



## Russia's Black Sea Fleet: Toward a Multiregional Force

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## Abstract

In this CNA Occasional Paper, Dr. Igor Delanoe, Deputy-Head, French-Russian Analytical Center Observo (Moscow), examines the development of Russia's Black Sea Fleet since the 2000s. Dr. Delanoe traces the origins of structural changes that affected the fleet through the State Armaments Program beginning in 2011, the Ukrainian crisis and Moscow's renewed emphasis on Black Sea defense. He examines the Fleet in the context of Russia's renewed presence in the Eastern Mediterranean Sea, and discusses new concepts and technologies of growing importance to Russia's forward operating naval squadrons. Today, the Black Sea Fleet appears to be a more flexible and multipurpose naval formation. Its area of responsibility has evolved and is focused on the greater Mediterranean region, tasked with the protection of Russia's southern flank, from the Caspian region to the Levant. Dr. Delanoe also discusses transition from the quality naval procurement of the 2011-2020 plan to mass production in a context of financial pressure and sanctions, arguing that the modernization plan of the Black Sea Fleet has proved more resilient in the face of these challenges.

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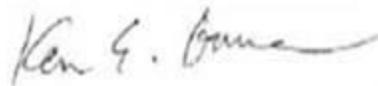
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# Introduction

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The Black Sea Fleet has played a role in all three of the latest military expeditions undertaken by Russia. Although their involvement was limited, some surface units were mobilized during the August 2008 Russia-Georgia war to form a blockade off the Georgian coast and participate in some limited combat operations. In 2014, the issue of the Black Sea Fleet and the need for full sovereignty over the Sevastopol Naval Base was a leading factor in Moscow's annexation of the peninsula. Since 2015, the Black Sea Fleet has participated in Russia's military intervention in Syria, not only providing key logistical support—something it has been doing since the beginning of the Syrian crisis in 2011 to support Damascus—but also carrying out combat missions and enforcing conventional deterrence against a potential NATO or Turkish action in Syria.

The Russian Black Sea Fleet has experienced deep structural changes since the end of the 2000s. During the Soviet period, it was a large blue-water naval formation, tasked with an area of responsibility encompassing not only the Black Sea but also the Mediterranean and the Indian and Atlantic Oceans. Its core mission was to challenge NATO navies' supremacy in the Mediterranean basin, presenting a permanent threat on the alliance's southern flank and supporting political and military-technical partnerships with third countries in the Middle East and Africa. After a period of general disarray following the collapse of the Soviet Union, the Black Sea Fleet became the center of the naval preoccupations of the Russian General Staff at the end of the 2000s. Therefore, even before the Ukrainian crisis and the subsequent absorption of Crimea by Moscow, the Black Sea Fleet had already benefited from some funding and plans that aimed at stopping the severe bleeding of capabilities. The annexation of Crimea in 2014 and its consequences (sanctions, lasting tensions with the Euro-Atlantic community, new shores to protect) completely changed the picture, compelling Russia's Ministry of Defense to recalibrate its priorities regarding the modernization of the Black Sea Fleet.

Today, the Black Sea Fleet appears to be a more flexible and multipurpose naval formation. Its area of responsibility has evolved and is more focused on the greater Mediterranean region. Meanwhile, the Caspian Flotilla, which was of secondary importance during the Soviet era, plays a greater role and is also experiencing a military buildup, although its scale is modest in comparison with that of the Black Sea Fleet. However, Russia's military insertion in Syria and the recent rise of tensions in the Azov basin have highlighted the porosity of the tasks undertaken by both formations. The Black Sea Fleet and the Caspian Flotilla, both arranged around the defense of a maritime bastion (the Black Sea and the Caspian Sea, respectively) tend to be merged into a single, more agile, more ubiquitous force, tasked with the protection of

Russia's southern flank, from the Caspian region to the Levant. These bastions can be used to protect Russia's territory from the south or to carry out strikes against targets located far beyond Russia's immediate neighborhood. This was demonstrated with the Kalibr cruise missiles fired from the Caspian Sea and the Levant by surface platforms and submarines during the Russian military campaign in Syria.

# The Modernization of the Black Sea Fleet: Successes and Failures

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Until the end of the 2000s, the Black Sea Fleet barely received any new combat units. As a pure tactical operational fleet with no strategic nuclear role to play, this formation did not benefit from either the attention or the funding that still, at some point, accrued to the Northern and Pacific Fleets, where Russia sought to maintain its naval nuclear deterrent. Furthermore, the terms of the 1997 Russia-Ukraine agreement—renewed in April 2010 in Kharkiv—on Moscow’s lease of the Sevastopol Naval Base and other military assets in Crimea were constraining. While a limit was imposed on the numbers of all types of Russian units deployed on the peninsula, the texts did not address the issue of modernization of the Black Sea Fleet, which was subsequently left as a matter of dispute. The Ukrainians were advocating for a replacement of the units on a “same type for same class” basis, which did not match Russia’s expectations.

The 2001-2010 State Armament Program prioritized the naval leg of the nuclear triad and the export of naval military hardware<sup>1</sup>—putting aside even the maintenance, to say nothing of the renewal, of the Black Sea Fleet’s combat capabilities. Most of the Soviet-era large antisubmarine ships of Project 61 (Kashin destroyers) and Project 1134 (Kresta cruisers) were disarmed during the 1990s, while the classic attack submarines of Projects 613 (Whiskey) and 641 (Foxtrot) were scrapped during the 1980s and late 1990s, with no new submarines commissioned. The two first modern units inducted were Grachonok class (Project 21980) antisaboteur fast-attack boats in 2011 and 2012. The Caspian Flotilla had a slightly better fate during the 2000s. In 2003 it received the frigate *Tatarstan* (Project 11661K), laid down in 1990, as well as three small artillery ships of Project 21630 (Buyan class). They were laid down between 2004 and 2006 at the Almaz plant (Saint Petersburg), and were commissioned between 2006 and 2012.<sup>2</sup> With no new vessels inducted, the decommissioning of old Soviet platforms built during the 1980s and 1990s created a critical risk of disruption in the combat capabilities of the fleet, while its combat readiness was also under question.

After the 2008 war between Russia and Georgia, the Ministry of Defense initiated an ambitious armament program under the auspices of then minister of defense Anatoly Serdyukov. With

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<sup>1</sup> K. Bogdanov, I. Kramnik, *The Russian Navy in the 21<sup>st</sup> Century*, CNA Occasional Paper, Oct. 2018, p. 12.

<sup>2</sup> These are *Astrakhan*, *Kaspiysk* (later *Volgodonsk*), and *Makhachkala*, inducted in 2006, 2011, and 2012, respectively.

an overall budget of 20.7 trillion rubles (approximately US\$ 700 billion at the average 2011 exchange rate), this plan, surprisingly for a continental power, prioritized the navy: it received roughly 25 percent of the budget (5 trillion rubles (or US\$ 165 billion)), 2.3 trillion (US\$ 78 billion) of which was budgeted for shipbuilding.<sup>3</sup> As of the early 2010s, after nearly two decades, the Black Sea Fleet began to receive new combat units.

## The State Armament Program 2011-2020: the rebirth of the Black Sea Fleet

In the Black Sea, the objective was not so much to enhance the capabilities of the fleet as to stop the bleeding of its units and maintain a credible operational level. The Russian Ministry of Defense initially ordered a batch of six Project 11356M frigates (Admiral Grigorovich class), according to two contracts signed in 2010-2011,<sup>4</sup> for an overall amount of 80 billion rubles. Designed by the Severnoe Bureau (Saint Petersburg) in partnership with the Yantar Shipyard (Kaliningrad) during the second half of the 2000s, this project built on the success story of the export of Project 11356 frigates (Talwar type) to India in 2003-2004. The lead unit, *Admiral Grigorovich* (Figure 1), was laid down by Yantar in December 2010. Six diesel submarines (Project 0636.3) were urgently ordered, to supplement the only operational submarine that was active in the Black Sea Fleet, B-871 *Alrosa* (Project 877V). These submarines derived from the Soviet classic attack submarines of Project 877 (Kilo type) and were largely exported to China, Iran, Algeria, and India during the 1980s and 1990s. In other words, this option was seen as the most workable one to enhance submarine capabilities in the Black Sea relatively quickly.

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<sup>3</sup> «Проект программы военного кораблестроения России разработают к ноябрю», РИА Новости, 5 сентября, 2013.

<sup>4</sup> «ОСК построит еще три фрегата типа “Адмирал Григорович” для ВМФ России», Лента, 28 июня 2017.

Figure 1. The frigate Admiral Grigorovich moored in Sevastopol (13 June 2016)



Source: Russian Black Sea Fleet website.

Designed by the Rubin Bureau (Saint Petersburg), the construction of the batch of six units was contracted to the Admiralty Shipyard (Saint Petersburg), and the lead unit, B-261 *Novorossiysk* (Figure 2), was laid down in August 2010. Moscow also contemplated dispatching one of the two Mistral-type helicopter carriers purchased from France, though this project was ultimately cancelled after the breakdown of defense cooperation with NATO in 2014. A program of procurement of small missile ships of Project 21631 (Buyan-M, a river-sea class of light corvettes) was also launched, with the lead unit, *Grad Svyazhsk*, laid down in August 2010, at the Gorkiy Shipyard (Zelenodolsk, Republic of Tatarstan). This plant has also been responsible for the Grachonok class antisaboteur boats (Project 21980) ordered by the Ministry of Defense and pursued during the 2010s, for the Black Sea Fleet and the Caspian Flotilla. Most of the units encapsulated in the modernization plan (except

the Mistral) are designed to sail in green-water zones, littoral areas, or, at most, in a closed sea, such as the Black Sea. The 2011-2020 program did not feature any blue-water units, and there was no plan to renew the amphibious component, which traditionally has been strong in the Black Sea Fleet.

Figure 2. B-261 Novorossiysk (28 September 2015)



Source: Russian Black Sea Fleet website.

While the construction of the submarines was duly achieved between 2014 and 2016, the plan for the frigates was disrupted by the Ukrainian crisis (see Table 1 below). As of spring 2019, the Black Sea Fleet has received only three of the six planned Project 11356 frigates. The induction of Project 21631 small missile ships has been ongoing, despite turbulences caused by the Ukrainian crisis.

**Table 1. Status of modernization projects started before 2014**

<b>Program</b>	<b>Project</b>	<b>No. of active units as of spring 2019</b>	<b>Kalibr cruise missiles?</b>	<b>Status as of spring 2019</b>
Frigates	11356M	3	Yes	Partly completed by 2018 <sup>a</sup>
Small missile boats	21631	2 (BSF) + 3 (CF)	Yes	Ongoing
Antisaboteur boats	21980	6 (BSF) + 1 (CF)	No	Ongoing
Classic attack submarines	0636.3	6	Yes	Completed by 2016
Amphibious assault ship	Mistral	0	No	Canceled

Note: BSF = Black Sea Fleet. CF = Caspian Flotilla.

<sup>a</sup> The two last units were sold to India in January 2019, and the fate of the third last unit is not clear.

The Ukrainian crisis and the annexation of Crimea brought many structural challenges to Russia's initial modernization program for the Black Sea Fleet. The Euro-Atlantic sanctions disrupted the military-industrial cooperation between Russia and European suppliers, while military industrial cooperation between Russia and Ukraine was terminated. The German MTU AeroEngines conglomerate was the supplier of diesel turbines for Project 21631 (five units) and Project 21980 (seven units) vessels. Since then, Russia has substituted Chinese turbines for the German ones, with *Vyshnyi Volochyok* (Project 21631) being the first unit of its kind equipped with a Chinese propulsion system (Figure 3).

Figure 3. The small missile boat Vyshnyi Volochyok in Sevastopol (28 May 2018)



Source: Russian Black Sea Fleet website.

The termination of military-industrial cooperation with Ukraine created considerable trouble for the Black Sea Fleet's modernization program. ZoryaMash Proekt (Mikolayiv) ceased to supply the gas turbines equipping the Project 11356M frigates, with only the three first units having received their turbines on time. In the absence of domestically-produced gas turbines, currently under development by Saturn (Rybinsk), Russia struck a deal to sell two of the three remaining units, *Admiral Butakov* and *Admiral Istomin*, to India.<sup>5</sup> The fate of the third one,

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<sup>5</sup> According to a « 2+2 » formula, the two vessels will be completed for India by 2022 (the turbines will be sent directly to India by ZoryaMach Project). Two other units of a modernized version of the Project 11356M will be built

*Admiral Kornilov*, remains unclear. Its construction stopped for a while in 2017, then restarted in 2018.<sup>6</sup>

Meanwhile, during the 2000s, Russia was seriously considering the possibility of disrupted access to Sevastopol Naval Base after the end of the leasing contract in 2017. Therefore, as early as 2004, it undertook the construction of a new naval base in Novorossiysk, on Russia's Black Sea shores.<sup>7</sup> Neither the signing of the Kharkiv Agreement in April 2010, extending the leasing of Sevastopol to Russia to 2042, nor the annexation of Crimea in 2014 jeopardized this program. It is expected that up to 60 vessels, including diesel submarines, could dock at the Novorossiysk Naval Base.<sup>8</sup>

In 2017-2018, Russia decided to build a new naval base for the Caspian Flotilla in order to supplement the Astrakhan Naval Base and the Makhachkala Naval Support Facility. The former no longer suited the navy, because of Astrakhan's commercial activity linked to the Volga River, and the latter could not be expanded since it is in the immediate vicinity of a commercial port. Therefore, the navy selected Kaspiysk as a new site. A few kilometers south of Makhachkala, this new naval base is expected to welcome all the Kalibr-equipped units of the Caspian Flotilla. Situated closer to the geographical center of the Caspian Sea, it will enable these platforms to strike any target from Central Asia to the Middle East on short notice. The work started later in 2017 and is expected to last three to four years, and cost between 20 billion rubles (US\$ 330 million) and 30 billion rubles (US\$ 490 million). Once completed, up to 60 percent of the Caspian Flotilla units will be redeployed to Dagestan, i.e., to the Makhachkala Naval Support Facility and the Kaspiysk Naval Base.<sup>9</sup>

Having gained hundreds of kilometers of coastline by annexing Crimea, Moscow also had to order additional units to enforce the protection of the newly annexed littoral. This role has been given to Project 22160 (Vasily Bykov class) patrol boats (Figure 4). Most are being built by the Gorkiy Shipyard, although two units are reportedly being built at Zaliv (Kerch, Crimea). As shown in Table 2, six units are set to be inducted into the Black Sea Fleet, with the lead unit,

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in Goa with the participation of Russia and with a technology transfer. "India's GSL to build Russian-designed P11356 frigates in transfer of technology agreement," *Naval Today*, 30 Jan. 2019.

<sup>6</sup> «"Известия": ОСК возобновит строительство фрегатов типа "Буревестник" в 2018 году», ТАСС, 2 июня 2017.

<sup>7</sup> Vladimir Putin signed a decree for the construction of a new naval base in 2003, and work started a year later, in 2004. This project is carried out in the framework of a Federal program entitled "Creation of a system of naval bases for the Black Sea Fleet on Russia's soil for the 2005-2020 period." The scope of the program also includes the upgrading of Temryuk and Yeysk naval infrastructures on the Azov Sea, as well as those of Tartus (Syria). <http://fcp.economy.gov.ru/cgi-bin/cis/fcp.cgi/Fcp/ViewFcp/View/2006/179/>.

<sup>8</sup> «Около 60 кораблей, судов ВМФ будут базироваться в районе Геопорта», РИА Новости, 17 марта 2018.

<sup>9</sup> «Дорога в Дагестан», *Известия*, 21 апреля 2018.

*Vasily Bykov*, already in service. This program has also suffered from the disruption of industrial-military cooperation with Germany, since the German MAN Engines company was supposed to supply the turbines—it only did so for the first unit and then terminated the cooperation. Subsequent ships were equipped with domestically produced engines.

Figure 4. The Project 22160 patrol boat *Dmitry Rogachev* approaching Sevastopol (4 December 2018)



Source: Russian Black Sea Fleet website.

Russia initiated another program of small missile vessels, known as Project 22800 Karakurt. Derived from Project 12300 Scorpions, these light ships are armed with Kalibr cruise missiles and Onyx antiship missiles, and are built at the Pella plant (Saint Petersburg). Some units are also reportedly under construction in Crimea at the Zaliv plant, which has been subcontracted by Gorki, and at More Shipyard, in Feodosiya (Crimea). Starting from the third unit, these vessels should feature a navy version of the Pantsir air defense system. During the 2017

International Maritime and Defense Salon of Saint Petersburg, the Ministry of Defense stated that a target of 18 units was under consideration for this project.<sup>10</sup>

**Table 2. New vessels ordered after 2014 to supplement the 2011-2020 Modernization Plan**

Program	Project	No. of units ordered as of spring 2019	No. of active units as of spring 2019	Kalibr cruise missiles?	Status as of spring 2019
Small missile ships	22800	12	1	Yes	Ongoing
Patrol boat	22160	6	2	No	Ongoing

Many factors jeopardized the completion of the 2011-2020 State Armament Program. Approved at a time when the oil price was higher, it had to face not only the deflation of oil prices, but also sanctions, disruption of the cooperation with foreign suppliers, and erosion of the ruble's value since 2014.<sup>11</sup> However, the modernization plan of the Black Sea Fleet has been more or less successfully recalibrated. The issue of the diesel and gas turbines remains a problem for the short and middle terms: the Chinese solution does not seem to be satisfactory, as the turbines do not appear reliable enough or powerful enough, at least for the Project 21631 platforms.<sup>12</sup>

As shown in Table 3, in 2018, as in 2016 and 2017, the Black Sea Fleet received more new units than any other Russian naval formation, including the lead unit of Project 22160. In 2018, the intelligence ship *Ivan Khurs* (Project 18280) and two additional units of Project 21631 were inducted into the Black Sea Fleet. As the State Armament Program slowly comes to an end, one can certainly say that it was largely unrealistic, generally speaking, and failed to reach its objectives.<sup>13</sup> However, if we consider the scope of the plan for the Black Sea Fleet, we can say that, taking into account the tremendous obstacles met by the Russian military-industrial complex, its goals have been fulfilled relatively successfully. As of March 2018, the Black Sea Fleet had received roughly 50 units (including service, support, surface combatant, and submarine units) since 2014.<sup>14</sup> If we consider the pace of construction of the units and the ratio

<sup>10</sup> «Зеленодольский завод построит пять малых ракетных кораблей до 2020 года», *Лента*, 29 июня 2017.

<sup>11</sup> The ruble lost 40 percent of its value in 2014-2015.

<sup>12</sup> «ВМФ отказался от ремоторизации "Каракуртов" несмотря на проблемы с поставкой дизелей», *Флотпром*, 9 октября 2018.

<sup>13</sup> Anton Lavrov, *Russian Military Reforms from Georgia to Syria*, CSIS Russia and Eurasia Program Report, Nov. 2018, p. 20.

<sup>14</sup> «Процесс модернизации и обновления рассчитан на длительный период», *Красная Звезда*, 20 марта 2018.

of vessels commissioned into the Black Sea Fleet despite all the obstacles, this formation seems to be better supplied than the other fleets.

Table 3. The production of Russian naval shipyards, 2013-2019

	No. of submarines	No. of surface vessels	Total number	No. for Black Sea Fleet
<b>2013</b>				
Commissioned	2	3	5	0
Laid down	1	10	11	5 <sup>a</sup>
<b>2014</b>				
Commissioned	4	11	15	5
Laid down	7	6	13	6 <sup>b</sup>
<b>2015</b>				
Commissioned	2	2	4	4
Laid down	3	11	14	4 <sup>b</sup>
<b>2016</b>				
Commissioned	2	5	7	4
Laid down	2	9	11	9 <sup>a</sup>
<b>2017</b>				
Commissioned	0	5	5	1
Laid down	3	7	10	5
<b>2018</b>				
Commissioned	0	8	8	4
Laid down	0	4	4	4 <sup>c</sup>
<b>2019 (author's assessment)</b>				
To be commissioned	3	13	16	8
To be laid down	2	2	4	1

Note: This table includes combat units (surface combatants and submarines), minesweepers, and intelligence vessels, with the exclusion of antisaboteur boats (Grachyonok type) and fast attack boats (Raptor type).

<sup>a</sup> Including units of Project 11356M later sold to India.

<sup>b</sup> Including units initially commissioned in the Black Sea Fleet and later deployed to the Baltic Fleet or the Caspian Flotilla.

<sup>c</sup> Units possibly ordered for the Caspian Flotilla (Project 21631) or the Baltic Fleet (Project 12700).

Despite relative success in implementing and recalibrating the 2011-2020 armament program in the Black Sea Fleet after the 2014-2015 period, Russia faces some gaps. The frigate program is not complete: Moscow cannot be content with only three units out of six originally planned. The Russian VPK<sup>15</sup> has to overcome the technical difficulties posed by the construction of gas turbines. This should be done by the beginning of the 2020s. The Black Sea Fleet also faces a

<sup>15</sup> Военный промышленный комплекс. The Russian military-industrial complex.

gap with regard to amphibious assault ships. The Project 11711 Ivan Gren class of large amphibious vessels are set to be inducted into the Baltic Fleet, and, importantly, they are not comparable to the Mistral class. Moreover, until recently,<sup>16</sup> the navy was planning to shut down the Ivan Gren program after the first two units were commissioned. We will have to wait until the beginning of the next decade to see concrete plans regarding large amphibious platforms. A second issue is the proliferation of small units of various programs fulfilling the same tasks (for example, Project 21631 and Project 22800 missile boats), which will induce additional costs for maintenance. This has been a permanent pattern of the Russian naval VPK for decades. At the same time, their procurements contribute to supporting the activity of shipyards, especially in Crimea.

Another issue is related to mine warfare. Russia has ordered a series of new minesweepers of Project 12700. So far, the Black Sea Fleet has received only one unit, *Ivan Antonov*, in early 2019.<sup>17</sup> The same goes for intelligence capabilities. A new series of intelligence vessels (Project 18280) has been launched; the lead unit was commissioned in the Northern Fleet, and the second one, *Ivan Khurs* (Figure 5), joined the Black Sea Fleet in June 2018. However, financial issues threaten the project. Finally, the latest US sanctions have added the Gorkiy plant to the list of sanctioned Russian entities.<sup>18</sup> As demonstrated, this shipyard has been key to the resurrection of the Black Sea Fleet and the Caspian Flotilla. While the plant has *de facto* been working in a sanctioned environment since 2014, it finds itself now *de jure* under sanctions. US sanctions could slow the pace of construction of future units and might also endanger the potential contract with Algeria on Project 22160 patrol boats, which would have a financial impact on the shipyard.<sup>19</sup>

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<sup>16</sup> According to the head of OSK (the Russian consortium for shipbuilding), two or three additional units of a modernized version of the Project 11711 may be ordered. «Глава ОСК рассказал о строительстве больших десантных кораблей для ВМФ России», Федеральное агентство новостей, 3 декабря 2018.

<sup>17</sup> The lead unit, *Alexandre Obukhov*, was commissioned in the Baltic Fleet in late 2016.

<sup>18</sup> "Ukraine-/Russia-related Designations," US Department of the Treasury, financial sanctions, 15 Mar. 2019. <https://www.treasury.gov/resource-center/sanctions/OFAC-Enforcement/Pages/20190315.aspx>

<sup>19</sup> «Алжир подписал контракт с Россией на закупку четырех патрульных кораблей проекта 22160», ЦАМТО, 23 мая 2018.

Figure 5. The intelligence ship Ivan Khurs in Sevastopol (12 March 2019)



Source: Russian Black Sea Fleet website.

## The State Armament Program 2018-2027: from quality to quantity?

The 2018-2027 State Armament Program (according to what we know so far) seems more realistic than its predecessor, at least for the navy. It puts the emphasis on the serial production of light, affordable platforms, while delaying the construction of first-rank vessels (aircraft carrier, destroyer) until a later stage. Yet, with 3 trillion rubles (\$US 50 billion) for the navy out

of an overall budget of 19 trillion rubles (roughly \$US 317 billion),<sup>20</sup> the 2018-2027 State Armament Program prioritizes the status quo by putting the level of finance at the one that prevailed *de facto* after 2014-2015 for the naval forces. The three main priorities set for the plan with regard to the fleet are the development of SSBNs, of multipurpose attack submarines, and of green-water vessels armed with precision-guided weapons. Of those, the Black Sea Fleet and the Caspian Sea Flotilla stand to benefit from the third objective.<sup>21</sup>

Russia will keep prioritizing the construction of light and multipurpose units, some of them featuring Kalibr cruise missiles. The programs of small missile vessels (Project 22800, Project 21631) and patrol boats (Project 22160) will be extended, with new units commissioned through the first half of the 2020s.<sup>22</sup> On average, the pace of construction of these small units has slowed, especially for the Project 21631 small missile ships. The fifth unit, *Serpukhov*, was completed in 35 months. However, the completion of the two last units, *Vyshniy Volochyok* and *Orekhovo Zuyevo*, experienced certain delays. The pace slowed to 57 and 55 months, respectively, mostly due to the irregular financing following the 2014-2015 period, and the trouble with the Chinese turbines. The construction of the lead vessels of Project 22160 (*Vasily Bykov*) and Project 22800 (*Mytishchi*) took 58 months and 48 months, respectively. It is expected that this construction time will decrease with the serial units, provided that the funding is allocated regularly. Considering the raised tensions in the Azov Sea, Russia might order additional light landing vessels of the Serna type (Project 11770) to strengthen its amphibious component in the Azov basin.

There are no plans to order additional submarines for the Black Sea Fleet at this stage, since the Admiralty Shipyard is now completing the order of six diesel submarines (Project 0636.3) for the Pacific Fleet. The program of Project 11356M frigates seems frozen until Saturn comes up with a viable solution for the gas turbines. Possibly, the sixth unit, the frigate *Admiral Kornilov*, could be inducted into the Black Sea Fleet at a later stage. Another issue is the modernization of the flagship of the fleet, the Slava class cruiser *Moskva* (Project 1164). The vessel has been docked at the Repair Plant №13 in Sevastopol for more than a year, pending its overhaul. However, in February 2019, the Severnoe Design Bureau indicated that it had not yet received the money to work out the modernization scheme.<sup>23</sup> At this stage, the modernization of *Moskva* could likely start in early 2020s at best. This risks a rupture in the

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<sup>20</sup> «У триллионов есть два союзника – армия и флот», *Коммерсант*, 18 декабря 2017.

<sup>21</sup> Bogdanov, Kramnik, *Russian Navy in the 21st Century*, pp. 23-24.

<sup>22</sup> During the 2016 Armiya Salon in Moscow, the Russian minister of defense signed a 27 billion ruble contract for three additional units of the Project 21631, expected to join the Black Sea Fleet or the Caspian Flotilla.

<sup>23</sup> «Источник: модернизацию крейсера "Москва" отложили до 2020-х годов», *Флотпром*, 31 января 2019.

high seas capabilities of the Black Sea Fleet, unless the other Slava cruiser, the recently overhauled *Marshal Ustinov*, is redeployed from the Northern Fleet.

Finally, there is still a question regarding the modernization of the amphibious capabilities of the Black Sea Fleet. So far, they rely on ex-Soviet platforms: the Project 775 (Ropucha class) and 1171 (Alligator class) large landing ships, largely seen in action between Russia's Black Sea ports and Syria since 2011. Although they are cheap and easy to maintain, these units have been overused, prompting Russia to redeploy some units from the Baltic to the Black Sea and the Mediterranean. In the absence of any plan to replace these old platforms, it is expected that Russia will continue using them. However, although the Syrian campaign can be seen as a success for the Russian forces, it has demonstrated that the navy would have greatly benefited from a large amphibious ship for command and attack operations. One of the two French Mistral-class vessels ordered by Moscow in 2010 could have been fully devoted to this role. After France cancelled the contract because of the Ukrainian crisis, Russia undertook to develop its own large amphibious ship program. Two projects have so far emerged: the Priboy universal landing ship and the Lavina assault landing ship.

Designed by the Nevsky Bureau (Saint Petersburg), the Priboy was modeled on the Dutch Rotterdam-class LPD vessel. With a displacement of 14,000 tons, it is supposed to land an expeditionary force of 500 to 600 marines and up to 60 vehicles. The Lavina was designed by the Krylov Bureau (Saint Petersburg) and features a displacement of 24,000 tons. A group of 20 transport and attack helicopters, with an expeditionary force of 500 marines, can be embarked and can be landed by the Serna air-cavity landing craft, for example. Supposedly, the lead vessel of one of the two projects could be laid down in Saint Petersburg, at the Severnaya plant, currently undergoing modernization, in 2020.<sup>24</sup> If such vessels are to be built, their construction will doubtless benefit from the short experience that the Russians acquired with the French in the framework of the Mistral contract before its cancellation.<sup>25</sup> Pending the potential laydown of new large amphibious vessels, Russia keeps on building small Serna-class (Project 21820) landing ships; yet, there is no plan to renew the fleet of medium and large landing ships, extensively used in Syria. To fill the gap, Russia may consider reflagging merchant vessels while extending the life of the old Project 775 and 1171 units.

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<sup>24</sup> «Источник: строительство вертолетоносцев начнется на Северной верфи в 2020 году», ТАСС, 10 января 2018.

<sup>25</sup> Remember that up to 40 percent of the hulls of the two units, *Vladivostok* and *Sevastopol*, were built in Russia in 2013 and 2014, under the supervision of French experts and engineers.

# The Black Sea Region: a Critical Strategic Space on Russia's Southern Flank

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## The emergence of a southern strategic bastion

Spanning the area from Moldova through the wider Caspian region, Russia's southern flank has experienced the most challenging geopolitical reconfiguration since 1991. The Euro-Atlantic expansion across the region during the 1990s and the 2000s largely contributed to the erosion of Russia's influence and frustrated the Kremlin's interests. Russia's annexation of Crimea has opened the path to the renewal of Russian maritime power and presence not only in the Black Sea but in the Mediterranean as well. The Russian strategic footprint in the Black Sea basin has been further enhanced since the Kremlin initiated a rearmament program in 2011. The integration of Crimea into the Southern Military District was the first step toward the creation of a southern strategic bastion, which has emerged as a duplicate of the existing Northern Strategic Bastion<sup>26</sup> but features capacities adapted to the Black Sea-Mediterranean strategic context.

The aim of the Southern Strategic Bastion would be fundamentally different, given that there are neither nuclear submarines in the Black Sea Fleet nor strategic weapons deployed in Crimea. Still, through the deployment of a set of conventional armament systems on the peninsula and in continental Russia, the Southern Strategic Bastion would implement conventional deterrence in order to lock Russia's southern flank and project power beyond Russia's immediate neighborhood. The Southern Strategic Bastion would consist of the complex of military assets on Russia's Black Sea coasts, including Crimea, and of those in the Caucasus, including the 102<sup>nd</sup> Base in Armenia, as well as bases established since 2008 in Abkhazia and South Ossetia. From a military perspective, the Russian Mediterranean Squadron

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<sup>26</sup> The concept of the Northern Strategic Bastion was formally adopted by the Security Council of the Federation in 1998. As the result of the Russian strategic thinking consecutive to the critical loss of shores in the Baltic Sea in 1991 and the dramatic collapse of conventional force capabilities, the concept of the Northern Strategic Bastion emphasizes the role of nuclear weapons as the ultimate security guarantor and protector of Russian interests. It was conceptualized and formalized in the 1990s by the strategist Andrey A. Kokoshin on the basis of the Soviet naval bastion concept from the 1970s. The bastion is formed by the assets of the strategic complex of the Kola Peninsula and the Arctic shore, to which can be added, from a military point of view, the positions of Kaliningrad and Saint Petersburg. Read Андрей А. Кокошин, *Политология и социология военной стратегии*, Москва, КомКнига, 2005, 616 с.

and the assets in Syria (Tartus Naval Support Point and Khmeimim Airbase) also play a key role in the Southern Strategic Bastion.

The aim of this bastion is to prevent any further expansion of Western influence in a region where Moscow considers that its interests have never been taken into consideration by the Euro-Atlantic community. The capacities of the Southern Strategic Bastion must in particular provide Russia with absolute superiority over non-Black Sea states' naval groups in the basin—mainly NATO vessels—whose activity in the Black Sea naval theater is clearly perceived by Moscow as hostile. In order to fulfill this task, the Kremlin has considerably enhanced its anti-access and area denial (A2/AD) capacities in the Black Sea basin. These capacities rely on land-based defense systems (S-300, plus four S-400, divisions deployed near Djankoy, Evpatoria, Sevastopol, and Feodosiya) and antiship capabilities (two Bastion batteries, with a range of 600 km, under the command of the 15th Missile Brigade, Bal antiship batteries).<sup>27</sup> They also include new sea platforms equipped with Kalibr cruise missiles inducted during the 2010s. Air capacities, such as MiG-31 bombers, equipped with hypersonic antisurface Kinzhal missiles,<sup>28</sup> and Tu-22M3 long-range bombers,<sup>29</sup> contribute to the Russian defensive layout.

The Black Sea plays the role of a “geographical security zone,” where Russian naval platforms capable of firing Kalibr cruise missiles can patrol in a safe environment. The Caspian Sea, for its part, appears as a zone for launching potential strikes against targets in the Middle East and Central Asia from surface platforms that are securely located in a maritime area deep inside the Eurasian landmass.

## Moscow's lines of defense in the wider Black Sea Region and the Eastern Mediterranean

Unlike in its other contiguous naval theaters, in the Black Sea Russia has to maintain a multidirectional defense. This theater is also the only one where Russia faces an openly hostile neighbor with which it is in a quasi-open war—namely, Ukraine. Consequently, from Moscow's perspective, the two main maritime threats in the Black Sea basin are emanating from NATO, mainly through its naval activity, and Ukraine. The first one is immediate and limited to Black

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<sup>27</sup> A third Bastion complex should enter in service in 2019. «ВМФ России примет на вооружение три дивизиона ракетных комплексов "Бастيون"», Ракетная техника, 3 марта 2019.

<sup>28</sup> «МиГ-31 с ракетами "Кинжал" выполнили более 380 полетов над Черным и Каспийским морями», 20 февраля 2018.

<sup>29</sup> «В Совфеде назвали причину размещения Ту-22М3 в Крыму», ТАСС, 18 марта 2019.

Sea waters. The second could materialize in the years to come and emanate from both the Black and the Azov Seas, where Russia pretends to exert an absolute supremacy over any challengers. Whereas Russia has opted for an A2/AD approach to meet the security challenges posed by NATO, the future potential threat posed by the resurgence of a modest Ukrainian naval force and the appearance of land-based antiship capabilities calls for different solutions. Kiev has displayed a willingness to create a “mosquito fleet” of fast, small artillery and small missile boats in the years to come in order to pose an asymmetric challenge to a locally more powerful Russian navy.<sup>30</sup>

Several Russian lines of defense have emerged in the Black Sea basin. The first one spans the area from the Sea of Azov to the Black Sea maritime space, between Crimea and Ukraine, and is aimed at handling the future asymmetric threat posed by the potential creation of a Ukrainian “mosquito” naval force. Project 03160 (Raptor class) fast attack boats, Project 22160 small patrol boats, and Project 22800 small missile ships complement coastal artillery and air assets to counter this first challenge. Moreover, in the Black Sea Fleet, as in the Baltic and Northern Fleets, the coastal troops have been merged in an army corps, providing them with greater autonomy and agility.<sup>31</sup> The importance of this line of defense has been highlighted by the tensions between Russia and Ukraine in the Azov Sea basin in November 2018.

The second line of defense is also in the Black and the Azov Seas, but is aimed at NATO. Russia intends to tackle the perceived security challenge posed by NATO by deploying various asymmetric capacities designed to deter NATO navies from undertaking any hostile actions against Russian assets. The same sea and river platforms mentioned above—to which should be added new Admiral Grigorovich type frigates, new Kilo-class submarines, and the Project 21631 missile ships—are tasked to fulfill this mission. Platforms dispatched on Russian rivers (Volga or Don) and in the Caspian Sea (Project 21631 missile ships) also contribute to both lines of defense and can implement intertheater maneuvers between the Black, the Azov, and the Caspian Seas.

The third line of defense is in the Eastern Mediterranean, where a Russian naval task force has been permanently deployed since the beginning of the 2010s. Formed with units coming from the Northern Fleet, the Baltic Fleet, the Black Sea Fleet/Caspian Flotilla, and the Pacific Fleet dispatched on a rotational basis, the Mediterranean Squadron was formally resurrected in 2013. It is assigned under the Black Sea Fleet, which provides most of the vessels (up to 10 platforms, rarely more). Having dispatched anti-air systems (S-300, S-400 divisions) and anti-ship capabilities (Bastion battery) in Syria, this task force can patrol in a relatively safe

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<sup>30</sup> Ihor Kabanenko, “The Ukrainian Navy: Conceptual Aspects and Cooperation with the West,” *Eurasia Daily Monitor*, Vol. 14, Issue 32, 9 Mar. 2017.

<sup>31</sup> «Вытеснить НАТО из Арктики: чем вооружат мощнейшие корабли Северного флота», РИА Новости, 1 июня 2017.

environment in the Levant. Project 11356M frigates, two Project 0636.3 diesel submarines, and Project 21631 missile boats have formed the backbone of the squadron, occasionally reinforced with ex-Soviet platforms (mainly Project 1164 cruisers and Project 1155 large antisubmarine warfare vessels). Constrained by the terms of the Montreux Convention (1936), which regulates traffic through the Turkish Straits, Moscow cannot freely dispatch its conventional submarines from the Black Sea to the Mediterranean for patrols.<sup>32</sup>

These three lines of defense illustrate how the Black Sea region simultaneously plays the roles of both a bastion and a corridor. Light river-sea platforms and domestic waters allow for greater ubiquity of the forces, which can transit back and forth from the Levant to the Caspian. Furthermore, Russian firepower has been critically increased since the induction of the Kalibr cruise missiles in the Black Sea Fleet and the Caspian Sea Flotilla, narrowing the qualitative gap with Western navies.

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<sup>32</sup> Article 12 of the Montreux Convention.

# The Black Sea Fleet: Main Trends and Challenges

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As the 2011-2020 State Armament Program comes to an end, we can already draw two conclusions. First, the Black Sea Fleet, like the Russian Navy, is slowly transitioning from an aging ex-Soviet blue-water fleet toward a more agile multi-purpose green-water navy. Second, facing several industrial and financial constraints, Russia has opted to produce more light units, which are cheaper and faster to build. Although they feature a very light tonnage (less than 1,000 tons, for example, for the Project 22800 small missile ships), some of them are equipped with Kalibr cruise missiles.

## Littoralization and Kalibrization

The cumulative effects of the issues that appeared in 2014-2015 (the collapse of oil prices, the structural inability of the VPK to implement the 2011-2020 armament program, and the sanctions and termination of defense cooperation with foreign partners) compelled Moscow to recalibrate its armament plan. Facing difficulties with the construction of frigates (Project 22350, Project 11356M) and heavy corvettes (Project 20380, Project 20385, and Project 20386), Russia has prioritized the mass construction of light tonnage units heavily armed with precision-guided missiles. This reorientation has particularly affected the Black Sea Fleet, which has been the theater where small platforms featuring Kalibr cruise missiles (Project 21631, Project 22800) have proliferated, embodying this dual trend of “littoralization” and “Kalibrization.” (See Table 4.) Consequently, the proliferation of small tonnage units has decreased the fleet’s range of action. This trend is expected to continue across the 2020s, especially in the absence of any plans related to the construction of oceangoing vessels.

Today, therefore, the Southern Military District appears to be the most “Kalibrized” military district in Russia, largely thanks to naval platforms in service in both the Black Sea Fleet and the Caspian Sea Flotilla. As of early 2019, the Russian Navy has 19 platforms (surface and submarines) in service, armed with 164 Kalibr cruise missiles. Among these platforms, 16 are deployed in the Black and Caspian Seas, and they can fire a theoretical salvo of 116 Kalibr cruise missiles. This number should be seen in relative terms, however: the SSGN K-560 *Severodvinsk* is armed with 32 Kalibrs, and a single Arleigh Burke destroyer can be armed with up to 96 Tomahawk missiles (depending on the mission and the type of missiles embarked).

Table 4. Russian Navy vessels armed with Kalibr cruise missiles (as of early 2019)

Type	Name	Project	Commissioned (day/mo/year)	No. of missiles	Formation
Frigate	<i>Admiral Grigorovich</i>	11356M	11.03.2016	8	Black Sea Fleet
Frigate	<i>Admiral Essen</i>	11356M	07.06.2016	8	Black Sea Fleet
Frigate	<i>Admiral Makarov</i>	11356M	27.12.2017	8	Black Sea Fleet
Light frigate	<i>Dagestan</i>	11661K	28.11.2012	8	Caspian Sea Flotilla
Missile corvette	<i>Grad Sviyazhsk</i>	21631	27.07.2014	8	Caspian Sea Flotilla
Missile corvette	<i>Uglich</i>	21631	27.01.2014	8	Caspian Sea Flotilla
Missile Corvette	<i>Velikiy Ustyug</i>	21631	19.12.2014	8	Caspian Sea Flotilla
Missile corvette	<i>Zeleny Dol</i>	21631	12.12.2015	8	Baltic Sea Fleet
Missile corvette	<i>Serpukhov</i>	21631	12.12.2015	8	Baltic Sea Fleet
Missile corvette	<i>Vyshniy Volochyok</i>	21631	02.06.2018	8	Black Sea Fleet
Missile corvette	<i>Orekhovo Zuyevo</i>	21631	10.12.2018	8	Black Sea Fleet
Missile corvette	<i>Mytishchi</i>	22800	17.12.2018	8	Black Sea Fleet
SSGN	<i>Severodvinsk</i>	885	17.06.2014	32	Northern Fleet
SSK	<i>Novorossiysk</i>	636.3	17.09.2014	6	Black Sea Fleet
SSK	<i>Rostov-na-Donu</i>	636.3	30.12.2014	6	Black Sea Fleet
SSK	<i>Stary Oskol</i>	636.3	03.07.2017	6	Black Sea Fleet
SSK	<i>Krasnodar</i>	636.3	05.11.2015	6	Black Sea Fleet
SSK	<i>Velikiy Novgorod</i>	636.3	26.10.2016	6	Black Sea Fleet
SSK	<i>Kolpino</i>	636.3	24.11.2016	6	Black Sea Fleet

Since the latest ships were commissioned in 2018, the Russian naval forces have reached a theoretical parity in terms of cruise missiles with one Arleigh Burke type cruiser. The US Navy occasionally dispatches one of those cruisers in the Black Sea for supporting cooperation with local partner navies (mainly Romania). The presence of a US Arleigh Burke type cruiser in the

Black Sea usually prompts a nervous reaction from Russia's side, highlighting the tendency in Moscow to think more in terms of capabilities than in terms of intention.

The light units (e.g., Project 22800 missile boats with a tonnage of 800 tons) are set to be deployed in the 500-n.mi. area—called a “close maritime zone” in Russia<sup>33</sup>—where they can operate under the powerful protection of various sets of defense systems deployed on shore. The antiair missile systems (S-300, S-400), the antiship coastal battery (Bastion-P), and the air cover provided by the Su-30SM dispatched in Crimea create a secure environment for these vessels. The combination of these systems lies at the heart of the A2/AD “bubbles” created by Russia along its littoral zones to inhibit the activity of its potential adversaries, mostly NATO navies and air forces. Newly inducted and Kalibr-capable ships can carry out missile strikes from the Black, Azov, or Caspian Sea, or from domestic waters, where both protection and navigability are optimal for such light sea-platforms. The range of the Kalibr—up to 2,500 km—allows these units to strike any targets from Central Europe to Central Asia, via the Middle East, from a relatively safe position in the maritime bastion of the wider Black Sea region.

The Black Sea basin becomes more and more part of the set of “geographical security zones” in the conventional sense, as it plays the role of a launching platform for precision-guided missiles. Yet, considering the family of missiles to which the Kalibr belongs, we must bear in mind that this cruise missile can be tipped with a nuclear tactical warhead, enabling the Black Sea Fleet missile platforms to carry out either a conventional attack or a tactical strike.

## The Syrian campaign: projection of the line of defense

Russia's campaign in Syria has highlighted a remarkable pattern: the projection of littoral warfare beyond the “geographical security zone.” Since the beginning of the 2010s, the Russian Navy has resurrected a Mediterranean squadron,<sup>34</sup> technically under the command of the Black Sea Fleet. The priorities of Russia's naval squadron in the Mediterranean largely revolve around Syria, and its missions can be summarized as follows:

- Support the Syrian regime by providing a logistical and material lifeline through a maritime bridge between Russia's Black Sea ports and Syrian ports.
- Implement a conventional deterrence to prevent any robust military operations against the Syrian regime.

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<sup>33</sup> Ближняя морская зона – БМЗ.

<sup>34</sup> For information on the composition of the Mediterranean Squadron, refer to the previous section of this paper.

- Support the Russian and loyalist forces' operations on the ground with the firepower of the Kalibr cruise missiles.

This set of objectives has provided Moscow with a credible posture on the Syrian crisis while allowing Russia to project its line of defense beyond the Black Sea region, toward the Levant, in the context of tensions with the Euro-Atlantic community following the Ukrainian crisis. Russian material support, which has been in action since the very beginning of the uprising in Syria, has been key to the regime's survival. As of January 1, 2018, a total of 318 rotations had been conducted between Syrian and Russian ports, carrying more than 185,000 tons of military cargo.<sup>35</sup> Of these rotations, 55 percent were carried out by amphibious units of the Black Sea Fleet.

The Black Sea Fleet and the Caspian Sea Flotilla further contributed to combat operations by firing Kalibr cruise missiles from surface platforms and submarines, from the Eastern Mediterranean and the Caspian Sea (for the surface vessels). Three types of ships have been involved in these actions: small missile boats (Project 21631), frigates (Project 11661K, Project 11356M), and diesel submarines (Project 0636.3). As of March 2019, eight launches of 37 cruise missiles have been carried out.

In the Levant, Russia has not only projected its line of defense but also engaged in littoral warfare. Most of the units mobilized in the Eastern Mediterranean are light vessels, fitted for green, if not brown, water. They can nevertheless patrol the Levant relatively safely, thanks to Russia's web of logistical assets in the region: the naval support facility in Tartus; a naval facility in Latakia; and bilateral agreements with Cyprus (Limassol) and Malta (La Valette), authorizing Russian warships to make port calls for light logistical operations. Besides, Russia's Mediterranean Squadron benefits from air cover provided by air assets and air defense missile systems established in Syria, primarily at Khmeimim Airbase. This contributes to a uniquely safe environment for the Russian Navy outside Russia's contiguous maritime spaces. The extent to which Russia can duplicate this environment in another area remains to be seen.

Russia has displayed its ambitions to widen its naval activity to the so-called "world ocean," yet, as discussed above, the backbone of the Mediterranean Squadron is made of small and medium-size vessels. Thus, Russia will need to create a web of support points in the middle and longer term. While the success of these ambitions remains to be demonstrated, the latest version of the Russian naval doctrine hints at such a move in general and vague terms.<sup>36</sup>

In the Mediterranean, Russia has an immediate need to create the proper infrastructures in order to maintain and support the activity of its diesel submarines, considering the constraints

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<sup>35</sup> «Российские десантные корабли создали "дорогу жизни" для Сирии», Взгляд, 2 октября 2017.

<sup>36</sup> Bogdanov, Kramnik, *Russian Navy in the 21<sup>st</sup> Century*, pp. 20-21.

of the Montreux Convention. If six new diesel submarines have been commissioned in the Black Sea Fleet, only four of them are effectively dispatched in the Black Sea, with the two others based in the Eastern Mediterranean. Those two belong to the Mediterranean Squadron, and their maintenance will call for the construction of maintenance infrastructure in Tartus. In March 2019, B-265 *Krasnodar* made an unexpected and rare southbound passage across the Bosphorus to the Eastern Mediterranean. A few days later, its sister ship, B-268 *Velikiy Novgorod*, deployed in the Mediterranean, crossed the Turkish Straits to reach the Black Sea. This “swap” deployment can be authorized under the terms of the Montreux text only if the submarine going south is bound for a shipyard outside the Black Sea basin (although the convention does not indicate how much time is allowed for the submarine to reach the plant after the crossing).

The submarines of the Project 0636.6 type have to go through a major technical maintenance operation every 10 years; otherwise, they have to go through a lighter intermediary maintenance operation every three and a half years. The latter type of intervention can be done in Sevastopol, as demonstrated with both *Krasnodar* and *Stary Oskol*, which underwent such light maintenance in 2018. B-271 *Kolpino*, which was commissioned in November 2016 and has been patrolling the Eastern Mediterranean since then, transited to the Black Sea on May 1, 2019 and is expected to go through a light maintenance cycle in Sevastopol, while *Stary Oskol* replaced it in the Mediterranean.<sup>37</sup> To comply with the terms of the Montreux Convention, these submarines that redeployed from the Black Sea will certainly show up in the Baltic Sea one day to go through their maintenance cycle.

The lack of units able to sail on the “world ocean” will lead the Russian Navy to dispatch low- or medium-tonnage units in remote maritime areas to fulfill tasks traditionally devoted to blue-water ships. This was the case with the frigate *Yaroslav Mudry* (Project 11540, Baltic Fleet), which was dispatched to Cuba in late 2016.<sup>38</sup> A year later, two corvettes of the Baltic Fleet—*Boykiy* and *Soobrazitelnyy* (Project 20380)—accomplished a 30,000-n.mi. deployment, which took them to the Atlantic and Indian Oceans via the Mediterranean, raising eyebrows among some experts.<sup>39</sup> One could expect units of the Black Sea Fleet to carry out deployments in remote areas—beyond the Mediterranean basin—in the Red Sea and off the Horn of Africa, including vessels not necessarily fitted for this type of deployment (Project 11356M and certainly Project 21631 are in that category). The deployment of such platforms, overarmed

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<sup>37</sup> <https://turkishnavy.net/foreign-warship-on-bosphorus/foreign-warship-on-bosphorus-in-2019/>

<sup>38</sup> «Сторожевой корабль "Ярослав Мудрый" выполнил все задачи в Карибском море», РИА Новости, 2 декабря 2016.

<sup>39</sup> They were deployed together with a tug, from October 14, 2017, to January 15, 2018. «Эксперт: Российские корветы недостаточно мореходны для работы в океане», Flot.ru, 12 Jan. 2018.

and with questionable propulsion systems, will inevitably exert pressure on the logistics and maintenance chain.

## Conclusion

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The 2011-2020 State Armament Program has succeeded in stopping the atrophy of the Black Sea Fleet's capabilities. Despite some shortfalls, it has helped change the physiognomy of the fleet while rejuvenating it. It has turned the Black Sea Fleet from an aging ex-Soviet fleet into a more agile, multipurpose naval formation. The Caspian Sea Flotilla, which benefited from a modernization plan during the 2000s, has roughly followed the same path.

It is true that the proliferation of light units has also contributed to decreasing the Black Sea Fleet's range of action. Yet, despite this shift toward littoral areas, the Black Sea Fleet and the Caspian Sea Flotilla retain a robust capacity to threaten and deter more powerful navies, thanks to the cruise missiles and antiship missiles with which their platforms are equipped.

Not only do the Black Sea Fleet and the Caspian Sea Flotilla have similar orders of battle, but intertheater maneuvers between the Caspian Sea and the Eastern Mediterranean via domestic waterways have enhanced the porosity of the missions and the ubiquity of the two formations. From the Caspian Sea waters to the Levant, both formations have been mobilized to fulfill the same task: to support combat operation in Syria. In case of a grave crisis in Ukraine, there is no doubt that both formations will also be put on combat alert. While transitioning to a littoral force, the Black Sea Fleet has nevertheless gained in versatility and is capable of fulfilling tasks in the Caspian Sea, the Black Sea basin and the Mediterranean. On occasion, some units can be dispatched to the Red Sea and off the Horn of Africa, confirming the Black Sea Fleet's status as a multiregional force.

One challenge for the 2018-2027 armament program will be to transition from the quality procurement of the 2011-2020 plan to mass production in a context of financial pressure and sanctions. The modernization plan of the Black Sea Fleet has proved more resilient in the face of these challenges, but it will not escape this reality.

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