I. Topolski, *Military potential of the Russian Federation in the Kaliningrad Oblast,* „Yearbook of the Institute of East-Central Europe", 23 (2025), issue 3, pp. 235–252, DOI: https://doi.org/10.36874/RIESW.2025.3.12

*Ireneusz Topolski**

Military potential of the Russian Federation in the Kaliningrad Oblast[1]

Potencjał militarny Federacji Rosyjskiej w obwodzie kaliningradzkim

ABSTRACT:
The military potential in the Kaliningrad Oblast after the aggression against Ukraine is of great importance to the Russian Federation. The most important reasons for its development are economic, political, and military. The Baltic Sea is an important route for the transmission of energy resources, especially crude oil and, previously, also natural gas. After Finland and Sweden joined the North Atlantic Alliance, the deployment of armed forces in the oblast completely counteracts Russia's isolation in this direction. The level of military potential in the exclave significantly exceeds its defensive needs. What is more, offensive systems predominate, including those covering means of delivering nuclear weapons. This creates a military threat to the countries of the region. The military potential in the oblast serves Russia by deterring the countries of the North Atlantic Alliance, whereas special units prepared to conduct hybrid operations compensate for the lack of land forces.

KEYWORDS:
military potential, Kaliningrad Oblast, Russian Federation, Baltic Sea, military instruments

* Ireneusz Topolski – PhD Habil., Institute of International Relations, Maria Curie-Sklodowska University in Lublin, Poland, ORCID: http://orcid.org/0000-0001-7152-8329, e-mail: ireneusz.topolski@mail.umcs.pl.

1 While the article was inspired by the IEŚ Commentary, it is a completely new item, cf.: I. Topolski, *Potencjał militarny Federacji Rosyjskiej w obwodzie kaliningradzkim*, "Komentarze IEŚ" 2022, no. 220, https://ies.lublin.pl/wp-content/uploads/2022/10/ies-komentarze-708-220-2022_goscinny.pdf [10.06.2024].

STRESZCZENIE:
Potencjał militarny w obwodzie kaliningradzkim po agresji na Ukrainę ma duże znaczenie dla Federacji Rosyjskiej. Najważniejsze przyczyny jego rozwoju mają charakter ekonomiczny oraz polityczno-militarny. Morze Bałtyckie jest ważnym szlakiem przesyłu surowców energetycznych, szczególnie ropy naftowej, a wcześniej także gazu ziemnego. Po przystąpieniu do Sojuszu Północnoatlantyckiego Finlandii i Szwecji rozmieszczenie sił zbrojnych w obwodzie całkowicie zapobiega izolacji Rosji na tym kierunku. Poziom potencjału militarnego w eksklawie znacznie przekracza jego potrzeby obronne, co więcej przeważają systemy o charakterze ofensywnym, w tym obejmujące środki przenoszenia broni nuklearnej. Stwarza to zagrożenie militarne dla państw regionu. Potencjał militarny w obwodzie służy Rosji do odstraszania państw Sojuszu Północnoatlantyckiego. Natomiast jednostki specjalne przygotowane do prowadzenia działań hybrydowych rekompensują niedostatek sił lądowych.

SŁOWA KLUCZOWE:
potencjał militarny, obwód kaliningradzki, Federacja Rosyjska, Morze Bałtyckie, instrumenty militarne

Kaliningrad Oblast, located in the southeastern part of the Baltic Sea, is the westernmost region of the Russian Federation (hereinafter referred to as the Federation, Russia). The exclave lies over 300 km away from the territory of Russia (Pskov Oblast), and ~65 km from Belarus in the Suwałki Gap. On the other hand, the sea route to ports in the Federation is ~900–1,100 km long. For comparison, the distance from the oblast to Warsaw, Bornholm, and Copenhagen is 278 km, 345 km, and 575 km, respectively, and from Kaliningrad to Vilnius – 50 km. The exclave borders Lithuania to the north and east (280.5 km) and Poland to the south (232 km, including a land border of ~209.8 km). Most land borders are natural. In the western part, the Baltic Sea coastline is almost 183.6 km long. The specific location of the Kaliningrad Oblast makes it of great military importance[2]. In February 2024, the

[2] M. Cordes, *Kaliningrad Oblast 2024: Russia's vessel of havoc on the Baltic Sea*, Dansk Institut for Internationale Studier, DIIS Report, Copenhagen 2024, p. 9; *Географические данные калининградской области* [*Geografičeskie dannye kaliningradskoj oblasti*], https://geo.god-tigra.ru/geograficheskiye-dannyye-kaliningradskoy-oblasti.php [11.06.2025]; *Калининградская область* [*Kaliningradskaâ oblast'*], https://regionsinfo.ru/szfo/39reg [12.06.2025]; T. Szubrycht, K. Rokiciński, P. Mickiewicz, *Morze Bałtyckie w polityce bezpieczeństwa Rosji*, Poznań 2020, p. 297.

Kaliningrad Defence District was subordinated to the re-establishment of the Leningrad Military District (MD) after the dissolution of the Western MD, of which it was a part, whose headquarters are in Saint Petersburg[3].

The aim of this article is to analyse the military potential in the Kaliningrad Oblast, with particular emphasis on the period after the aggression of the Russian Federation against Ukraine on 24 February 2022. The following research hypotheses were adopted:

1. The military potential deployed in the Kaliningrad Oblast significantly exceeds its defence needs. In addition, Russia is developing and modernising its military infrastructure and deploying weapons systems that are capable of striking deep into the territory of the Alliance countries and blocking the Baltic Sea basin.

2. Deterrence with military potential in the Kaliningrad Oblast towards the West is of the greatest significance for Russia after the aggression against Ukraine in 2022. This role is played by means of delivering the so-called non-strategic nuclear triad. On the other hand, special units prepared to conduct hybrid operations compensate for the lack of land forces.

Factor analysis was used to verify the adopted research hypotheses, complemented by research techniques such as content analysis of scientific studies, document analysis, and statistical techniques. In the first two sections, the article analyses the conditions and nature of military potential in the Kaliningrad Oblast. The third section covers the possibilities of using this potential as an instrument of policy by Russia.

1. Determinants of the military potential in the Kaliningrad Oblast

The Kaliningrad Oblast covers an area of 13.3 thousand km², and with the Curonian Lagoon and the Vistula Lagoon ~15.1 thousand km². In terms of topography, flat terrain and lowlands predominate, but there are also hilly

[3] Указ Президента Российской Федерации. от 26.02.2024 g. № 141. О военно-административном делении Российской Федерации [Ukaz Prezidenta Rossijskoj Federracii. ot 26.02.2024 g. no 141. O woenno-administratiwnom delenii Rossijskoj Federracii], http://publication.pravo.gov.ru/document/0001202402260031 [12.04.2025]; J. Kukkola, *The Leningrad Military District: The Past and Future of the Northwestern Direction*, Helsinki 2024, pp. 1, 40.

areas with the highest elevation reaching 242 m above sea level. The average height is ~15 m above sea level; however, ~1 thousand km² is covered by polders. High humidity and flat terrain cause the occurrence of numerous rivers and lakes; in this area, there are 4.6 thousand rivers and drainage channels, with a total length of ~13 thousand km, 70% of which are small rivers and streams. In addition, in the exclave, there are also several hundred marshes and ~4 thousand lakes, mostly small reservoirs. Forests cover ~21% of the land area of the oblast, most of which occur in wetlands[4]. Although the territory of the Kaliningrad Oblast is relatively small, its conditions and characteristics, including the aforementioned presence of a large number of rivers, lakes, marshes, and forests, make it conducive to the preparation and conduct of defensive operations.

The transport infrastructure in the region includes over 750 km of railway tracks (48 km per 1 thousand km²), ~9.1 thousand km of highways, and 571 km of inland waterways. The exclave has an extensive network of paved roads, convenient for the movement of military units. The transport infrastructure is complemented by the international airport Khrabrovo and three ice-free ports, i.e., Kaliningrad, Baltiysk, and Pionersky[5]. A characteristic feature of the oblast's communication infrastructure is its low accessibility from the outside.

In 2018, the population of the Kaliningrad Oblast exceeded 1 million. Demographic growth slowed down significantly after the beginning of the aggression against Ukraine. The war contributed to a decrease in migration from other regions of the Federation and the post-Soviet area. The high increase, for example, in 2019–2021 was probably due to the relocation of soldiers and their families. Demographic conditions indirectly affect the military potential in the region. They include soldiers and their family members, as well as potential reservists. It is also necessary to take into account the personnel servicing the military infrastructure, people working for the army in arms plants, and the processing industry[6].

---

4 G.M. Fedorov et al., *Current Problems in Developing the Natural Resource Potential of the Russian Exclave in the Baltic*, "International Journal of Environmental & Science Education" 2016, vol. 11, no. 17, pp. 10455–10465; *Geografičeskie…*; *Kaliningradskaâ…*; T. Szubrycht, K. Rokiciński, P. Mickiewicz, op. cit., pp. 296–297.

5 *Kaliningradskaâ…*

6 S. Abylkalikov, *Demographic challenges of the Kaliningrad region in the new geopolitical reality: Trends, risks, and prospects*, BSR Policy Briefing series, vol. 6, 2024, pp. 6,

Political and military conditions significantly affect the size and specificity of Russia's military potential in the region. Since 2014, three main conditions have dominated: the annexation of Crimea and the war in Donbas (2014), Russia's aggression against Ukraine (24 February 2022), and the accession to the North Atlantic Alliance of Finland (4 April 2023) and Sweden (7 March 2024). A "new Cold War" has emerged in relations with the West[7]. The outbreak of war in Ukraine and the accession of Finland and Sweden have weakened the Russian Federation's strategic position in the Baltic region. Furthermore, the Baltic Sea offers the potential for attacking targets in Russia using long-range weapons systems deployed on warships. The potential threat level has also increased, with the risk of closing the Gulf of Finland to maritime navigation or blocking transport routes to the Kaliningrad Oblast. This situation compels Russia to ensure freedom of maritime transport since the Baltic Sea is of great significance to the Federation as a very important route for the transmission of energy resources. Firstly, it included the construction of both submarine gas pipelines Nord Stream 1 and Nord Stream 2, and later, after their commissioning in 2011–2012 and 2021, their protection. Secondly, there is a transhipment terminal for oil and its products in Primorsk. In 2023, Russia's total oil exports through the Baltic Sea ports were about 1/3, and by sea 60%. They are complemented by the port in Ust-Luga, used for coal export. Securing this infrastructure requires the stationing of appropriate naval and air forces, capable of operating all year round, which is possible thanks to the Kaliningrad Oblast. This problem ceased to exist after the aggression in February 2022 against Ukraine and the destruction of both submarine gas pipelines in the same year[8]. However, because of international sanctions, oil exports are handled by a *shadow fleet*, which also needs protection[9].

11–14; M. Cordes, op. cit., p. 19; M. Raś, *Aktywność międzynarodowa regionów Federacji Rosyjskiej*, Warsaw 2018, p. 299.

7 Kaliningrad Oblast as a source of military threats in the region, see I. Topolski, *Military Importance of the Kaliningrad Oblast*, "Athenaeum. Polish Political Science Studies" 2024, vol. 83, no 3, pp. 161–168.

8 *International Security and Estonia 2025*, Estonian Foreign Intelligence Service, 2025, p. 38, https://www.valisluureamet.ee/doc/raport/2025-en.pdf [25.09.2025]; T. Szubrycht, K. Rokiciński, P. Mickiewicz, op. cit., pp. 219–221; J. Kukkola, op. cit., pp. 48–49.

9 The operation of *the shadow fleet* in the Baltic Sea, see A. Kuczyńska-Zonik, *Rosyjska „flota cieni" na Morzu Bałtyckim*, "Komentarze IEŚ" 2024, no. 18, https://ies.lublin.pl/komentarze/rosyjska-flota-cieni-na-morzu-baltyckim/ [11.06.2025]; D. Szacawa, J. Bor-

2. The nature of the military potential in the Kaliningrad Oblast

In this part of the article, emphasis is placed on defining the nature of the military potential in the Kaliningrad Oblast[10]. Russia is focusing on three directions, i.e., the development and modernisation of military infrastructure, the supply of weapons with higher combat values, and the creation or deployment of new formations. The actions taken are focused on four components: early warning and electronic warfare systems (EWS), means of delivering nuclear weapons, conventional forces, and reconnaissance and sabotage (creating hybrid threats). In principle, these actions are to eliminate NATO's quantitative and qualitative advantage in the region. Russia is developing systems and infrastructure in the Oblast that will allow it to significantly increase its combat capabilities and deterrence against the West, with limited financial costs.

In the region, modernisation included storage facilities for nuclear weapons and bases for servicing delivery vehicles. Major renovation and extension were carried out in underground bunkers intended for storing nuclear weapons near Kulikovo. After modernisation, these warehouses have become a focal point for Russia's 12th Main Directorate (12th GUMO), which oversees nuclear weapons. Moreover, in 2024, the so-called "local warehouse" was transformed into a national warehouse[11]. This means that nuclear warheads and delivery vehicles can be deployed much faster. The storage facility is located at a distance of up to 100 km from the bases where the delivery vehicles are located. Three other facilities deserve special attention: the Chkalovsk airport (8 km), which, after major renovation, can receive heavy interceptor fighters with hypersonic missiles. Ships capable of carrying missiles with nuclear warheads are moored in Baltiysk (35 km). The third includes the base in Chernyakovsk (96 km), where hangars for launchers capable of

nio, *„Wartownik Bałtyku" – odpowiedź NATO na działania sabotażowe Rosji na Bałtyku*, "Komentarze IEŚ" 2025, no. 7, https://ies.lublin.pl/komentarze/wartownik-baltyku-odpowiedz-nato-na-dzialania-sabotazowe-rosji-na-baltyku/ [10.06.2025].

[10] Military potential deployed in the Kaliningrad Oblast, cf.: I. Topolski, *Potencjał…*

[11] In Russia, non-strategic nuclear weapons are stored in large national warehouses, from which, in the event of a crisis or war, they are transferred near the zone of military operations or means of delivery to "local warehouses".

carrying nuclear weapons and nine modern launch platforms were built for the needs of the 152nd Guards Missile Brigade (152nd BRG)[12].

These operations are accompanied by the deployment of non-strategic nuclear weapons. The land component is made up of the 152nd BRG, equipped with 12 9K720 *Iskander* launchers – probably the 9M723 ballistic missile version. Each vehicle is armed with two missiles with a range of 500+ km – the total number of these vehicles amounts to 24. The P-800 *Bastion* coastal defence systems are also probably adapted to use *Yakhont* missiles with nuclear charges. The naval component includes small *Buyan-M* and *Karakurt*-class missile ships moored in Baltiysk, classified by NATO as small missile corvettes. Each of these units is armed with eight *Kalibr*-NK cruise missiles (2000–2500 km). The air component is made up of three MiG-31K aircraft with Kh-47M2 *Kinzhal* hypersonic missiles (2000+ km). It remains unknown whether nuclear weapons have been deployed in the exclave. According to the Minister of Foreign Affairs, Radosław Sikorski, Russia has ~100 nuclear weapons in this region[13].

Strategic objects include the *Voronezh-DM* early warning radar station (object no. 2461 – Independent Radio-technical Node) near Pionersky. Its range is up to 6,000 km, which allows monitoring the airspace over the Baltic Sea, Northern Europe, the Azores, and Greenland. In 2023, the construction of a new 29B6 *Kontiejnier* over-the-horizon radar began near Chernyakhovsk. The diameter of the entire complex is ~1,200 m, and it is to have 150 antenna masts. The range of the radar systems will allow for the detection of aircraft and missiles up to a distance of 3,000 km from the direction of Western Europe and Ukraine. The 1237th Special Purpose Strategic Radio-electronic

[12] H. Kristensen, *Russia Upgrades Nuclear Weapons Storage Site In Kaliningrad*, https://fas.org/publication/kaliningrad/ [10.06.2025]; *International Security…*, p. 19; O. Kund, K. Maran, H. Roonemaa, *Satellite imagery analysis: What's going on in Putin's military bases behind the Estonian border and how big a threat they really pose us*, "Eesti Ekspress", 1 November 2024, https://ekspress.delfi.ee/artikkel/120333504/satellite-imagery-analysis-what-s-going-on-in-putin-s-military-bases-behind-the-estonian-border-and-how-big-a-threat-they-really-pose-us [10.06.2025].

[13] H. Kristensen, op. cit.; O. Kund, K. Maran, H. Roonemaa, op. cit.; M. Domańska et al., *Twierdza Kaliningrad: coraz bliżej Moskwy*, Warsaw 2019, pp. 74–75; Е. Жуков, *Чем ответит Россия, если Польша нападёт на Калининград* [E. Žukow, *Čem otwetit Rossiâ, esli Polʹša napadët na Kaliningrad*], Life, 17 May 2022, https://life.ru/p/1494718 [20.06.2022]; K. Żęgota, *Obwód kaliningradzki Federacji Rosyjskiej a bezpieczeństwo międzynarodowe Europy Środkowo-Wschodniej. Między geopolityka a konstruktywizmem*, Poznań 2021, p. 232; *The Military Balance 2025*, London 2025, pp. 182–188.

Reconnaissance Centre and the Special Purpose Independent Radio Node are also located in the exclave[14].

A large component of the EW forces has been deployed in the exclave, which is responsible for, among other things, monitoring the activity of NATO aircraft and reconnaissance ships. In particular, the 841st Independent Radio-Electronic Warfare Centre of the Baltic Fleet, equipped with an automated *Murmansk-BN* complex, used for reconnaissance and jamming communications in the full range of short waves, should be mentioned here. The system has a range of radio communication suppression within a radius of ~5 thousand km, and in ideal conditions, 8 thousand km. The range of the complex includes the countries of Central and Eastern Europe, the Baltic region and the waters of the Baltic Sea, as well as the north-western Atlantic Ocean. Some of the personnel of the EW units are participating in the war in Ukraine[15].

The military potential in the region is distinguished by the dominant role of naval forces, with support tasks assigned to land and air forces. About 2/3 of the Baltic Fleet's potential is stationed in the exclave. The greatest combat capabilities are possessed by the *Bujan-M* and *Karakurt* class ships, which can attack targets almost all over Europe. However, these are not oceangoing units, adapted to operate in the difficult hydro-meteorological conditions of the water body, and they do not have a well-developed anti-aircraft defence. Without the protection of anti-aircraft and anti-missile defence systems, their effectiveness decreases. Ships deployed in the region also escort ships of the *shadow fleet* to the open ocean. The Baltic Fleet's surface attack ships can carry a total of ~148 missiles of various categories. The naval potential is supplemented by the *Bastion-P* (1 division) and *Bal* (1 or 2 divisions) coastal defence missile systems, capable of striking land targets. The Bal system can

[14] J. Kjellén, *The Russian Baltic Fleet – Organisation and role within the Armed Forces in 2020*, Report no. FOI-R--5119—SE, February 2021, p. 55; O. Kund, K. Maran, H. Roonemaa, op. cit.; M. Żyła, *Obwód Kaliningradzki w polityce bezpieczeństwa Federacji Rosyjskiej*, Warsaw 2018, pp. 155, 208; T. Szubrycht, K. Rokiciński, P. Mickiewicz, op. cit., p. 307.

[15] Ю. Дмитриев, *Держат эфир под контролем*, "Страж Балтики" [Û. Dmitriev, *Deržat èfir pod kontrolem*, "Straž Baltiki"] 2023, no. 16, pp. 1, 9, https://ric.mil.ru/upload/site173/CQDCqDNWp6.pdf [24.10.2023]; Н. Пороскоў, *Электронные глушилки меняют приоритеты*, "НВО Независимая Газета" [N. Poroskow, *Èlektronnye glušilki menâût prioritety*, "NWO Nezawisimaâ Gazeta"], 28 April 2022, https://nvo.ng.ru/concepts/2022-04-28/5_1187_priorities.html [24.10.2023].

attack ships with a displacement of up to 5,000 tons, and the *Bastion-P*, all classes of ships[16].

The air component is estimated at ~43–56 combat aircraft, which allows for operational activities, including offensive ones. However, in terms of quality, the Su-24M and Su-27 aircraft belong to the older generation, and deliveries of the Su-30SM/SM2 have slowed down. In the case of combat aircraft, technical condition and operational readiness are important – in September 2023, an Su-30SM crashed. The region is characterised by a high saturation of long-range S-400 (48 launchers) and S-300 (16) anti-missile and anti-aircraft systems – a total of 256 missiles – giving the ability to attack land targets. They are supplemented by self-propelled Pantsir-S1 systems (12–18 units). Probably in November 2023, some of the S-400 systems were transferred to Russia[17].

The land component includes the 11th Army Corps of the Coastal Defence Forces and the Land Forces of the Baltic Fleet (11th KA). Considering the composition of the units that make up this formation, it is offensive in nature. The land component includes the 336th Guards Marine Brigade, formally in the structure of the coastal defence forces. In Russia, the brigade is an exception, as it has a landing and assault battalion like the Airborne Troops and has a significant number of mechanised weapons. This unit may be transformed into a marine division. Approximately 60–70% of the equipment from the Kaliningrad Oblast was transferred to military operations in Ukraine. In late September 2022, there could be as few as 6,000 of the original 30,000 Russian ground forces left in Kaliningrad and near the Baltic region. During the fight, the 11th KA and the 336th Brigade suffered significant personnel and equipment losses. An important problem is the social consequences for returning participants in the war, e.g., post-traumatic stress disorder, insufficient medical care, increased alcoholism, drug use,

[16] *Russian Navy 2025: List of Active Russian Navy Ships and Submarines*, http://russianships.info/eng/today/ [12.06.2025]; T. Szubrycht, K. Rokiciński, P. Mickiewicz, op. cit., pp. 120, 286–303; I. Topolski, *Potencjał…*; *The Military Balance 2025…*, p. 191.

[17] H. Kristensen, op. cit.; O. Kund, K. Maran, H. Roonemaa, op. cit.; I. Topolski, *Potencjał…*; *Russia relocates S-400 air defense system from Kaliningrad to Moscow to protect government buildings in winter*, https://www.globaldefensecorp.com/2023/12/02/russia-relocates-s-400-air-defense-system-from-kaliningrad-to-moscow-to-protect-government-buildings-in-winter/ [25.06.2025]; *Russia Deploys Su-30SM2 Fighters In Kaliningrad*, https://www.globaldefensecorp.com/2022/02/03/russia-deploys-su-30sm2-fighters-in-kaliningrad/ [27.06.2024].

and crime. In April 2025, the combat military reserve "BARS 39" was created – a mobile human reserve in the region, to which reservists and contract soldiers can report[18].

The Federation attaches great importance to units conducting intelligence and sabotage operations. Such formations are prepared for hybrid operations. The 561st Naval Intelligence Sabotage Unit focuses on strategic targets along the Baltic Sea coast. Special units include the 313th Spetsnaz Detachment of the Baltic Fleet. In addition, the Main Directorate of Deep-Sea Research of the Ministry of Defence, the main bases of which are Kaliningrad and Baltiysk, should be mentioned here. Specialised units for deep-sea research are stationed there, with the ability to conduct underwater sabotage[19].

The military potential in the region also incorporates other power structures. These include the Federal Security Service, the Federal Service of the National Guard Troops and the Federal Protective Service of the Russian Federation[20].

The military infrastructure in the region is adapted to accommodate a large military component. Before the collapse of the USSR, ~100,000 troops were stationed there, and in 1992–1993 their number was estimated at ~200,000–300,000. A well-developed repair base is engaged in technical maintenance, repair, and modernisation of weapons for the naval and land forces, and to a lesser extent, the air force. Five enterprises in the region belong to the military-industrial complex. The Yantar shipyard in Kaliningrad builds and repairs surface ships and specialised units for deep-sea research. The 33rd Repair Shipyard in Baltiysk is engaged in the maintenance and repair of ships – two floating docks with a deadweight of 4,500 tons. The plant also has a machine park for repairing tank engines, diesel locomotives, and special

[18] M. Cordes, op. cit., pp. 23–24, 41-43; O. Kund, K. Maran, H. Roonemaa, *op. cit.*; S. Abylkalikov, op. cit., pp. 9–10; K. Stepanenko, T. Trach, *Russian Force Generation and Technological Adaptations Update April 30, 2025*, Institute for the Study of War, https://www.understandingwar.org/backgrounder/russian-force-generation-and-technological-adaptations-update-april-30-2025 [24.06.2025]; J. Kukkola, op. cit., pp. 58–59; S. Sukhankin, P.W. Lackenbauer, A. Lajeunesse, *Russian Reactions to NATO's "Nordic Expansion"*, Strategic Perspectives NAADSN, July 2023, p. 7, https://www.naadsn.ca/wp-content/uploads/2023/08/23-jul-Russian-responses-to-Nordic-enlargement-Strategic-Perspective.pdf [25.09.2025].

[19] O. Kund, K. Maran, H. Roonemaa, op. cit.; K. Żęgota, op. cit., p. 277; M. Cordes, op. cit., pp. 49–51.

[20] M. Żyła, *Obwód…*, pp. 155, 158; M. Domańska et al., op. cit., p. 67.

equipment. The other facilities are the "94th Automobile Repair Plant" (production of radio electronics and devices), the "150th Aircraft Repair Plant" (maintenance and repair of military helicopters), and the "Svetlovskoe ÈRA" enterprise (maintenance and repair of warships). They are complemented by the "Fakel" enterprise, which produces plasma engines for spaceships[21].

3. Military potential in the Kaliningrad Oblast as an instrument of the policy of the Russian Federation

The involvement of a large component, primarily ground forces, in the war in Ukraine significantly reduced the military potential in the Kaliningrad Oblast. This situation has influenced the nature of its use by Russia against the West. Actions undertaken are focused on developing selected methods of utilising military potential in the Kaliningrad Oblast. These include nuclear deterrence and select asymmetric warfare, including attacks on strategically important undersea infrastructure. The military potential in the Kaliningrad Oblast is of great importance to the Federation, especially in the context of[22]:

1) deterring a potential adversary – NATO;

2) defending the exclave until the "arrival" of troops from the Leningrad MD or Belarus – the role of *an impregnable bastion*. "Securing" territorial continuity with Russia or Belarus – control of the Suwałki Gap;

3) isolating and controlling the Baltic Sea, i.e., temporarily winning and maintaining control over its selected water areas – creating an anti-access zone, which is to prevent or limit the operation of NATO naval and air forces, including the reinforcement of the group of troops in the Baltic states;

[21] M. Cordes, op. cit., pp. 49–51; M. Raś, op. cit., pp. 299; M. Żyła, *Kaliningrad oblast in the military system of the Russian Federation*, "Security and Defence Quarterly" 2019, vol. 25, no. 3, p. 105; *Предприятия оборонно-промышленного комплекса в Калининградской области – 5 компаний* [*Predpriâtiâ oboronno-promyšlennogo kompleksa Kaliningradskoj oblasti*], https://manufacturers.ru/company-list/kaliningradskaya-oblast--oboronno-promyshlennyy-kompleks [24.06.2025].

[22] J. Kjellén, op. cit., pp. 23–27; E. Muuga et al., *Security Threats to the Undersea Connections Related Critical Infrastructure of the Baltic States: The Baltic Sea in the Focus of Hybrid Warfare*, 2025, pp. 24–51; O. Kund, K. Maran, H. Roonemaa, op. cit.; T. Szubrycht, K. Rokiciński, P. Mickiewicz, op. cit., pp. 54–314; M. Żyła, *Obwód…*, pp. 125–182; K. Żęgota, op. cit., pp. 271–386; I. Topolski, *Military Importance…*, pp. 161–168; P. Siegień, *Kaliningrad Oblast at war*, [in:] D. Szacawa, K. Musiał (eds.), *The Baltic Sea Region after Russia's Invasion of Ukraine*, Lublin 2022, p. 65.

4) freedom of action for warships in the Baltic Sea and the North Sea, including the Danish Straits;

5) the possibility of attacking selected important military and economic targets in NATO states – especially the eastern flank;

6) paralysing shipping in the Baltic Sea and blocking the enemy's naval bases and ports;

7) ensuring the possibility of conducting free economic activity – protection of underwater infrastructure;

8) securing maritime communication routes (freedom of navigation) and the merchant fleet (protection of navigation in the Baltic Sea area). Providing effective logistical support for the exclave, approaches to ports and naval bases;

9) conducting hybrid activities, including sabotage and diversion on the entire coast of the area and against underwater infrastructure.

The military potential in the Kaliningrad Oblast as an instrument of the Federation's policy should be considered together with Belarus. This state constitutes a rather specific type of cover for the exclave. It includes air defence and anti-missile systems, ballistic missile launchers, and air forces deployed on the territory of Belarus. Military units of this type deployed in the region and Belarus complement each other[23].

The Federation's deterrence with military potential in the region is of a complex nature. It is a rather peculiar "indicator" that determines not only the level of security in this part of the continent but also the state of NATO-Russia relations. Firstly, it includes the stationing of means of delivering non-strategic nuclear weapons. Russia's deliberate actions are "ambiguous" in the matter of the deployment of nuclear charges in the warehouses prepared for this purpose, i.e., it is neither confirmation nor denial of the deployment. "Potential" nuclear weapons deployed in the region constitute a protective umbrella for it and a great threat to the countries of the region. Secondly, due to their sensitivity to possible destruction, the means of delivering nuclear weapons that Russia has in the exclave will be used first. Thirdly, training of units capable of carrying nuclear charges, combined with raising their combat readiness, including those equipped with *Iskander-M* missile launch systems. The scope of the exercises includes, for example,

[23] I. Topolski, *Military presence of the Russian Federation in the Republic of Belarus*, "Rocznik Instytutu Europy Środkowo-Wschodniej" 2022, vol. 20, issue 2, pp. 78–87.

the electronic launching of ballistic missiles at important targets in the territory of the "potential" enemy. Fourthly, the use of MiG-31K aircraft in manoeuvres. Fifthly, the deployment of A2/AD systems generates military threats in the Baltic Sea basin, which also affects the security of Poland and the Baltic states. Moreover, as part of the training, they were to combat "enemy" ships. It should be noted that the potential of various types of missiles deployed on surface attack ships, coastal defence systems, anti-missile and anti-aircraft systems, ballistic missile launchers, and aircraft-borne, in the case of their almost simultaneous use, poses a major challenge to the North Atlantic Alliance. The nuclear deterrence of the West is being strengthened following Russia's 4 August 2025 declaration that it will no longer be bound by the Intermediate-Range Nuclear Forces Treaty. This allows land-based ballistic missiles with a range of over 500 km to be officially based in the Kaliningrad Oblast[24].

A separate and specific problem is the implementation of large manoeuvres, including strategic ones, e.g., *Zapad-25*, which were conducted in September 2025 on the territory of Belarus, the Kaliningrad Oblast, and the Baltic Sea. Such exercises also serve to demonstrate Russia's military power. Moreover, this activity leads to the accumulation of a large military potential, which can later be used to undertake various forms of military activity, starting with provocations and ending with conducting armed operations[25].

The military potential deployed in the exclave increases Russia's ability to destabilise the situation in the Baltic Sea and conduct covert operations against the critical undersea infrastructure of NATO countries. The Federation may use special forces stationed in the Kaliningrad Oblast to conduct hybrid operations. These units may perform sabotage and diversion operations against important facilities located on the Baltic Sea coast, especially port infrastructure. Their tasks also include surveillance and radio intelligence. The region also has units capable of attacking underwater

[24] P. Pizzolo, *The Strategic Relevance of Kaliningrad*, "Proceedings" 2024, vol. 150, no. 10, https://www.usni.org/magazines/proceedings/2024/october/strategic-relevance-kaliningrad [28.06.2025]; H. Williams, *What Trump's Submarine Threat and Russia's INF Exit Really Mean*, https://www.csis.org/analysis/what-trumps-submarine-threat-and-russias-inf-exit-really-mean [9.08.2025].

[25] A.M. Dyner, *„Zapad 2025" – sygnalizacja Rosji i Białorusi mimo wojny*, "Biuletyn PISM" 2025, no. 101, https://www.pism.pl/publikacje/zapad-2025-sygnalizacja-rosji-i-bialorusi-mimo-wojny [27.09.2025].

infrastructure[26], i.e., submarine telecommunications and power cables and gas pipelines. Such sabotage activities can also be carried out under the guise of civilian ocean missions, as well as the use of merchant ships, including shadow fleets[27]. In the event of hybrid operations, a very important problem seems to be activities that may lead to attempts to "violate-test" Article 5 of the North Atlantic Treaty.

The significant EW potential accumulated in the Oblast is being used to disrupt GPS signals over the Baltic Sea and parts of the region's territories. This may include attempts to disrupt communications, control, and navigation. These actions can lead to the disruption of the coordination of armed forces and various services. In this case, it is also worth mentioning the large possibilities of observing the airspace of NATO countries through early warning systems located in the region. Additionally, together with the deployed anti-missile and anti-aircraft defence systems, also on the territory of Belarus, they are to allow Russia freedom of action.

It should be emphasised that in the case of the deployment of a ground forces component, it may include veterans who participated in the war in Ukraine. Due to the difficult terrain conditions on the border of the region with Poland and Lithuania, it is important to determine areas that may constitute positions for carrying out a potential attack, and the concentration of troops.

Conclusion

The development of the military potential of the Russian Federation in the Kaliningrad Oblast is directly determined, to the greatest extent, by political, military, and economic conditions. The military presence in the exclave prevents Russia from being completely isolated in the western direction after Finland and Sweden joined NATO. The weakest point of the Alliance is also located in this region, i.e., the *Suwałki Gap* located between the oblast and Belarus. The Baltic Sea is an important route for the export of oil by the

[26] A network of underwater installations on the bottom of the Baltic Sea, see P. Mickiewicz, *Morska szachownica. Geopolityczne znaczenie akwenów morskich*, Poznań 2022, pp. 254–255.

[27] E. Muuga et al., op. cit., pp. 24–51; O. Kund, K. Maran, H. Roonemaa, op. cit.

so-called *shadow fleet*. The hydrometeorological and hydrological conditions of the water body indirectly affect the military potential in the region.

The two research hypotheses adopted in the introduction to the article were confirmed. First, the Kaliningrad Oblast is the most militarised region in Russia, which has no equivalent in the Euro-Atlantic Area. It is home to tactical units that have a significant degree of offensive weapons, such as naval strike teams, short-range ballistic launcher systems, motorised and armoured units, naval infantry, air forces, and special forces. Some of these systems can serve as a means of delivering non-strategic nuclear charges within the entire nuclear triad. In the case of formations defined as defensive, i.e., coastal defence, and anti-missile and anti-aircraft defence, they have the ability to attack land targets. The Kaliningrad Oblast is distinguished by the deployment of an extensive component of early warning and radar systems and EW systems. The military infrastructure in the exclave allows for the deployment of a significant component of troops, bristling with all types of armed forces and supplemented by force structures. After the aggression against Ukraine, a significant part of the ground forces was sent to Ukraine, which suffered significant human and equipment losses as a result of the fighting.

With regard to the second research hypothesis, the Federation is using its military potential in the Kaliningrad Oblast to the greatest extent possible to deter, including the "nuclear deterrence", the West from undertaking what it considers "undesirable actions". This is accompanied by various forms of demonstrating military power combined with increasing combat readiness. Conducting hybrid operations combined with sabotage and diversionary actions remains an important issue. Since the war in Ukraine began, Russia has limited its ability to conduct large-scale land operations from the region against Poland and Lithuania. Concerns may be raised by various forms of actions that are intended to "test" NATO's response in the context of fulfilling Article 5 of the North Atlantic Treaty.

After the end of the war in Ukraine, it should be expected that, apart from the border with Finland, Russia will gradually rebuild and strengthen its military potential in the Kaliningrad Oblast. Compared to the beginning of 2022, this level may increase for three reasons. First, the infrastructure in the exclave is prepared to receive a large military component. The second issue concerns the strengthening of the operational group in a strategically important region bordering NATO countries. It should be emphasised that

the complete military isolation of the Kaliningrad Oblast without "excluding" Belarus is very difficult. Thirdly, conducting and coordinating hybrid operations within the perimeter, i.e., sabotage and diversionary operations, including those under a "false flag" in NATO countries and in the Baltic Sea.

References:

Abylkalikov S., *Demographic challenges of the Kaliningrad region in the new geopolitical reality: Trends, risks and prospects*, BSR Policy Briefing series, vol. 6, 2024.

Cordes M., *Kaliningrad Oblast 2024: Russia's vessel of havoc on the Baltic Sea*, Dansk Institut for Internationale Studier, DIIS Report, Copenhagen 2024.

Dmitriev Û., *Deržat èfir pod kontrolem*, "Straž Baltiki" 2023, no. 16, https://ric.mil.ru/upload/site173/CQDCqDNWp6.pdf.

Domańska M. et al., *Twierdza Kaliningrad: coraz bliżej Moskwy*, Warsaw 2019.

Dyner A.M., *„Zapad 2025" – sygnalizacja Rosji i Białorusi mimo wojny*, "Biuletyn PISM" 2025, no. 101.

Fedorov G.M. et al., *Current Problems in Developing the Natural Resource Potential of the Russian Exclave in the Baltic*, "International Journal of Environmental & Science Education" 2016, vol. 11, no. 17, pp. 10455–10467.

Geografičeskie dannye kaliningradskoj oblasti, https://geo.god-tigra.ru/geograficheskiye-dannyye-kaliningradskoy-oblasti.php.

International Security and Estonia 2025, Estonian Foreign Intelligence Service, 2025, https://www.valisluureamet.ee/doc/raport/2025-en.pdf.

Kaliningradskaâ oblast', https://regionsinfo.ru/szfo/39reg [12.06.2025].

Kjellén J., *The Russian Baltic Fleet – Organisation and role within the Armed Forces in 2020*, Report no. FOI-R--5119—SE, February 2021.

Kristensen H., *Russia Upgrades Nuclear Weapons Storage Site In Kaliningrad*, https://fas.org/publication/kaliningrad/.

Kuczyńska-Zonik A., *Rosyjska „flota cieni" na Morzu Bałtyckim*, "Komentarze IEŚ" 2024, no. 18.

Kukkola J., *The Leningrad Military District: The Past and Future of the Northwestern Direction*, Helsinki 2024.

Kund O., Maran K., Roonemaa H., *Satellite imagery analysis: What's going on in Putin's military bases behind the Estonian border and how big a threat they really pose us*, *Eesti* "Eesti Ekspress", 1 November 2024, https://ekspress.delfi.ee/artikkel/120333504/satellite-imagery-analysis-what-s-going-on-in-putin-s-military-bases-behind-the-estonian-border-and-how-big-a-threat-they-really-pose-us.

Mickiewicz P., *Morska szachownica. Geopolityczne znaczenie akwenów morskich*, Poznań 2022.

Muuga E. et al., *Security Threats to the Undersea Connections Related Critical Infrastructure of the Baltic States: The Baltic Sea in the Focus of Hybrid Warfare*, 2025.

Pizzolo P., *The Strategic Relevance of Kaliningrad*, "Proceedings" 2024, vol. 150, no. 10, https://www.usni.org/magazines/proceedings/2024/october/strategic-relevance-kaliningrad.

Poroskow N., *Èlektronnye glušilki menâût prioritety*, "NWO Nezawisimaâ Gazeta", 28 April 2022, https://nvo.ng.ru/concepts/2022-04-28/5_1187_priorities.html.

Predpriâtiâ oboronno-promyšlennogo kompleksa Kaliningradskoj oblasti, https://manufacturers.ru/company-list/kaliningradskaya-oblast--oboronno-promyshlennyy-kompleks.

Raś M., *Aktywność międzynarodowa regionów Federacji Rosyjskiej*, Warsaw 2018.

Russia Deploys Su-30SM2 Fighters in Kaliningrad, https://www.globaldefensecorp.com/2022/02/03/russia-deploys-su-30sm2-fighters-in-kaliningrad/.

Russia relocates S-400 air defense system from Kaliningrad to Moscow to protect government buildings in winter, https://www.globaldefensecorp.com/2023/12/02/russia-relocates-s-400-air-defense-system-from-kaliningrad-to-moscow-to-protect-government-buildings-in-winter/.

Russian Navy 2025: List of Active Russian Navy Ships and Submarines, http://russianships.info/eng/today/.

Siegień P., *Kaliningrad Oblast at war*, [in:] D. Szacawa, K. Musiał (eds.), *The Baltic Sea Region after Russia's Invasion of Ukraine*, Lublin 2022, pp. 61–72.

Stepanenko K., Trach T., *Russian Force Generation and Technological Adaptations Update April 30, 2025*, Institute for the Study of War, https://www.understandingwar.org/backgrounder/russian-force-generation-and-technological-adaptations-update-april-30-2025.

Sukhankin S., Lackenbauer P.W., Lajeunesse A., *Russian Reactions to NATO's "Nordic Expansion"*, Strategic Perspectives NAADSN, July 2023, https://www.naadsn.ca/wp-content/uploads/2023/08/23-jul-Russian-responses-to-Nordic-enlargement-Strategic-Perspective.pdf.

Szacawa D., Bornio J., *„Wartownik Bałtyku" – odpowiedź NATO na działania sabotażowe Rosji na Bałtyku*, "Komentarze IEŚ" 2025, no. 7.

Szubrycht T., Rokiciński K., Mickiewicz P., *Morze Bałtyckie w polityce bezpieczeństwa Rosji*, Poznań 2020.

The Military Balance 2025, London 2025.

Topolski I., *Military Importance of the Kaliningrad Oblast*, "Athenaeum. Polish Political Science Studies" 2024, vol. 83, no. 3, pp. 156–171.

Topolski I., *Military presence of the Russian Federation in the Republic of Belarus*, "Rocznik Instytutu Europy Środkowo-Wschodniej" 2022, vol. 20, issue 2, pp. 75–91.

Topolski I., *Potencjał militarny Federacji Rosyjskiej w obwodzie kaliningradzkim*, "Komentarze IEŚ" 2022, no. 220.

Ukaz Prezidenta Rossijskoj Federracii. ot 26.02.2024 g. no 141. O woenno-administratiwnom delenii Rossijskoj Federracii, http://publication.pravo.gov.ru/document/0001202402260031.

Williams H., *What Trump's Submarine Threat and Russia's INF Exit Really Mean*, https://www.csis.org/analysis/what-trumps-submarine-threat-and-russias-inf-exit-really-mean.

Żęgota K., *Obwód kaliningradzki Federacji Rosyjskiej a bezpieczeństwo międzynarodowe Europy Środkowo-Wschodniej. Między geopolityka a konstruktywizmem*, Poznań 2021.

Żukow E., *Čem otwetit Rossiâ, esli Polʹša napadët na Kaliningrad*, Life, 17 May 2022, https://life.ru/p/1494718

Żyła M., *Kaliningrad oblast in the military system of the Russian Federation*, "Security and Defence Quarterly" 2019, vol. 25, no. 3. pp. 99–117.

Żyła M., *Obwód Kaliningradzki w polityce bezpieczeństwa Federacji Rosyjskiej*, Warsaw 2018.