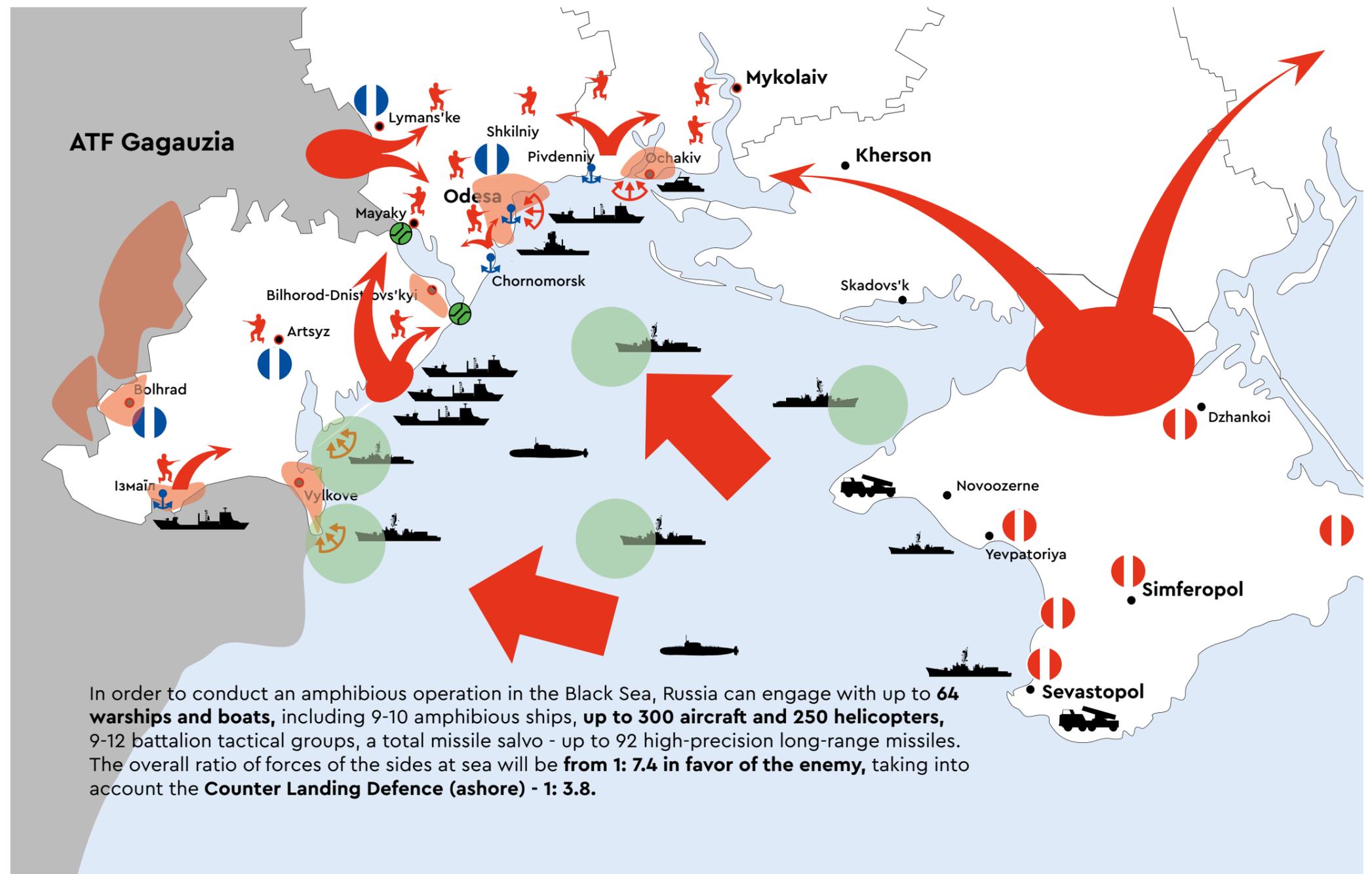
If they are implemented, these operations are likely to be carried out as a key element of a strategic offensive operation of three joint task forces of Russian troops moving against Ukraine in order to implement the “Novorossiya” project of Russia. If the Kremlin decides to conduct this strategic operation, it will be carried out in several strategic directions using various groups of Russian troops deployed along the Russian-Ukrainian state border. Russia can also use its troops from the territory of the Republic of Belarus.

An amphibious operation may be preceded by a blockade (embargo) operation to block the above-mentioned Ukrainian ports. Conditions for this have already been created by Moscow. Russia controls all sea corridors to and from Ukraine with the exception of a 25-mile wide navigation passage between Serpent Island and the Tavrida gas platform, one of the platforms captured by Russia in 2014. The approaches to Ukraine are controlled by deliberately deployed Russian military units with appropriate weapons and technical means of underwater and surface surveillance. The sea area between the Tavrida platform

and the other gas platforms close to the western coast of Crimea has been transformed into a Russian mobile controlled access zone with a layered positioning of forces of the Federal Security Service (FSB) of the Russian Federation, special operations forces, and ships and aviation of the Black Sea Fleet of the Russian Federation. Under these conditions, blockade actions of the Russian Federation in the specified area will not require a significant build-up of forces. This means that at any time, when it is convenient for the Kremlin, this threat can be rapidly acted upon with extremely negative consequences

for Ukraine. At the same time, covert/hybrid methods of armed struggle can be used in the course of blockading actions, specifically – naval mines and submarine sabotage forces.

A large-scale amphibious operation of Russia against Ukraine is currently considered as unlikely.



In order to conduct an amphibious operation in the Black Sea, Russia can engage with up to **64 warships and boats**, including 9-10 amphibious ships, **up to 300 aircraft and 250 helicopters**, 9-12 battalion tactical groups, a total missile salvo - up to 92 high-precision long-range missiles. The overall ratio of forces of the sides at sea will be **from 1: 7.4 in favor of the enemy**, taking into account the **Counter Landing Defence (ashore) - 1: 3.8**.

A scenario of Moscow's forcible resumption of the Dnieper water supply to Crimea

Prior to the annexation of Crimea, mainland Ukraine provided 85% of Crimea's potable water needs. Against the background of the ongoing aggravation of the problem of potable water supply in Crimea, the Russian armed forces can potentially conduct an operation deep into the territory of the Kherson region under a far-fetched pretext in order to establish control over the North Crimean Canal. The scenario for such an operation would be expected to cover a number of covert/hybrid and overt actions in the Black and Azov seas. These actions could involve a number of non-kinetic and kinetic operations: informational and psychological, economic, amphibious, air and land ones, that will be coordinated with each other in terms of the purpose, design, time and methods of deploying and using forces.

The mentioned scenario is expected to consist of the following stages:

1) an informational, psychological and cyber stage aimed at "legitimizing" Russian claims against Ukraine regarding the resumption of water supply to occupied Crimea. This stage can be carried out through: a biased "interpretation" of the provisions of International humanitarian law, the formation of affirmative consent among certain segments of the population of the coastal regions of Ukraine regarding the resumption of the supply of water from the Dnipro river to the peninsula, as well as the destabilization of critical infrastructure facilities through cyber-attacks;

2) conducting naval blockades and other actions in the Black and Azov seas with the aim of the socio-economic destabilization of the Ukrainian coastal territories, as well as forming a contrived excuse for the Kremlin to invade Ukraine;

3) armed escalation, demonstrative actions of Russian troops in the Black and Azov seas, near the isthmuses of Crimea, in the area of Mariupol, and on certain sections of the delimitation line in the Donbas;

4) a surprise amphibious operation with the aim of cutting off the supply of water for the Kherson region via the Krasnoznamenensky Canal by seizing the wa-

ter-intake facilities and key pumping stations; this stage may also provide for the blockade of the coastal grouping of the Armed Forces of Ukraine from the Black Sea and Azov flanks and facilitating the actions of land groupings of Russian troops in the coastal directions;

5) an offensive of Russian troops in the direction of Mariupol-Krasnoperekopsk to break through the land corridor to Crimea simultaneously with mutually-coordinated offensive actions of the 22nd Army Corps of the Russian Federation, located in Crimea, as well as an offensive of part of the Russian forces in the direction of Kakhovka, Kherson.

These steps can be consecutive, and some of them can be performed simultaneously. At the same time, it is possible to conditionally distinguish certain scenario phases:

The first phase is the phase of forcing Ukraine to resume potable water supply to Crimea. It will include a set of personalized actions (bribery, blackmail, threats), informational and psychological actions, and the use of force. During the decisive part of this phase, a Kremlin-inspired escalation on the delimitation line is possible, as well as sudden actions to seize the water-intake facilities of the Krasnoznamenensky Canal and key pumping stations using amphibious units (sea-borne and/or airborne). If these actions are successful, it can be assumed that Moscow will issue a short-term ultimatum regarding the resumption of water supplies to Crimea by Kyiv. At the same time, Moscow will demonstrate its "readiness" and "openness" to a "constructive" negotiation process with Kyiv. During this time, the forces of the Black Sea Fleet of the

Russian Federation and the air forces of the Russian Federation will block the Naval Forces of Ukraine in their bases. At this stage, an embargo operation near Snake Island is also possible – to form "controlled chaos" in Ukrainian ports, as well as demonstrative actions with combat missile launches. At the same time, there will be a consolidation of Russian units in the occupied territories, and in case of favourable conditions – their advance towards transit pumping stations and the main dam on the main channel of the Kakhovka Reservoir and the other core facilities involved in the management of the North Crimean canal, in particular those located in Tavrichesky. The overall balance of forces of the parties within this phase is likely to be 1:3.8 in favour of the Russian Federation. The potential conditions for such actions by Moscow have already been created.

The second phase is the phase of the forceful seizure of important southern facilities/locations of the North Crimean Canal, critical infrastructure facilities and critical territories of the Kherson region, as well as a breakthrough on the land corridor to Crimea through large-scale offensive actions of land, air and naval groups of the Russian Federation in the directions of Mariupol - Kakhovka and/or Mariupol - Krasnoperekopsk. As part of this phase, the Kremlin may resort to manipulating the threat of invasion to "finally resolve the issue of water supply to Crimea". Under certain conditions, the actions of Russian troops may be aimed at misleading the leadership of the security and defence sector of Ukraine in order to distract attention from amphibious and other actions in the southern Kherson region. In this case, the main efforts would focus on the unexpected



actions of the amphibious and airborne troops, as well as the ground forces grouping of the Russian Federation in Crimea with the support of strike aircraft and ships. It is important to note that as of today, the Russian Federation does not have a critical advantage over Ukraine in ground combat capabilities for the implementation of this phase. The capabilities of the Russian Federation for this kind of operation at present are the 8th Army (about 45 thousand people, including the 1st and 2nd Army Corps in the temporarily occupied territories of Donbas) and the 22nd Army Corps of the Black Sea Fleet of the Russian Federation (9 thousand people), with a ratio of 1:1.7 in favour of the Russian Federation in the coastal direction. That being said, the Kremlin can build up this task force in a short time.

Given the above, if the Kremlin decides to implement the scenario of the forcible resumption of the Dnipro water supply to Crimea, Russia will quickly change the operational use of its own capabilities in various directions, depending on the situation.

A Russian operation against Ukraine to forcefully resume the supply of Dnipro water to Crimea is currently considered likely.

Scenario of the transformation of the Sea of Azov into a Russian lake

In terms of the military security of Ukraine, the Sea of Azov has a very unprofitable status for Ukraine, that of joint "internal waters" with Russia. Ukraine agreed to sign an agreement providing for this status (The Treaty Between the Russian Federation and Ukraine on Cooperation in the Use of the Sea of Azov and the Kerch Strait) in 2003 under direct Russian pressure after the events near the Tuzla Island. This status creates several potential threats to Ukraine.

First of all, the absence of territorial waters actually means that the limit for legally opening fire on an aggressor approaching on the water or in the air was brought 12 miles closer, this line is now the coastline itself. Secondly, this lack of territorial waters allows the enemy to carry out the covert insertion of frogmen right up to the very coast of Ukraine. Third, under the guise of "research" the aggressor could secretly place sea mines on the approaches to Ukrainian seaports and on shipping routes. These three factors limit Ukraine's use of its armed forces in the event of aggression against it. Also, according to the terms of the Treaty, the ships of third countries, such as the United States, Great Britain or other NATO countries, can enter the Sea of Azov only with the consent of both the Russian Federation and Ukraine, which means that such passage is virtually impossible. This kind of assistance would be significant for Ukraine, especially given that the Sea of Azov does not fall under the jurisdiction of the Montreux Convention of 1936. These factors are well known to the Russian Federation and most likely, they were prepared in advance and artificially.

The most developed Azov Sea ports include: Mariupol and Berdyansk in Ukraine and Taganrog and Rostov-on-Don in Russia. The Volga-Don Canal plays a significant transport role for Russia and provides an opportunity to carry out river-to-sea navigation all the way from the Caspian Sea. This is not only about ordinary transportation, but also about the movement of newly built ships from the factories of Zelenodolsk and landing boats from the Caspian Flotilla. It also provides the only potential for maritime transit communication with the open sea for the other countries of the Caspian region (Azerbaijan, Kazakhstan, Turkmenistan, and Iran). On the coast from Henichesk to Shyrokyne there are several amphibious-accessible areas. In addition to landing amphibious vehicles by the "afloat" method, it is possible to carry out an unopposed landing in the seaports of Berdyansk and Mariupol. Given the small distances between the Ukrainian- and Russian-controlled coasts, the deployment of forces and the conduct of an amphibious operation can be rapid.

A scenario of Russia's actions in the Sea of Azov is a Russian attempt to seize the coast of Ukraine and create a land corridor to

the Autonomous Republic of Crimea. This operation is likely to be carried out by units of the Russian Federation located on the Taman Peninsula. Amphibious assault units of the Russian Federation (up to a battalion – in terms of size) deployed in northern Crimea can also be delivered by helicopters. This strike would be combined with an enemy advance by land, sea, and air. In the future, it is possible for the Russian Federation to attack the north of Ukraine with the seizure of areas of the Left-bank of the Dnieper, where important enterprises of the Ukrainian military-industrial complex and energy capabilities are located, primarily the Zaporizhzhia nuclear power plant and main gas pipelines. An offensive aimed at the seizure of areas of southern Ukraine is also possible; it would be aimed at the resumption of the Dnieper water supply to the Crimea and incorporating, for example, the unrecognized PMR (Pridnestrovian Moldavian Republic) into the Russian Federation.

There are signs that the first stage of this scenario is already underway, in accordance with the so-called “Anaconda” strategy, which provides for the suppression of Ukraine's maritime economy in the Sea of Azov. The Russian Federation seeks to establish control over the situation in the air, at sea, as well as in marine areas close to the bases of the Ukrainian Naval Forces and the State Border Guard Service of Ukraine.

In 2018, Russia completed the construction of a bridge across the Kerch Strait, which was a clear violation of international law, the United Nations Convention on the Law of the Sea in particular. This Russian construction led to a 40% reduction in the size of vessels traveling to the Sea of Azov (similar to PANAMAX) and a 40% reduction in the economic revenues of the two main Ukrainian ports of Mariupol and Berdyansk.

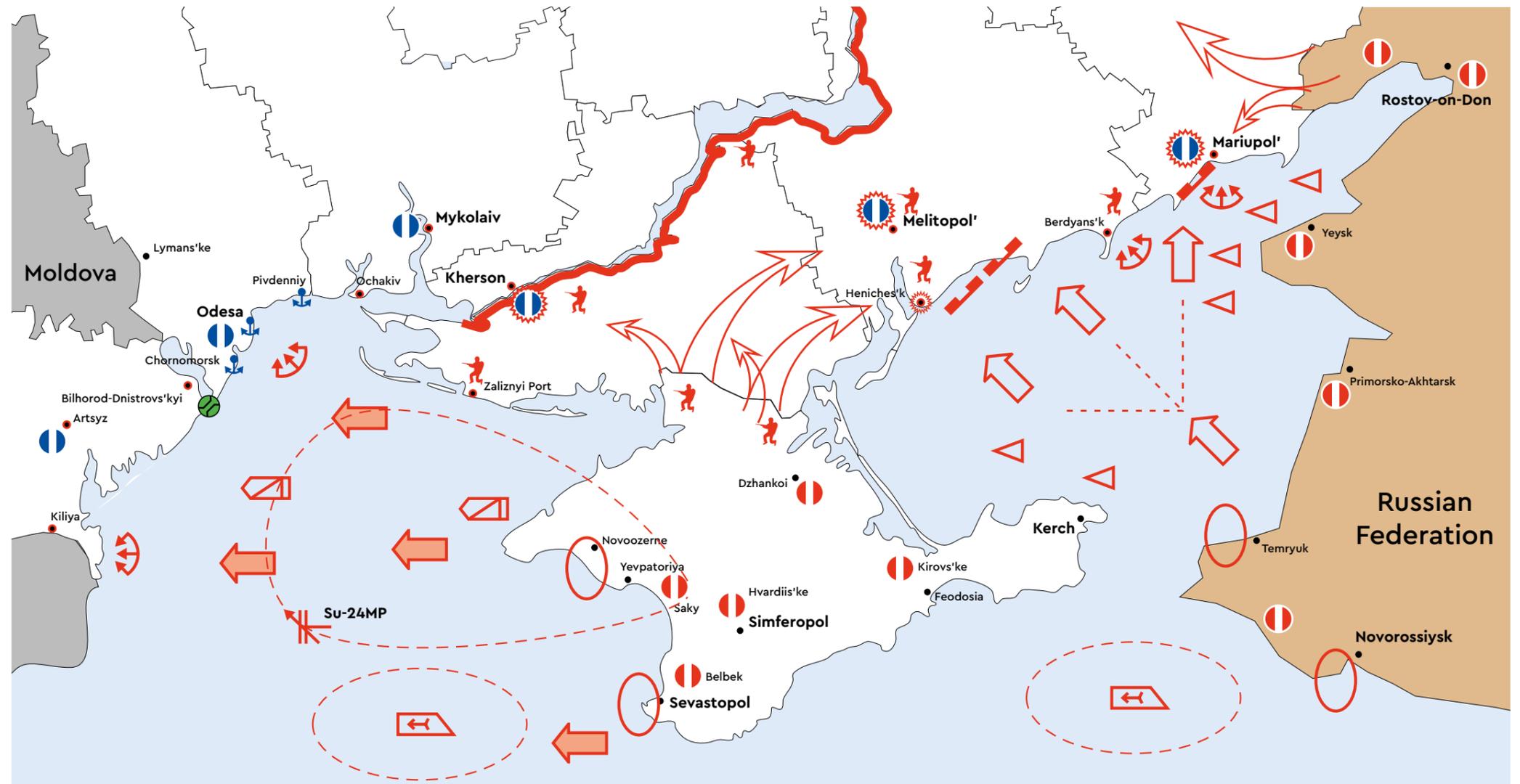
In addition, the Russian Federation continues to hinder Ukraine's maritime economic activity in the Sea of Azov by deliberately delaying ships traveling through the Kerch Strait from the Black Sea to the ports of Berdyansk and Mariupol and also those travelling in the opposite direction. The average delay in late 2018 for a ship attempting this passage was up to 8-12 days in each direction. Today, after political pressure on Russia, the delays have become shorter – about 1-2 days. However, the wait time for vessels bound for Ukrainian ports is many times longer than the wait time for vessels bound for Russian ports in the Azov Sea. This difference confirms the artificiality of

this process. To suppress the economy of the Ukrainian Azov region and prepare for hybrid actions aimed at annexing Ukrainian territories, Russia uses about 100 medium and small Federal Security Service vessels in the Azov Sea.

Physical and geographical conditions, in particular the short distances to the Russian coast, contribute to the naval blockade of the Ukrainian ports of Mariupol and Berdyansk. The only thing that does not allow Russia to use medium and large landing ships to land on most of this coastline is the shallow depth. (The Russian Federation conducted a cycle of navigation and hydrographic stud-

ies of the northern part of the Sea of Azov in 2015-2016, and these studies showed that the maximum draft for a watercraft to freely approach any point of the Ukrainian coast of Azov cannot exceed 1.5 meters).

The Russian Federation has ample opportunities to conduct sabotage and reconnaissance operations from the sea against the facilities of the Armed Forces of Ukraine and Ukraine's economy on the mainland. A very probable danger for navigation is a mine hazard, which will be the basis for hybrid actions during the blockade of our ports. Due to the lack of territorial waters, today there is a possibility of unhindered and covert



Scheme 2. Scenario of the capture of the Azov Sea and the restoration of the water supply to Crimea from Dnipro river

installation of mines close to our Azov coast by Russian vessels pretending to be fishing or carrying out scientific research. There are pro-Russian people among a part of the population of the Ukrainian Azov region, although this support has not been readily apparent in recent years. Russia has a significant advantage in the combat potential of its forces in the Sea of Azov. Russian forces can count on the support of the powerful aviation group of the 4th Army of the Aerospace Forces of the Southern Military District of the Russian Federation. All this would enable Russia to carry out a blockade of Ukrainian ports from the sea and apply hybrid methods of disruption on the shore.

At the beginning of 2021, the Naval Forces of the Armed Forces of Ukraine in the Azov sea had four small armoured boats (which were delivered to the sea by land) and two support ships. In addition, up to 15 different boats of the Ukrainian State Border Guard Service were involved in port security duties. Since 2017, two Ukrainian marine battalions have been permanently stationed in the ports of Mariupol and Berdyansk, and units of the National Guard of Ukraine have been located in villages and towns on the coast. The protection of the coast of the Sea of Azov is one of the tasks of the Joint Forces Operation in eastern Ukraine, which involves ground units and aviation. The overall ratio of forces in the Sea of Azov today is 1:7.5, and for operations on the shore – 1:2.3 with the advantage on Russia's side.

The second stage of the scenario of aggression in the Azov Sea may begin with an artificial aggravation of the situation on the Ukrainian coast due to the activation of pro-Russian elements, as well as terrorist acts conducted by them and by sabotage groups of the Russian Federation. These actions will also be supported by the pseu-

do-Republic of the “Donetsk People's Republic” (DNR), which, under Russian leadership and financed by Russia, has formed certain amphibious capabilities. It can be assumed that the format of the operation will be as hybrid as possible, with the involvement of the Russian military only at the final stage of “assistance to the Russian-speaking population”. After isolating or destroying Ukrainian pockets of resistance to Russia on the coast and establishing Russian control over the situation at sea and in the air, amphibious troops and the necessary supplies will be delivered to the ports of Berdyansk and Mariupol. Then there will be a build-up of the Russian security forces component in the zone of the stabilization operation under the guise of “ensuring the safety and tranquillity of the population” on land by advancing from the eastern direction, from the occupied territories of the “DNR”. Amphibious assault demonstrative actions or a Russian strike from the north of Crimea in the direction of Mariupol by forces consisting of up to a battalion, with the support of assault aircraft, will aim to complete this land corridor. Providing assistance to or building up the Ukrainian naval surface forces via the sea during such a scenario is unlikely due to Russia's military control over the Kerch Strait.

The end result of such a scenario would be the consolidation of Russian troops on the Azov coast of Ukraine and the creation of a land corridor from Russia to the Autonomous Republic of Crimea. Any further actions of the Russian Federation in a scenario like this would depend on Ukraine's ability to resist and on the political reaction of the international community.

A Russian operation against Ukraine in the Azov Sea is currently considered as likely.

Scenario of Russian forceful expansion into the Mediterranean

Moscow's aggressive geopolitical interests also extend to the Mediterranean, as stated very clearly in the “The Fundamentals of the State Policy of the Russian Federation in the Field of Naval Operations for the Period Until 2030”. As part of the implementation of this strategic document, a standing task force of the Russian Navy (hereafter – STF) was deployed in the Mediterranean in 2013. This STF consists of 10-15 warships (missile, anti-submarine, and amphibious), submarines (both nuclear and diesel), and auxiliary vessels (a maintenance ship, tankers, cargo vessels) from the Russian Black Sea, Northern, Baltic, and Pacific fleets.

The creation of this task force was aimed at ensuring a permanent naval presence of the Russian Federation in the Mediterranean Sea, as well as supporting Russia-friendly authoritarian regimes in the Middle East and North Africa. It should be noted that a similar mission was formerly performed during the Cold War by the 5th Mediterranean operational squadron of the Soviet fleet, which ceased to exist in 1992 after the collapse of the Soviet Union. The current size of the Russian Naval Forces in the region is much smaller compared to the old 5th operational squadron, which included up to 70-80 warships, submarines, and auxiliary vessels.

The main operational goal of today's STF is to create naval capabilities that are visible to the NATO command in the region, and also to sustain the capability to create protected areas for combat patrol of its own submarines and isolate a certain marine (coastal) area in the Mediterranean Sea.

The STF is supplied by the 720th logistics support base of the Russian Navy (hereafter referred to as the LSB), located in the port of Tartus (Syria). Air support for the STF is provided by Russian aircraft from the Khmeimim Air Base. Moscow plans to deploy a full-fledged naval base on the site of the LSB. Tartus and Khmeimim have de facto turned into a transshipment point for the “Crimean military express” for projecting fleet forces and transferring personnel, weapons, ammunition, and material and technical means by sea to promote the geopolitical interests of the Russian Federation in the region. This is how the Russian grouping was built up in Syria in 2015-2016 and withdrawn due to its reduction in 2017. It should be noted that since the autumn of 2018, the Russian Federation has been conducting large-scale joint exercises annually, moving its naval and military space forces using the above-mentioned military bases in Syria. The exercises involve up to 20-25 surface

ships and up to 30 aircraft, including Tu-160 strategic bombers.

Russian expansion of their military capabilities in the Mediterranean is carried out in the form of the repair and maintenance of ships, and also for land and aviation units. Such servicing provides for their stay in the region on a rotating basis (up to 6 and sometimes more months). At the same time, if necessary, they can be built up in a short time, primarily at the expense of the Black Sea Fleet of the Russian Federation. In general, the scenarios of Russian military operations in the Mediterranean Sea can take the following forms:

- a limited naval presence – which would be carried out by deploying most of the task force in the Port of Tartus in certain degrees of combat readiness and with the periodic patrolling of the main sea lines of communication in the Eastern Mediterranean by 1-2 ships in order to ensure support for the projection of forces within the framework of the “Crimean express”;
- an operation for the demonstration of military force – which would be conducted in cooperation with the Russian air force by the overt and covert deployment of a unit of or a full strength STF near combat areas; such an operation would be accompanied by the surveillance and potential targeting of certain priority targets using weapons and technical means (coastal objects, aircraft carriers, attack ships, and submarines), the conduct of demonstrative missile launches, artillery firings, and the use of other weapons in front of NATO forces;
- an operation to support an authoritarian regime (an “operation of coercion” in the Russian nomenclature) – would be carried out by moving STF forces to combat areas and striking certain targets, mainly with the launch of Kalibr cruise missiles and the use of other weapons. In this context, we should pay attention to the combat use of Russian carrier-based aircraft, missile ships, and diesel-electric submarines against objects in Syria in 2016–2017. As this experience shows, Kalibr missile launches can be carried out from combat patrol areas of ships and submarines both in the Mediterranean Sea and from other theatres, in particular, the Black and Caspian seas;
- an operation of a group of combined-arms forces – a large-scale operation that would be carried out by a combination of a built-up STF in cooperation with the Russian Air Force and Air Defence Forces in order to isolate a certain sea (coastal) area in the Mediterranean Sea and create a manoeuvrable denied access zone (A2/AD) within its framework, oust NATO forces from it, as well as form an anti-missile barrier in a certain coastal zone. Probably, this operation would begin with the use of conventional weapons, with its possible development under certain conditions into a confrontation with the use of nuclear weapons.

Given the limited Russian military presence in the Eastern Mediterranean and the overall unfavourable current balance of power in the region for the Russian Federation (1:6.9 in favour of NATO forces), Moscow does not have the ability to ensure dominance in any area of this sea and, accordingly, to conduct a victorious

operation of a group of combined-arms forces. At the same time, the Russian Federation has the joint-force military capabilities to create a military advantage in a particular coastal area for a short period of time, which would allow it to implement the above scenarios to promote its own interests.

It is likely that the Kremlin will continue to adhere to a hybrid geopolitical model in which it will offer Western political heavyweights “joint initiatives”, ostensibly playing on their side, but in reality, caring exclusively about its own interests hidden behind the Kremlin's manipulative rhetoric. At the same time, Russia will be building up the capabilities to base its own groups of forces in the region by supporting authoritarian regimes and creating favourable conditions for the long-term lease of the port infrastructure of these countries, including turning them into outposts for Russian military expansion in the region. As part of this activity, Moscow is considering the possibility of restoring its naval presence in Eritrea (the former 933rd logistics support base of the USSR Naval Forces on the island of Nokra in the Dahlak Archipelago in the Red Sea) or/and deploying naval forces to Sudan.

Certain activities of Russian naval exercises in the Mediterranean Sea with the countries of North Africa, which in the 1960s and 1980s were satellites of the USSR, deserve attention. An example is the annual exercise with the Egyptian Naval Forces “Friendship Bridge”, which was launched in 2015. It is significant that Egypt purchased two Mistral helicopter carriers from France in 2015. These ships were ordered and built for the Russian Navy (this contract was cancelled at its final stage due to the occupation of Crimea

by the Russian Federation). Through these exercises Russia opposes the implementation of the NATO Mediterranean Dialogue program, resumes its influence on countries that are its traditional interest, and probably gets acquainted with the experience of operating Mistral landing ships with Russian helicopters on board. Influence over Egypt is particularly important for Russia in terms of both control over the Suez Canal and continuing historical disputes with Israel, the main US ally in the Middle East.

The continuation of Russia's active military activities in the Mediterranean Sea is currently assessed as quite likely.

CONCLUSIONS AND RECOMMENDATIONS

The threats that Russia is currently creating for Ukraine in the Black and Azov seas are obvious. The scenarios presented in this study are quite real and have been worked out by the Russian Federation during at least the last 7 years through military exercises. If the Russian leadership has the political will, these scenarios can be activated quickly. Ukraine should carefully prepare for them, not allowing the enemy to seize the complete initiative.

Countering Russia is possible primarily through the use of asymmetric methods, with the concentration of efforts on the enemy's vulnerabilities. The geographic areas for the counteraction of potential Russian aggression at sea allow Ukraine to do this in a feasible way using small but fast, manoeuvrable and well-armed boats together with coastal missile and artillery systems.

Russia's aggressive activities in the Mediterranean Sea primarily stem from its ambition to restore its status as a

military superpower and to counter NATO forces in the Mediterranean region. North Africa and the Middle East belong to the zone of priority geopolitical interests of Russia. Russia will continue to conduct military exercises and operations in these regions and identify promising areas for further activity. At the same time, the Russian Federation will take measures to establish its control (a favourable operational regime) over this region for further possible military intervention in it through deploying its advanced forces and positioning military bases.



RECOMMENDATIONS TO THE UKRAINIAN AUTHORITIES:

I A clear and active international legal position of Ukraine regarding the restoration of Ukraine's sovereignty in accordance with the norms of international law, namely, the revision of international agreements with Russia that it violated during the annexation of Crimea in 2014. The status of the Black and Azov seas must fully comply with the requirements of the 1982 UN Convention on the Law of the Sea. The forced delimitation of Ukraine's maritime borders should be initiated.

II Work on the relevant Ukrainian legislation: it is necessary to adopt the Law of Ukraine "On the internal waters and the territorial sea of Ukraine" which includes the setting out of the coordinates of the median line in the maritime space between Ukraine and the Russian Federation. Temporarily, until the de-occupation of the Crimean Peninsula, it is recommended to suspend navigation in the territorial sea belt around the occupied Crimean Peninsula on the basis of Part 3 of Article 25 of the UN Convention on the Law of the Sea. The use of maritime corridors and traffic distribution schemes around the peninsula should also be considered in the context of the issue raised. In addition, violators of the ban could be criminally prosecuted with the help of Interpol (for more information, see the report of the Centre for Defence Strategies "Storm warning: growing threats in the Black Sea region" - December 2020).

III Improve the coordination processes: effective interdepartmental coordination of the state structures of Ukraine is necessary to adequately respond to the complex challenges of national security related to the maritime sphere. It is recommended to create a new interdepartmental coordination mechanism, possibly on the basis of the National Security and Defence Council of Ukraine, and to grant it relevant authority to coordinate measures in the field of national security at sea. For more information, see the report of the Centre for Defence Strategies "Storm warning").

IV Develop military capabilities: The Naval Forces of the Armed Forces of Ukraine, together with the naval units of the State Border Guard Service of Ukraine, are key tools of the state to ensure maritime security and the sovereignty of Ukraine at sea. At the current stage, the development of the Ukrainian Naval Forces should be centred exclusively around deterring aggression in the north-western part of the Black Sea and on the coast of the Sea of Azov. Ukraine needs to ensure the creation of a maritime domain awareness system as soon as possible, to ensure the protection of ports and the safety of navigation in the proximal maritime zone, and to build a deterrent force against possible aggression from the direction of the sea. Given the balance of power and resources between the non-NATO Ukraine and the Russian Federation, and given the current economic capabilities of Ukraine, only asymmetric methods can bring success in addressing the priority tasks at sea. A balanced, comprehensive and economically achievable solution to this problem is to build a group of "mosquito fleets" by 2030. The argument of the Strategy of the Naval Forces of the Armed Forces of Ukraine 2035 in this regard is exhaustive, professional, and requires comprehensive and rapid implementation.

V Rally international support: Ukraine's strategic partnerships with Western partners remains a key advantage that can help in acquiring the necessary capabilities for the Ukrainian Naval Forces and the naval units of the State Border Guard Service of Ukraine. Cooperation should be developed at the regional level (e.g. with Turkey and Romania), as well as with the United States and Great Britain, which continue to play an important role in the Black Sea security system. When working together with partners to plan the development of the capabilities of the Ukrainian Naval Forces, it is necessary to adhere to a consistent and systematic approach for the effective use of significant Western investments in Ukrainian naval armament systems. In the future, the development of the Naval Forces of Ukraine will also allow the revival of the state shipbuilding program with the maximum use of lessons learned from other NATO nations.



Andrii Ryzhenko

Andrii Ryzhenko retired from the Armed Forces of Ukraine in 2020 with rank of Navy Captain

Having served over 35 years at sea and ashore: aboard surface warships (Kinda, Kara, Krivak III), at Ukrainian Navy HQ on maritime tactics and PfP exercises, as defense and strategic planner, worked on Ukrainian Navy transformation into Euro Atlantic standards and contribution to NATO-led operations and NATO Response Forces.

As planner or coordinator, Andrii Ryzhenko organized and carried out more than 100 multinational Crisis Response Exercises, including the US-Ukrainian naval exercises Sea Breeze, guided and consulted Naval units for different NATO and EU operations, NATO Response Forces and EU Battle groups.

He was a manager at Ukrainian Navy HQ for the development of the Strategy of the Navy of the Armed Forces of Ukraine until 2035 (2017-2018), design of new Navy C2 structure based on NATO principles(2019). In February-March 2020 he served as Assistant Minister of Defense of Ukraine working on Maritime security and Policy on Ukrainian Navy development.

Andrii completed the following educational studies: Sevastopol Naval Academy (1990), International Surface Warfare Officer School in Coronado, CA, US (1996), US Naval War College, Staff Course, Newport, R.I. (2000), Sevastopol Naval Institute with Master degree in military art (2004), US Naval War College, Command Course, Newport, R.I. (2013).



Ihor Kabanenko

ret. Admiral, Ukrainian Navy

Ihor Kabanenko is a retired Admiral with the Ukrainian Navy. During his naval carrier he occupied positions from missile's boat commander assistant – fire control officer to the Chief of Staff of the Ukrainian Navy. He served as the Military Representative of Ukraine to NATO, Chief of Operations of the Ukrainian Armed Forces, and the First Deputy Chief of Defence.

He retired in 2013. From May to August 2014, Ihor Kabanenko served as the Ukrainian Deputy Minister of Defense, and from August to October 2014 – as Deputy Minister of Defense of Ukraine for European Integration. Ihor defended his PhD thesis in the sphere of risk management and military conflicts resolution. He is the author of a number of publications in defense & security sphere.

Currently he is the president of UA.RPA (Ukrainian Advanced Research Project Agency), which focuses on high-tech solutions and products for defense.

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