

SYNERGING



ENERGIES

# BLACK SEA SECURITY

ANALYTICAL JOURNAL №2-3 (42-43) 2024



IN FOCUS:

MARITIME LAW

RUSSIAN OIL  
EXPORTS

CHINA'S INTELLIGENCE  
CAPABILITIES



## **EIGHT YEARS IN PUTIN'S PRISON.**

## **THEY WARNED ABOUT RUSSIAN AGGRESSION AGAINST UKRAINE.**

**ACCORDING TO DMYTRO LUBINET, UKRAINIAN PARLIAMENT COMMISSIONER FOR HUMAN RIGHTS, RUSSIA ILLEGALLY HOLDS OVER 1700 UKRAINIAN CIVILIANS. AMONG THEM ARE THREE POLITICAL PRISONERS OF THE KREMLIN.**

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**OLEKSIY BESSARABOV**, journalist, deputy editor-in-chief of the Black Sea Security Journal of the NGO “Nomos” Center, a political prisoner of the Kremlin. The sentence in the case of “saboteurs” is 14 years in a prison under strict regime. In May 2021, Oleksiy Bessarabov from a Russian prison addressed the US Secretary of State: “Despite the fact that my name, like the names of dozens of other political prisoners, is on the lists of such human rights organizations as FreedomHouse, Memorial, we are almost forgotten. Only our relatives, friends, and work colleagues remember us. We are forgotten. Oleg Sentsov is already free, but the “Sentsov list” remains, moreover, it is constantly being replenished with new names of detainees,” – Oleksiy wrote a year before the large-scale invasion of Russia. The repression of the occupation authorities in Crimea continues to this day. Moreover, they are spreading.

In April 2011 O. Bessarabov wrote: “Today, Russia does not apply military and political pressure on Ukraine, preferring to seize its strategic assets and economic absorption... Such a course of events does not exclude the possibility of the situation turning into a conflict, including with the use of force.” “The Black Sea region: an explosive mixture with several detonators”, Collection of the Razumkov Center “Crimea, Ukraine in Black Sea Security Coordinates.”

On December 5, 2024, Oleksiy turned 48. May this day bring closer return to Ukraine!

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**DMYTRO SHTYBLYKOV**, Head of international programs of the “Nomos” Center, member of the editorial board of the Black Sea Security Journal, a political prisoner of the Kremlin, sentenced in the “saboteurs case” to 5 years in a strict regime colony. On November 8, 2021, Dmytro Shtyblykov was supposed to be released in connection with the end of his sentence in the case of “Crimean saboteurs”. On the same day, he was transferred from the Lefortovo FSB detention center to Rostov-on-Don to the Southern District Military Court. Accused of “espionage” and “treason”. The new term of punishment for a Russian political prisoner the “court” announced on November 9, 2016. According to it, Dmytro should spend another 14 years and 6 months in Russian prison. In October 2012, he wrote : “... It turns out that the militaristic sentiments of Russian citizens are directed against the nearest neighbors. I would like to hope that it is not so! The military-political leadership of the Russian Federation increasingly uses the topic of an external enemy and a possible military conflict to justify any means of maintaining internal stability in Russia, consolidating the population and distracting it from acute social problems... However, will the leadership then be able to extinguish the fire of militarism that is fanning today?. Do the Russians want war? Ask “Tishina”... SSK-1 “Tishina” is a Russian silent rifle and grenade launcher complex. “Military threats to Russia or with whom the Russian Federation can fight”, Black Sea Security Journal, No. 4 (26)



On November 8, 2024, Dmytro turned 54! We wish him strength, endurance, and hope!

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**VOLODYMYR DUDKA** – is a military pensioner, former commander of the ship of the Ukrainian Navy “Simferopol”, the sentence in the “saboteurs case “ is 14 years in a strict regime colony.

Volodymyr Dudka did not publish the Black Sea Security Journal, he was just a friend of Oleksiy and Dmytro from the time of their service in the Ukrainian Navy. This turned out to be enough to become the third participant in the “saboteurs case” and receive a harsh sentence on a falsified case.

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The surnames of Bessarabov, Shtyblykov and Dudka are included to the lists of Ukrainian human rights organizations, as well as “FreedomHouse” (USA), “Memorial” (RF) and resolutions of the European Parliament as political prisoners.



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Members of the editorial board Oleksii Bessarabov and Dmytro Shtyblykov are political prisoners of the Kremlin. Since 2016 they have been kept in prison by the FSB on fabricated charges.

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# Worldview – 2025: Trumpocracy vs. Alliance of Predators

The Chinese-Russian Global Strategic Duumvirate of Xi Jinping and Putin (hereinafter abbreviated as XiPu) is ALREADY formed. Its foundation is the deep desire of Beijing and Moscow to destroy American power. The intermediate goal is to tear Europe away from the United States, to make it a high-tech appendage within the framework of a bicentric Eurasian power with the leading role of Beijing and the subordinate role of Moscow and India, distanced from the West.

XiPu tandem has ALREADY formed an Alliance of Predators – Belarus, Iran, North Korea. They have already felt the main American flaw – weakness in inaction, inability to take preventive action. They want to successfully use the main technique of the American leader Trump – a tendency to bilateral formats and deals. And predators act in a pack!

Alliance of Predators is gravitating towards the BRICS countries, Central Asia, and Turkey. The so-called Global South is increasingly sympathetic to the XiPu tandem. Alliance of Predators is acting more openly and confidently. Attacks by Iranian proxies Hamas on Israel, Houthis on freedom of navigation in the Red Sea, and the appearance of North Korean troops in Europe are evidence of its growing activity. If the US under Trump's presidency goes into isolationism, this will create hothouse conditions for their further expansion and the defeat of America itself, when the events of September 11, 2001 will look like child's play.

Russia and China have already achieved success in the war against the West in strategic resource areas for future industrial development: Africa, the Middle East, Central Asia, Eastern Europe, the Arctic. The USA and France, starting from the 2020s and using the amorphous policy of the Biden-Sullivan-Burns group, have rapidly lost and continue to lose their positions in Africa. The resources of Africa are now mainly under the control of the XiPu tandem.

China has become the No. 1 strategic partner for the irreconcilable enemies in the Gulf region – Saudi

Arabia and Iran. It was Beijing's diplomacy, not Washington's, that won the Middle East. Iran, due to the sluggish and amorphous policy of the United States, has not only developed its missile and drone weapons programs, but also created a network of proxies in the region, which the Western coalition now cannot cope with. The Yemeni Houthis, led by Tehran, have been terrorizing one of the most important routes of world trade for over a year.

In Central Asia, rich not only in oil and gas, but also in uranium and rare earth metals, Russia and China also dominate. American oil companies in Kazakhstan are limited by logistics through Russia and are forced to play by Russian rules anyway. In essence, they have become agents of Russian influence on the banks of the Potomac. Kazakhstan is the most powerful producer of uranium raw, control over the export of which is in the hands of the Russians, who indirectly dictate their conditions to the United States and block Western sanctions against Rosatom.

Russia and China are already acting and will continue to act to throw the US out of Europe and strike the West from the Arctic, where the US, Canada and Europe are weak. The year 2025 in the Russian Federation has been declared the year of the 500th anniversary of the beginning of the development of the Northern Sea Route as a route from Russia to China.

The shift of American policy attention to the Indo-Pacific region should not lead to the defeat of the United States in Europe and the triumph of Russia and China. Namely, in Europe, the XiPu tandem is preparing the defeat of the United States not only on the continent, but also in the distant Pacific region, due to the domino effect. Having split the transatlantic unity of Europe and North America, Russia expects to throw out American oil and gas and regain its dominant position on the EU premium market and intensify the development of Arctic deposits of oil, gas and rare earths together with China.

## PREFACE

Eastern Europe, represented by Belarus, Ukraine, Moldova and Georgia, together with the Black Sea, is an important source base (mineral and agricultural resources) and logistical crossroads of Europe. Russia and China understand the importance of these countries, control over which will provide them with both optimal logistics to Europe and additional mineral and energy resources, where it is important for Beijing and Moscow to prevent their development by Western corporations. Belarus, which Russia has transformed into a strategic wedge against Europe, has already been lost to it, as has Georgia and the South Caucasus as a whole, which is increasingly turning into a zone of convergence of interests of Russia, China and an increasingly anti-European Turkey in the Caspian Sea - South Caucasus - Black Sea space. In the summer of 2025, Russia will once again try to destabilize Moldova.

In 2014, Russia resorted to aggression against Ukraine, occupying Crimea in order to block the development of a megaproject for the exploration of offshore gas fields by a consortium of Western companies led by the American ExxonMobil. Military risks also influenced the termination of two other megaprojects for the exploration of Ukrainian gas fields - the American Chevron in the west and the British-Dutch Shell in the east of Ukraine. The full-scale invasion of Ukraine by the Russian Federation and the occupation of parts of the east and south of Ukraine make it impossible to explore Ukraine's critical mineral deposits together with Western companies, and maintaining such a status quo will automatically work to replenish the resource base of Russia and China in the future.

In order to regain its power, the US should take the XiPu tandem in a pinch, and not try to create a format with them plus India. In East Asia, the US alliance with Japan, Korea, Taiwan, Australia and Canada should be strengthened. In Europe, NATO's dysfunction is obvious and Trump is only intensifying it. The time has come for small alliances. It is necessary to create an Arctic-Baltic-Black Sea shield against Chinese-Russian expansion and aggression. The Nordic Five, the Baltic Three, Poland, Ukraine, Romania - this is the coalition of the determined that should be supported by the US with the deployment of a coalition contingent in

Ukraine to deter further Russian aggression.

It is necessary to get rid of the Trojan horses of Russia and China in Europe, such as the leaders of Hungary and Slovakia, who masquerade as Putin supporters, Trump supporters, and Sinophiles, but are in fact their agents of influence, corrupt leaders who actually act in the interests of those who want to undermine the power of the United States.

To limit China's access to Russia's Arctic resources (oil, gas, rare earths, etc.) and Arctic logistics, the US must reliably seal off the Arctic and the Pacific Ocean from Chinese penetration. To do this, it is necessary to create two shields - Western and Eastern.

China and Russia are intensively developing the Northern Sea Route, exploiting the Arctic weakness of the US and Canada. This gives them the opportunity to bypass and avoid the US Navy fleets, which are concentrated in the Atlantic and Pacific Oceans, but are absent from the Arctic. Whoever controls Greenland, Iceland and Svalbard controls the gateway to the Arctic from the North Atlantic and vice versa, and therefore the US can create a Western shield against Chinese expansion into Europe through Scandinavia. An Eastern shield could be created if the US remembered that Wrangel Island in the Chukchi Sea and near the Bering Strait does not actually belong to Russia. In 1924, the Soviet gunboat Krasnyi Oktyabr (Red October) simply captured it, throwing a small group of Americans out of there. In 1928, the US rejected the Soviet annexation of the island, but did not take any practical steps. In 2022, the question was timidly raised on what basis Russia controls this American island. If Russia revises borders in Europe, then the US has every reason to revise borders in the Arctic.

Russia and China are dynamically working on the strategic logistics project of the Mohe (China) – Yakutsk – Magadan railway, with the prospect of further development in the direction of Chukotka, the implementation of which will contribute to the consolidation of Chinese-Russian control over the western part of the Pacific Ocean and the Arctic. And this project is not only about expanding logistics for Chinese-Russian trade. It is about strengthening the



## PREFACE

naval power of the Russian Federation and the PRC in the Asian Pacific zone.

Russia and China are ready to deliver a devastating blow to the West from the ocean depths, simultaneously cutting off the fiber optic transmission lines (FOTL) laid between the continents of Europe and North America. The Main Directorate of Deep-Sea Research of the Russian Ministry of Defense has long developed an appropriate algorithm for destroying FOTL and has at its disposal deep-sea vehicles that can operate at a 4-km depth in the North Atlantic.

Russia is also ready to seize the Svalbard archipelago, which belongs to Norway and was demilitarized according to the Svalbard Treaty of 1920, in a hybrid manner.

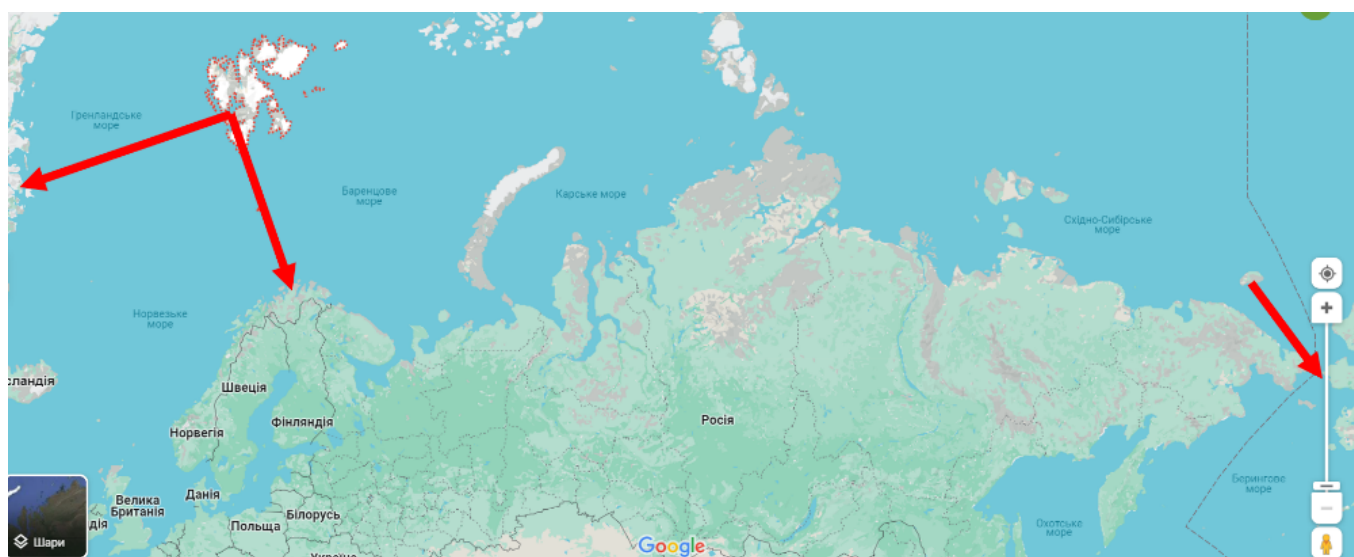
The USSR used the right of economic presence granted by the Spitsbergen Treaty, and therefore the current Russian Federation may now resort to a creeping seizure of the archipelago in order to somehow later fix its Russian status by landing a contingent of “snowmen”. Of course, this will be done accompanied by a propaganda argument to prevent the militarization of the archipelago by the North Atlantic Alliance, which is unlikely to be able to react quickly. By the way, one of the motives for Russia’s development of the “Zircon” long-range hypersonic cruise missile was, not least, to provide the Northern Fleet forces with means that would allow them to fire across vast spaces at considerable

distances. From this point of view, the deployment of submarines and frigates of the Russian fleet in the Svalbard fjords will allow it to keep under fire control the space between the archipelago and the Norwegian coast in the south and between the islands and Greenland in the north-west. Moscow wants to repeat the actions of the Third Reich, when the German Kriegsmarine, based in the Svalbard fjords, attacked Allied ships and convoys heading from the North Atlantic to the USSR during World War II.

The defeat of Russia through support for Ukraine is the main path to the defeat of the main enemy of the United States – China. Putin’s Syrian failure after the fiasco in the South Caucasus is an indicator of Russia’s geopolitical breakdown. Russia for China is a cheap resource base, China for Russia is a source of income from the sale of resources and obtaining the necessary industrial products – analogues of Western originals in the conditions of unavailability of the latter.

China must be deprived of resources for the future and the American way to do this is to defeat Russia, and not to flirt with it in the illusory hope of breaking away from China and the Coalition of Darkness. 2025 will show whether the new US administration is able to get off the wrong path of Biden - Sullivan - Burns or will stubbornly continue moving into a dead end.

**Mykhailo Gonchar, Editor-in-chief**



**Pavlo Lakiichuk**

Head of Security Programs,  
Center for Global Studies «Strategy XXI»

## They are Remembered! Eight Years in the Kremlin Torture Chambers!

*“My name is Oleksii Bessarabov. I am a citizen of Ukraine. I am one of more than a hundred Ukrainian citizens who were arrested by the Russian FSB in occupied Crimea and sentenced to long terms of imprisonment on falsified cases of “terrorists,” “extremists,” “spies” and “saboteurs.”*

*Despite the fact that my name, like the names of dozens of other political prisoners, is on the lists of such human rights organizations as Freedom House, Memorial, we are almost forgotten. Only our relatives, friends, and colleagues remember us. We are forgotten... Oleg Sentsov is already free, but the «Sentsov list» remains, and even more, it is constantly replenished with new names of prisoners.*

*We, political prisoners, knowing about the preparation of meetings with the President of Ukraine, and then the President of the United States with the Russian President, believe that the main topic should be the unconditional release of persons illegally detained by Russia from colonies in the territory of the Russian Federation and Crimea. This is not a question of politics, this is a question of restoring the minimum level of trust, honor and morality of the leaders of nations of the 21st century...*

*Of the 14-year prison term for the falsified «case of the ‘Ukrainian saboteurs,’ I have already been deprived of my freedom for 4.5 years. There are those who have been in prison for the seventh year; there are those who were arrested last month. We can only believe that if there is political will under the influence of the US, we will be able to be freed...»*

These are lines from an open letter from Oleksii Bessarabov, a person convicted in Crimea in the “Ukrainian saboteurs case,” to Anthony Blinken, which was handed over to the US Vice President in May 2021. In the letter, Oleksii Bessarabov emphasized the “falling off the international agenda” of the issue of releasing Ukrainians deprived of their freedom for political reasons in the occupied Crimean peninsula and in Russia. Bessarabov proposed that any negotiations with the Kremlin be preceded by an exchange of “all for all.”

The letter-call, the letter-cry for help did not go unnoticed under the Statue of Liberty. Blinken, during his visit to Ukraine on May 6, 2021, responded to the letter from Oleksii Bessarabov in his interview (symbolically) with Radio Liberty: «In general, we are very concerned... We are working together with many countries to have strong positions in opposition. At the same time, when we have the opportunity to influence the government of the country that is holding such people, we definitely

do it. So if there is such an opportunity, we will take advantage of it!»

And in August, a letter in response came from Washington. The US Secretary of State assured Oleksii and other Ukrainians - political prisoners of the Kremlin - that «*the United States of America has not forgotten about you and dozens of your unjustly convicted fellow citizens... Politically motivated persecution of residents of Crimea due to their political position, ethnic origin, or religious views is completely unacceptable,*» the letter said. Finally, Blinken emphasized: «*Know that the United States will continue to call on Russia to release all Ukrainian political prisoners it is illegally holding, so that you and other political prisoners can return to freedom, reunite with your loved ones, and continue living in a sovereign democratic Ukraine*»...

Three years have passed. On August 1, 2024, the «grand exchange» of prisoners between Russia, the United States, and four European countries



## IN FOCUS: KREMLIN PRISONERS

finally took place. In total, 26 prisoners from seven countries took part in the exchange: Russia exchanged Putin's killer and seven other Kremlin spies and swindlers for three Americans, several Europeans, and a dozen Russian oppositionists and human rights activists – Ilya Yashin (convicted in the Russian Federation in December 2022), Vladimir Kara-Murza (convicted in July 2023), Andrey Pivovarov (convicted in November 2022), Alsa Kurmasheva (arrested in October 2023), Oleg Orlov (convicted in February 2024), Oleksandra Skochilenko (convicted in November 2023), Liliya Chanysheva (convicted in June 2023), Ksenia Fadeeva (convicted in December 2023), etc. The “good Russians” went to Germany, where they immediately held a press conference in which they accused the West of “wrong sanctions against the Russian people.” And Navalny's “Crimea is not a sandwich” ally Ilya Yashin emphasized that he “did not consent to the expulsion”...

The administration of US President Joe Biden issued a statement after the exchange, in which the US president called the exchange a diplomatic feat. It says that three US citizens and one US green card holder who were unjustly imprisoned in Russia are returning home: Paul Whelan, Evan Hershkovich, Alsu Kurmashova and Vladimir Kara-Murza. In addition to these, five more German citizens and seven Russian citizens who were political prisoners there were returned from Russia.

*«These people have endured incredible suffering and uncertainty in Russia. Today their suffering is over»,*

President Biden said.

Neither Oleksii Bessarabov, nor his friends – the supposed “Sevastopol saboteurs” Dmytro Shtyblykov and Volodymyr Dudka, nor any of

the Kremlin's Crimean prisoners were included in the lists for the “largest exchange.” Apparently, something prevented the “very concerned US” from fulfilling its promise... very unfortunate...

Three years have passed since the US Secretary of State Blinken received Oleksii Bessarabov's letter. Three more years of Russian «strict regime» for Ukrainian prisoners. In total - more than eight years in the Kremlin's torture chambers!

In Ukraine, there is a lot of talk about preparing a “big exchange” of prisoners. The exchange of “all for all” is being talked about by the President of Ukraine Volodymyr Zelensky, the Secretary of the National Security and Defense Council Oleksandr Lytvynenko, the Head of the Main Intelligence Directorate of the Ministry of Defense Lieutenant General Budanov, and the Ombudsman Dmytro Lubinets. Dmytro Lubinets, at the same time, emphasizes:

*«We need to use the principle of justice. Whoever was captured earlier, gets out earlier. We have lists of prisoners of war and civilian hostages that the Russians took captive even before the start of the full-scale invasion – since 2014, we have defenders of Mariupol who have been in captivity for more than two years... »*

What can the Crimean prisoners expect? Will justice prevail?

*Expert group of the  
Center for Global Studies «Strategy XXI»*

## NATO fuel logistics on the Eastern Flank: Lessons for Europe and Ukraine

*If there is fuel in the tanks of aircraft and tanks, this is not a guarantee of victory, but if it is not there, it is a guaranteed defeat. Fuel logistics is no less important than the supply of ammunition for military equipment of units conducting combat operations. The Strategy XXI Center, with the assistance of NATO, implemented the project “Russian Tactics of Targeting Ukrainian Critical Energy Infrastructure.” The Alliance is not ready for war with Russia, despite more than 10 years of continuous aggression against Ukraine. Ukraine was also not ready for a full-scale invasion by the Russian Federation, but despite everything, it was not only able to withstand, but also strikes at the aggressor, transferring the war to its territory. The lessons of the ongoing war are important for both Ukraine and NATO, especially for the countries of the Eastern Flank. We are publishing some fragments of our research.*



- a reliably protected strategic fuel reserve (in underground caverns), inaccessible to conventional means of attack;
- parts of the strategic reserve abroad with the possibility of its prompt receipt in an emergency;
- operational dispersed mobile fuel reserves to support the armed forces and transport operations;
- pre-developed schemes for eliminating electricity shortages through backup generation and/or receiving emergency assistance from partner countries in the event of damage to generation facilities;
- rapid response repair teams in network operating companies to restore power supply in the event of damage to CEI facilities.

### 1. What does Ukraine’s experience show?

Components of national-level preparedness for wartime conditions include the presence of:

- air defense/missile defense umbrellas in the area of critical energy infrastructure (hereinafter referred to as CEI) , especially in the area of hydroelectric power plants with high dams;
- cyber protection of telecommunications that ensure the functioning of the CEI;
- anti-sabotage protection, especially for countries with critical maritime infrastructure;

It is important to conduct simulations of scenarios of possible enemy actions to damage energy networks, identify network vulnerabilities, and develop mechanisms to neutralize negative consequences in the event of damage to the energy infrastructure. Based on this, it seems important to organize and conduct regular command and staff exercises involving network operating companies, civil authorities, armed forces, etc.

Ukraine’s experience shows that in the circumstances of the destruction of oil depots by the aggressor, the prompt implementation of dispersed mobile

fuel storage made it impossible to defeat it and provided transport and the armed forces with the necessary fuel. For this purpose, all available fuel trucks in Europe were purchased. More than 40% of imports began to arrive by road, while by 2022 this type of fuel transportation in imports did not exist at all. In turn, the almost 100% dominance of rail transportation decreased to 40–45%.

In those countries where there are Soviet/Russian-designed nuclear power plants, the activities of Rosatom and its subsidiaries at nuclear power facilities should be terminated.

In the countries of the North, Baltic and Black Sea regions, special attention should be paid to the protection of maritime critical infrastructure - underwater gas pipelines, oil pipelines, offshore production platforms, fiber-optic communication lines, power cables. It is important to increase the awareness/qualification of personnel of CEI operators on cyber security issues.

The following should also be taken into account:

- fuel supply bases should be protected by object-based air defense and electronic warfare means, mobile anti-aircraft groups should be organized to protect against UAVs and subsonic cruise missiles;
- it is important to prevent the enemy from establishing control over the sea and maritime logistics. To do this, it is necessary to create a reliable defense system: coastal anti-ship complexes, naval strike drones, air defense, minefields, and anti-sabotage defense;
- temporary storage of operational fuel reserves near the combat zone must be dispersed and accompanied by camouflage;
- if there are unused pipelines of the oil transportation system operator, they can be put into operation for fuel storage after appropriate cleaning and preparation;
- it is necessary to immediately begin the destruction of not only the fuel logistics of the operational supply of its combat groups, but also the enemy's fuel and oil refining

infrastructure in its strategic depth, as well as the RosReserve bases;

## **2. Problems of fuel logistics and protection of NATO's critical energy infrastructure.**

NATO's deterrence concept is based on the idea that member states should be able to hold out against a Russian invasion until help from allies, including the United States, arrives. In the early days of the invasion of Ukraine, Russian forces seized territory larger than some of the Baltic states. Preventing this means increasing the presence of permanently stationed troops along Russia's border, increasing the integration of U.S. and allied military plans, increasing military spending, and specifying more detailed requirements for allies, particularly in areas such as logistics and energy security. The looming crisis of support reveals a serious weakness and even a credibility gap in the U.S. Department of Defense's concept of comprehensive deterrence.

The NATO Strategic Concept 2022 reinforces the Alliance's commitment to identifying and mitigating strategic vulnerabilities and dependencies, particularly in critical infrastructure and logistics chains. At the NATO Summit in Vilnius in 2023, Allies agreed to develop NATO's capacity to support national authorities in protecting critical infrastructure. In the EU, the Directive on the Resilience of Critical Infrastructures entered into force in January 2023. It had to be transposed into national law by October 2024. It requires Member States to identify critical infrastructures, i.e. to establish the basis for a future EU register, by 17 July 2026. Such a long time frame would negatively impact the ability to quickly update existing defence plans and put into question Europe's ability to defend itself against a more serious than hybrid attack.

As NATO depends on civilian energy networks, it is important to ensure the security of critical energy infrastructure and supply chains, and to develop innovative, sustainable, efficient and autonomous energy solutions for the military, such as decentralized networks with hybrid power generation. Secure fuel reserves and a multimodal distribution network can enhance resilience. In a war environment, infrastructure in the east will be



crucial, so the development of a fuel supply system on the Alliance's eastern flank is being accelerated. High fuel demands by combat forces can reduce their productivity, increase vulnerability and may require the diversion of combat forces to protect supply lines. As the Alliance shifted its strategy from collective territorial defence to contingency operations outside NATO territory after the collapse of the Warsaw Pact and the USSR, the modernization of fuel infrastructure was halted. New NATO members, in the absence of common guidelines approved by the North Atlantic Council, did not develop and adapt existing infrastructure on their territory to the collective defence commitment in the event of a war on NATO's eastern flank.

As a result of the Alliance's downsizing in the 1990s, available fuel storage and logistics capabilities have become limited. This is particularly evident in the Baltic and Black Sea regions, where refining, storage, transportation and distribution capacities may not be sufficient to meet the surge in fuel demand over a prolonged period of combat operations. In a potential conflict scenario, this could be further exacerbated by Russia's hostile economic and military actions. In NATO's eastern flank, existing military fuel storage and distribution capacities for jet fuel (F-34/F-35) and marine fuel (F-75/F-76) are insufficient to meet the needs of Allied forces that can be rapidly deployed to the east. Civilian storage facilities should be available to cover any potential shortfalls. However, this requires much deeper civil-military cooperation and integration, ensuring that civilian formations increase their readiness and are available at short notice in unforeseen situations.

The EU Military Mobility Action Plan 2.0 for the period 2022-2026, adopted in response to the escalation of Russian aggression against Ukraine, highlighted the main logistical constraints on NATO's eastern flank. The heavy reliance on contracted civilian transport, including commercial fuel delivery for the army, is evident. In particular, it proposes an update of the EU's military requirements to cover the fuel supply chain infrastructure for long-distance force movements. With the development of the energy transition, there is an EU interest in ensuring that armed forces are less dependent on

fossil fuels. At the same time, there is a lack of awareness that a rapid transition is not possible given the existing arsenal of military equipment that uses internal combustion engines running on hydrocarbon fuels.

To ensure that NATO's combined forces remain combat-ready and maneuverable for the long term, highly advanced logistics operations, especially fuel, are required. In the event of a potential kinetic attack in the Baltic or Black Sea regions, the Alliance will need to quickly establish a continuous supply of fuel for its rapid reaction units, such as the NATO High Readiness Task Force (VJTF) and the rest of the NATO Response Force (NRF). The US Army's rapid reaction force from the 82nd Airborne Division and allies on NATO's eastern flank are likely to be alerted and move even ahead of the VJTF. These first combat units will significantly increase the demand for regional fuel supplies.

### Illustrative example:

The fuel problems that arose during NATO's Nordic Response 24 exercise as part of the broader Steadfast Defender 24 exercise, described in a report by the French publication Le Monde :

*«On the first day of the Nordic Response 24 ground operations, Wednesday, March 6, the French vehicles remained immobilized for a dozen hours due to a lack of fuel, water and food. "Normally, the Norwegian army is supposed to replenish us every three days at the logistics points identified in advance. We have been waiting for them there since 11 am, now it is 10 pm and they are still not there," said Captain Vincent, responsible for logistics of the 7th Alpine Jaeger Battalion, that evening, shining his headlight on a dozen tracked snowmobiles scattered in the snow, **which had become vulnerable to detection and enemy fire.** The final refueling will be completed at 4 am.»<sup>1</sup>*

<sup>1</sup>Cédric Pietralunga. Avec les chasseurs alpins français dans l'Arctique norvégien : « Le grand froid est le terrain de jeu naturel des Russes, il faut être à niveau ». Le Monde. [https://www.lemonde.fr/international/article/2024/03/10/avec-les-chasseurs-alpins-francais-dans-l-arctique-norvegien-le-grand-froid-est-le-terrain-de-jeu-naturel-des-russes-il-faut-etre-a-niveau\\_6221126\\_3210.html](https://www.lemonde.fr/international/article/2024/03/10/avec-les-chasseurs-alpins-francais-dans-l-arctique-norvegien-le-grand-froid-est-le-terrain-de-jeu-naturel-des-russes-il-faut-etre-a-niveau_6221126_3210.html)

## IN FOCUS: NATO

In real combat conditions with Russian forces, this French unit, immobilized for 17 hours, and without any air defense or electronic warfare capabilities, would have already been detected by an Orlan-10 reconnaissance drone and destroyed by a swarm of Lancet-3 UAVs from a distance of 40-50 km.

When developing plans to expand the existing fuel infrastructure on NATO's eastern flank, existing shortcomings and vulnerabilities should be taken into account:

- the existing NATO fuel supply infrastructure in Western Europe has not been expanded to reliably supply Allied forces in the Baltic and Black Sea regions;
- civilian fuel infrastructure facilities are currently insufficiently prepared for crisis situations and martial law;
- civilian infrastructure—oil refineries, pipelines, storage facilities, fuel terminals — may not be able to withstand the load of simultaneously supplying allied forces, industry, and the population in the circumstances of a protracted conflict in Europe;
- refineries in Slovakia, Hungary and, to a lesser extent, the Czech Republic still rely on Russian oil transported by the southern branch of the Druzhba oil pipeline and have received exemptions from the European Commission

from the oil embargo imposed by the 6th EU sanctions package of May 30, 2022;

### 3. Conflict of interest.

The main problem that needs to be urgently resolved is the conflict of interests between the EU and NATO. The EU policy of steadily reducing the use of fossil fuels (in this case: car gasoline, diesel, jet and marine fuel) and e-mobility conflicts with the Alliance's needs for a rapid expansion of fuel infrastructure, since military equipment in wartime requires their increased use, which causes additional greenhouse gas emissions and reduces the effectiveness of decarbonization measures in Europe. ***It is necessary to make an appropriate exception for military equipment and their fuel supply networks, guided by the principle of « Safety above all!»***

Another serious problem is the reluctance of the civilian sector (operators of pipeline systems and fuel depots) to implement capacity expansion projects in circumstances of uncertainty about its payback, since the additional capacity required in circumstances of military operations will be redundant in peacetime and will require constant additional costs to maintain it in a functional state, which will make the operators' business unprofitable or even unprofitable.

During the pre-crisis phase, NATO fuel and logistics infrastructure will be exposed not only



Photo 1. NATO exercise Nordic Response 24  
Source: Le World

## IN FOCUS: NATO

to cyberattacks, but also to attacks by enemy reconnaissance and sabotage groups. Unforeseen and malicious actions are also possible such as the blockade of the Suez Canal in March 2021 due to the grounding of a container ship, the cyberattack and subsequent dysfunction of the large-scale fuel supply system of the Colonial Pipeline on the US East Coast in May 2021, or attacks by illegal armed groups on commercial vessels, as is currently happening in the Bab el-Mandeb Strait by the Yemeni Houthis. These cases demonstrate vulnerabilities that would threaten catastrophic consequences for

NATO forces in wartime.

Refineries producing NATO-standard fuels, as well as their delivery infrastructure, including key hubs of the Central European Pipeline System and marine terminals (see fig.1), will become prime targets for combined missile-drone strikes. In order to avoid the fatal consequences of strikes, taking into account Ukrainian experience, the mobility concept should be applied, which involves storing operational fuel reserves on wheels: in railway and road tanks, preventing the concentration of large volumes in one place.

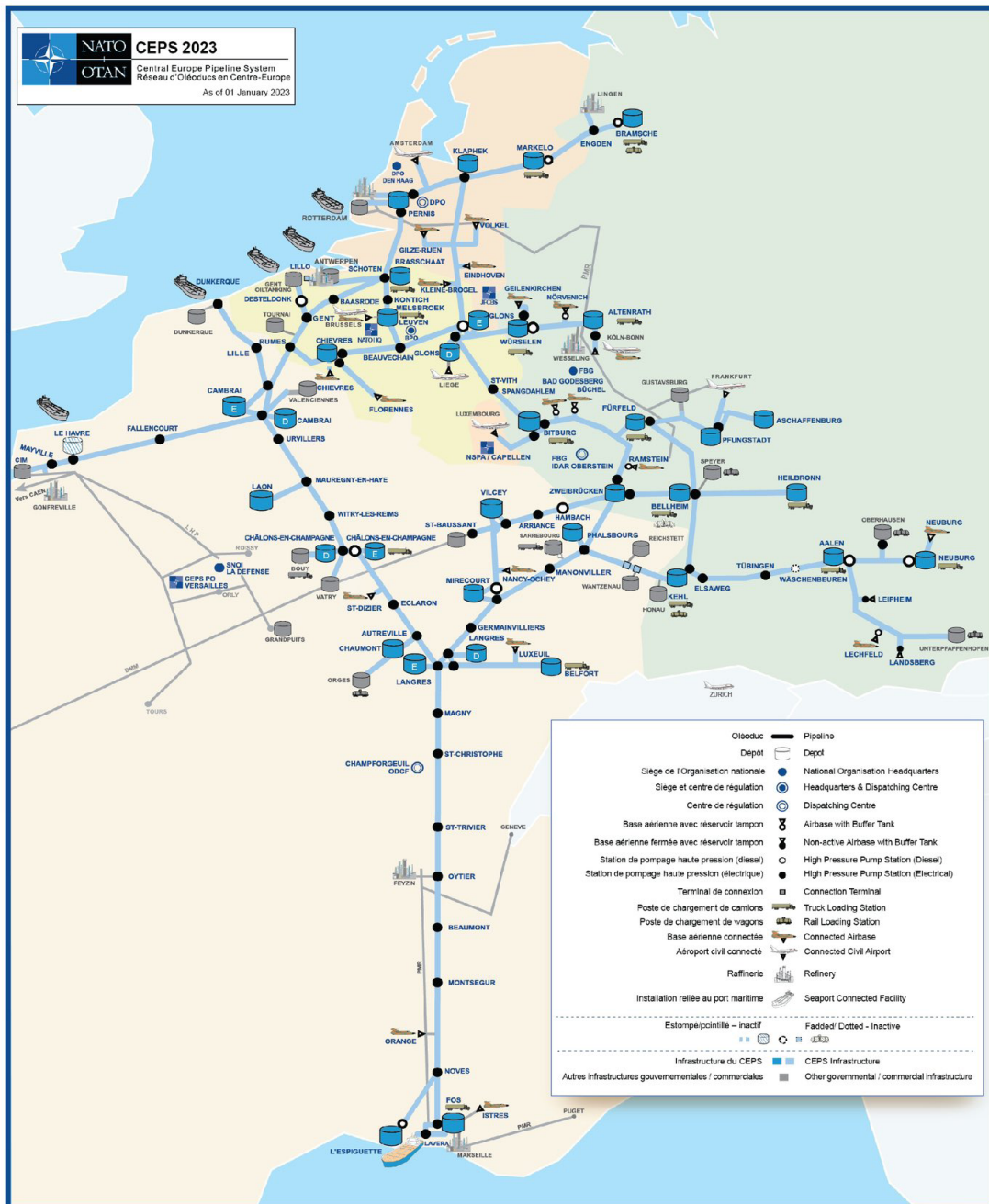


Fig. 1. NATO Central European Pipeline System in 2023.

Source: NATO Logistics and Procurement Agency

Source: NATO Support and Procurement Agency



### 4. Some recommendations

NATO, in tandem with the EU, should take steps to address the issue of fuel supply to ensure stability, as well as the issue of protecting the CEI, by taking into account a number of positions, given the experience of the war with Russia in the Ukrainian theater of operations:

1. The time frame for conducting the analysis of critical energy infrastructure in the EU, with the creation of relevant registers at national levels, is calculated under peacetime conditions and does not take into account that war is **already** underway in Europe. It is necessary to accelerate and carry out work on the categorization of the objects of CEI of NATO member states, with a special focus on the countries of the eastern flank, especially the Baltic states.
2. The immediate need to protect gas and oil production areas in the North Sea, deploy sonar in pipeline corridors to monitor the surface and underwater situation, and patrol critical energy infrastructure facilities is a requirement of today, not tomorrow.
3. Planning work should determine the amount of additional investment required for alternative supply routes in the event of destruction or damage to existing critical infrastructure, determine the amount of fuel needed by NATO forces for forward stocks, where and how to store them in case of unforeseen situations, which underground storage facilities can be used for protection against air strikes, etc.
4. Creation of an integrated Eastern European pipeline system in the space between the Baltic and the Black Seas, as a key element that will provide the necessary fuel capacity for NATO forces on the eastern flank.
5. Ensuring priority access for the military to fuel infrastructure during a crisis, as fuel disruptions can immobilize the movement of convoys with equipment and create local transport chaos.
6. Complete the transition of refineries in Slovakia,

Hungary, Bulgaria, and the Czech Republic to processing non-Russian oil in order to become completely independent of supplies from Russia.

7. Develop scenarios for countering and neutralizing a hybrid blockade of logistics by civilian actors, which may be organized by the enemy in the form of certain protests and blockades, following the example of the actions of Polish farmers and carriers on the Polish-Ukrainian border in 2023-2024.

8. Identify strategic vulnerabilities in fuel supply in the Alliance and take urgent action to mitigate critical deficiencies. The EU-NATO Working Group on Resilience and Critical Infrastructure could be given a clear mandate from the NATO Washington Summit to develop measures to enhance the NATO resilience of fuel supply chains.

9. Establish a reliable, resilient and adaptive logistics system in Europe. A system of interoperable logistics centres, particularly in potential theatres of war, networked across Europe, will facilitate the development of flexible, scalable and resilient operational support systems to maintain planning advantage and will also provide improved operational flexibility and resilience. In this regard, develop and approve, with funding sources, an Energy Sustainability Plan that will include measures to:

- 9.1. compilation of sectoral lists of critical infrastructure facilities, taking into account the CEI facilities located on NATO's eastern flank;
- 9.2. updating the list of critical infrastructure facilities that require priority air cover;
- 9.3. systematic monitoring and analysis of threats to energy infrastructure and risks to the performance of vital functions and/or the provision of vital services;
- 9.4. establishing requirements for ensuring the security and stability of the CEI in accordance with the identified threats and taking them into account when designing energy supply schemes;
- 9.5 alternative (backup) energy supply of critical infrastructure facilities that ensure the performance of vital functions and/or the provision of vital

11. Take measures to conduct joint training and enhance the combat capability of mobile fire groups

13. To work together with the Ukrainian side on the possibilities of using Ukraine's fuel infrastructure in the interests of NATO.

**Oleksandr Chudnovets,**  
Military sailor, historian

# War at Sea – 2024: Progress and Forecasts

*The Russian-Ukrainian war at sea in 2024 is taking place in a rather interesting paradigm. Gradually, step by step, Ukraine is pushing the Russian Black Sea Fleet out of the Black Sea. It so happened that by the beginning of July 2024, in the main base of the Black Sea Fleet – temporarily occupied Sevastopol, there was practically no large warship left, with the exception of auxiliary fleet vessels and ships undergoing repair. The entire core of the Black Sea Fleet, led by ships carrying Kalibr cruise missiles, is dispersed in various ports on the Black Sea, including the Sea of Azov. And as the main base, with all the infrastructure, the Russian fleet chose the port of Novorossiysk.*



*Loading of Kalibr missiles at the Diesel-electric submarine of Pr. 636.3. (NATO Improved Kilo class). Photo from open sources*

It is correct to say that the Russians do not feel comfortable in the Black Sea, although from the waters of the Sea of Azov, they have the opportunity to conduct missile strikes on the territory of Ukraine. By the way, regarding the missile strikes with «Kalibers», recently the shooting has been carried out mainly from submarines based in the port of Novorossiysk. Interestingly, the submarines themselves are not standing near the mooring walls, but are in the Novorossiysk roadstead in a semi-submerged state. Only the conning towers of the boats are visible on the surface of the water, fearing an attack by Ukrainian naval unmanned boats (drones). Currently, the Russian Black Sea Fleet has 3 «Kolpino» diesel-electric submarines, «Stary Oskol» and «Veliky Novgorod» pr.636.3 class «Varshavyanka», each armed with 4 cruise missiles «Caliber». The enemy also has another submarine in the Black Sea - Alrosa, pr.877, but it is not a carrier of cruise missiles and is constantly being repaired.

The largest surface combat ships of the Black Sea Fleet, which are the missile frigates «Admiral Makarov» and «Admiral Essen» pr.11356R class «Admiral Grigorovich», are mainly located in Novorossiysk and periodically go to sea, demonstrating the flag and the fact that they still have combat capabilities. The last information at the time of writing the article about the use of cruise missiles «Kaliber» (sea-based) was on July 8 of this year, during a massive missile attack on Ukraine (the missiles were fired by the frigate «Admiral Makarov» - author's note). These ships are simply not capable of going to the open sea to perform combat missions, because they are very afraid of becoming potential targets for our forces and means of destruction.

The story is repeating with the large surface ships of the Soviet Black Sea Fleet during World War II. Then in 1943, due to incompetent leadership, a number of surface ships, cruisers, destroyers and submarines were lost, the command of the Black Sea Fleet categorically forbade the use of surface ships in naval operations in the Black Sea (parallels suggest themselves: yes, the leader of the destroyers «Moscow»! died on June 26, 1941 during an offensive operation on the port of Constanta - author's note). As a result, this entire armada practically stood still until the end of the war in the ports of the Caucasian coast. So, history is cyclical and everything repeats...

And why has everything become so helpless and hopeless for the Russian Black Sea Fleet? The



answer is on the surface. It was Ukraine that effectively used its combat capabilities, primarily using naval unmanned boats and air- and land-based cruise missiles. All this could only be dreamed of in the worst dreams of racist naval strategists!

For the first time, Ukrainian naval drones showed themselves as a new effective weapon of modern warfare in October 2022, boldly penetrating the main base of the Black Sea Fleet - Sevastopol. As a result of the attack, the frigates «Admiral Makarov,» «Admiral Essen» and the minesweeper «Ivan Golubets» were damaged. This attack entered the analogues of naval art and the research of historians under the name «Sevastopol wake-up call,» and had primarily a psychological aspect in modern warfare at sea. Although indeed, the moment of truth in the fight for the Black Sea still occurred after the fateful sinking of the missile cruiser «Moscow» on April 14, 2022.



*Moscow missile cruiser pr. 1164*

Interestingly, if we take into account the tactical and technical characteristics of Ukrainian naval drones of the 2022 and 2024 models, we will see that the combat naval component is constantly being improved. Today, naval drones are capable of being equipped with a 350 kg warhead and a range of up to 800 km! In addition, the latest models of “naval warhorses” can carry and deploy naval minefields on board. Six Rashist ships were blown up on such mines in September-October 2023, namely the small missile boat on a hovercraft “Samum” pr. 1239, frigate «Admiral Makarov» pr.11356R, patrol ship «Pavel Derzhavin» pr.22160, tugboat «Professor Nikolay Muru» pr.22870, small missile boat type Buyan-M pr.21631 and hydrographic boat «Vladimir Kozitsky» pr.23040G.

And a completely innovative solution of the 2024 from the Ukrainian military is the installation on board of new modifications of the unmanned

maritime platform «Magura V5» - R-73 missiles. These are «air-to-air» missiles with an infrared targeting system. In addition, the «Grad» multiple launch rocket system (MLRS) has already been tested on the «Sea Baby» sea drones. All this armament allows the «unmanned boats» to fight against air targets, surface ships and hit enemy port infrastructure!



*Naval drone with MLRS.*

*Photo by Security Service of Ukraine*

In addition to the actions of our naval drones, military aviation operates no less effectively and successfully with modern and effective weapons - cruise missiles «Storm Shadow (SCALP-EG)». The use of missiles on fighters has both advantages (more carriers) and disadvantages (weight restrictions). This type of cruise missile has a weight of 1300 kg and a range, which in the original version is up to 560 km. The missile itself is perfectly suited for striking the most important enemy targets, namely command posts, air bases, fuel and ammunition depots, ships, etc. Due to its low altitude on approach, Storm Shadow can easily overcome air defenses. An example of their skillful use was the destruction in August 2023 in temporarily occupied Sevastopol of the large landing ship «Minsk» pr.775 and the diesel-electric boat «Rostov-on-Don» pr.636.3, and in November of the small missile ship «Askold» pr.22800, which was undergoing tests at the Zaliv shipyard in Kerch.

### Achievement

The 2024 year of war at sea was very successful and, most importantly, effective for our Security and Defense Forces , namely:

- On February 1, 2024, the missile boat «Ivanovets» pr. 12411 was destroyed by a strike by a sea-based unmanned aerial vehicle (UAV) in the roadstead of Lake Donuzlav, the western coast of Crimea near the city of Yevpatoria.

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- On February 24, 2024, the large landing ship «Caesar Kunikov» pr.775 was destroyed by an MBEC strike in the Black Sea near the city of Alupka, Crimea.



*Small missile boat «Askold» in Kerch.  
Archive MIL.IN.UA*

- On March 5, 2024, the patrol ship (corvette) «Sergey Kotov» project 22160 was destroyed by MBEC strikes in the Black Sea near the city of Kerch.
- On March 24, 2024, the large landing ship Yamal, project 775, was damaged by a missile strike, probably from the Storm Shadow (SCALP-EG) cruise missile, while docked in Sevastopol.
- On March 24, 2024, the large amphibious assault ship «Azov» pr.775 was damaged by a missile strike, probably from the «Storm Shadow (SCALP-EG)» cruise missile, while docked in Sevastopol.
- On March 24, 2024, the medium reconnaissance ship «Ivan Khurs» pr.18280 was damaged by a missile strike, probably from the «Storm Shadow (SCALP-EG)» cruise missile while parked in Sevastopol.
- On March 24, 2024, the large landing ship «Konstantin Olshansky» pr.775 (captured by the Muscovites in 2014, planned by the Russian Navy scammers to use instead of the destroyed large landing ship «Minsk», they simply repainted the name on board so that a new «Minsk» appeared - author's note), was damaged by a missile strike from the CM «Neptune» while parking in Sevastopol.
- On April 7, 2024, the small missile ship «Serpukhov» pr. 21631 class «Buyan-M» was damaged as a result of a special operation of the Ukrainian Defense Ministry's Main Intelligence Directorate (GUR) in the Baltiysk Naval Base (Kaliningrad Region).
- On April 21, 2024, the rescue vessel «Commune» (a 109-year-old ship - author's note) was damaged by a missile strike on the Sevastopol Naval Base.
- On May 6, 2024, the patrol boat pr.12150 «Mangust» was destroyed, Vuzka Bay (Black Sea region, temporarily occupied Crimea).
- On May 19, 2024, small missile ship «Cyclone» pr.22800 class «Karakurt» destroyed by a missile strike, probably by the Storm Shadow (SCALP-EG) cruise missile during a stop in Sevastopol.
- On May 19, 2024, the minesweeper «Kovrovets» pr.266M class «Aquamarine» was destroyed by a missile strike, probably from the «Storm Shadow (SCALP-EG)» cruise missile while parked in Sevastopol.
- On May 30, 2024, the transport and landing craft pr.701S code «Tunets» was destroyed by marine unmanned vehicle, Vuzka Bay (Black Sea region, temporarily occupied Crimea).
- On 06.06.2024, the Project 498 class «Saturn» raid tug was destroyed by a strike of marine unmanned vehicle in the waters of Lake Panske in Crimea.

One of the achievements of the end of 2023 and the entire 2024 is the creation and further expansion of the new Coalition of Naval Forces and Facilities in Support of Ukraine. The main tasks of the coalition are to help Ukraine win at sea, ensure the safety of civil shipping and eliminate the mine threat, because now the Black Sea is the most dangerous in terms of mine safety in Europe. The United Kingdom, together with Norway, led the new coalition of maritime capabilities, providing ships and vehicles to strengthen Ukraine's ability to operate at sea. Two British minesweepers of the *Sandown class* («Chernihiv» and «Cherkassy» in the Ukrainian

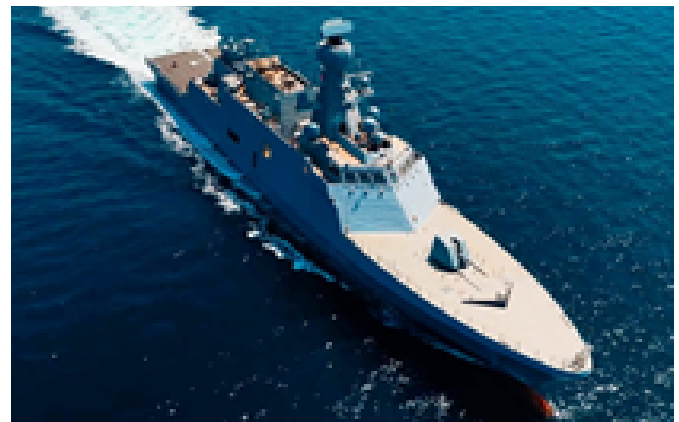


*Attack of a sea unmanned boat, May 2024. UA Main Intelligence Directorate portal*

Navy - author's note), as well as Dutch minesweepers of the *Alkmaar class* are already included in the Ukrainian Navy, or being prepared for transfer, and the crews are undergoing training. Since the spring of 2024, Ukrainian sailors have gradually been receiving patrol and landing and assault boats from Sweden (Combat Boat 90 assault boats), Finland (Uisko landing boats), France (OCEA FPB 98 patrol boats), Estonia (Patrol 18WP patrol boats), the USA (patrol and landing boats Island, Defiant, Mark VI, etc.) and other friendly states.

The process of rebuilding the Naval Forces of Ukraine is underway but mainly outside the country. Thus, in mid-2021, Turkey began building the first corvette for Ukraine, the Hetman Ivan Mazepa

(F211) class Ada , which was launched in Istanbul in October 2022. The ship is currently undergoing testing, and by the end of 2024 it is planned to be included in the Ukrainian Navy. The second corvette of the “Hetman series” is also being built, of this class, which was named “Hetman Ivan Vyhovsky”. There is an opinion that this corvette may later be equipped with the Ukrainian Neptune missile system. The presence of corvettes in the updated Ukrainian fleet may indicate that the Ukrainian Navy will not only be a mosquito fleet - a fleet of exclusively small ships and boats, but there are ambitions for larger ships and for longer distances.



*Corvette «Hetman Ivan Mazepa».  
Defence Express Archive*



### Forecasts

If we analyze the further hostilities in the Black Sea and Azov operational zones, then nothing comforting will happen for Moscovites. The main thing is that the Black Sea Fleet of the Russian Federation is not able to fully fulfill its tasks. It is practically squeezed off the shores of the Caucasus coast and is constrained in its actions. It is no

longer able to conduct amphibious and offensive operations, effectively provide cover for army units on the shore, ensure the safety of its merchant shipping and logistics routes. Even the activities of the reconnaissance ships of the Russian Black Sea Fleet, which are the «eyes and ears» of the fleet, are associated with the fear of being destroyed or damaged.



One thing that the Moscovites' Black Sea Fleet is still capable of is shelling the entire territory of Ukraine from the sea with Kalibr cruise missiles. Although even here, the carriers of cruise missiles are significantly limited in the use of the missiles themselves in terms of their number. The current international economic sanctions are still giving results, although we would prefer to see them expanded. According to estimates by foreign experts, the Russian Federation's military capacity to manufacture Kalibr-M cruise missiles (sea version) is 20-25 missiles per month, it all depends on the sanctioned electronic content and rocket engines. Although for us, Ukrainians, even this number of such weapons brings great suffering and grief...

What will happen next time will tell, but our resistance forces at sea are constantly improving. In addition to surface unmanned naval boats, in the future, underwater drones and possibly mini-submarines should appear as combat units. And this is a more effective weapon against the aggressor, which will allow us to approach enemy objects more covertly and imperceptibly and deliver devastating blows.

With the arrival of F-16 fighter jets, Ukraine will be able to deliver more targeted and effective strikes on coastal military facilities and the Russian Black Sea Fleet's naval forces. This aircraft can not only change the balance of power in the air, but also influence the course of the entire war.

We know that the key to Russia's defeat lies in the temporarily occupied Crimea. To do this, in the near future, Ukraine needs to de-occupy the peninsula. The systematic use of ground-based missile weapons, together with the use of aviation against military facilities on the territory of the Crimean peninsula, makes it possible to destroy all air defense and logistics of the occupiers. It is possible to conduct an amphibious operation in Crimea, and all the components for this are already gradually being developed. And in addition, the Crimean bridge illegally built by the occupation authorities must be destroyed, because it is an important logistical chain of the enemy and his (more Putin - author's note) ideological «scrap».

### Results

In the third year of the Russian Federation's full-scale invasion of Ukraine, five main factors emerged that helped it seize the initiative on the Black Sea:

*1. The establishment of minefields by forces and means at the beginning of the invasion on the approaches to the eastern coast in the Odessa area and in areas of possible landing of enemy naval landings. Enemy ships approached Odessa several times with the aim of landing, and practically all the large landing ships of the Black Sea Fleet were involved under the cover of frigates and the missile cruiser «Moskva». But this entire armada was forced to retreat, because dense minefields did not allow to fulfill the assigned tasks.*

*2. Sinking of the flagship of the Russian Black Sea Fleet, the missile cruiser Moskva. As a result of this significant event, the Russian fleet lost its largest combat unit in the Black Sea, which later made it possible to liberate Zmiinyi (Snake) Island. The sinking of the Russian flagship also had a major demoralizing effect on the personnel of the Russian Black Sea Fleet, reduced the level of threats from the Black Sea waters, and convinced Ukraine's allies to provide such weapons as Harpoon anti-ship missiles and other effective weapons.*

*3. The Battle of Zmiinyi Island, as a result of which it was liberated in July 2022. This made it possible to deprive the Russian Black Sea Fleet of the ability to control the entire eastern part of the Black Sea and force the Moscovites to unblock shipping trade routes, which further contributed to the creation of a "grain corridor."*

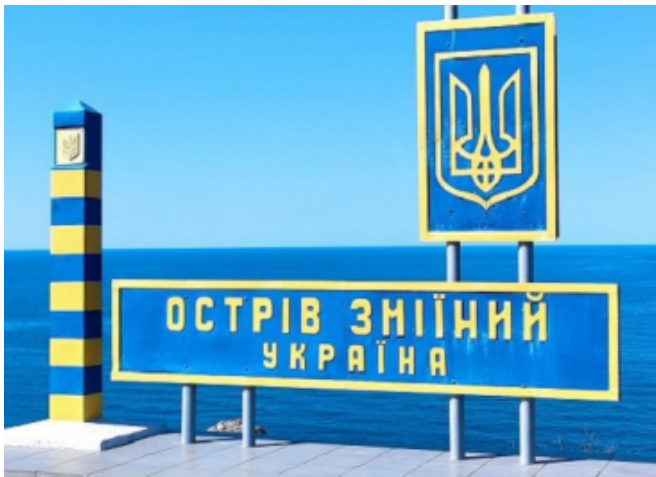
*4. The creation and operation of the «grain corridor» was of great socio-political and economic importance for Ukraine and the entire civilized world. It showed the world community that Ukraine is capable of fulfilling its economic obligations and that, despite the presence of the enemy fleet, it can carry out measures to ensure the safety of navigation. The Navy of the Armed*

## IN FOCUS: WAR

*Forces of Ukraine constantly patrols the Black Sea waters controlled by Ukraine, ensuring the operation of the «grain corridor».*

*5. The effective use of naval unmanned boats ensured Ukraine's dominance in the Black Sea. The paradox is that, without their own full-fledged military fleet, the Ukrainians imposed their «rules of the game» on the Russian aggressor.*

The Ukrainian military has already destroyed a third of the almost 80 warships of the Russian Black Sea Fleet. As of July 2024, according to the General Staff of the Armed Forces of Ukraine, the



*Snake Island - Ukraine. Photo by the State Border Guard Service of Ukraine*

racist aggressors lost ships/boats - 28 units and 1 submarine, 15 units remain damaged for repair. More to come... We believe! We will win!

In general, the Naval Forces of the Armed Forces of Ukraine, together with the Security and Defense Forces, are fulfilling their tasks, and as the Commander of the Navy of the Armed Forces of Ukraine, Vice Admiral Oleksii Neizhpapa, said: **«For the Armed Forces of Ukraine, any ship under the flag of the Russian Federation is a military target. They will all be destroyed or hit as soon as we can reach them!»**

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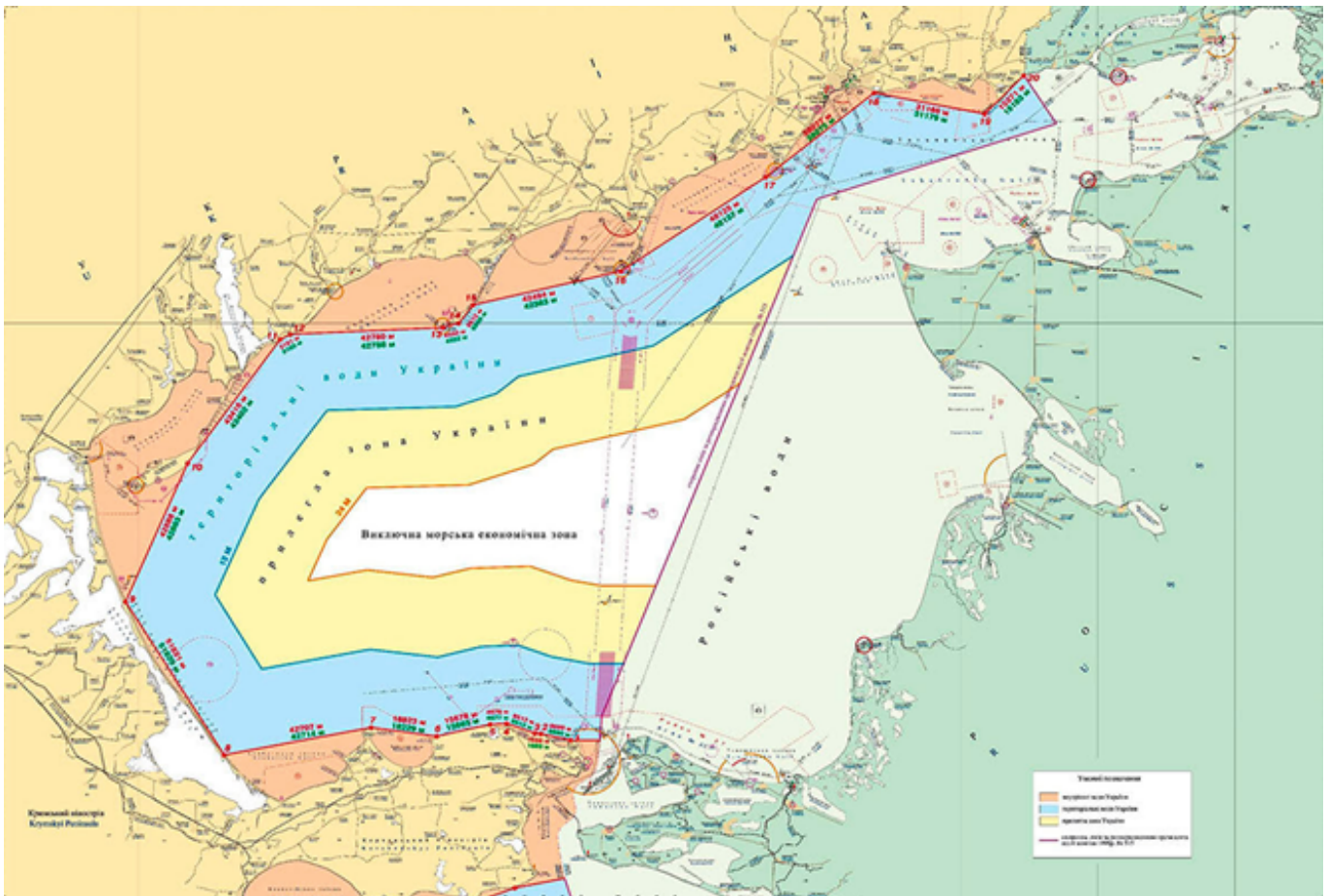
**Bohdan Ustymenko,**  
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## Territorial sea of Ukraine in the Northeastern Part of the Azov-Black Sea Basin

*Since 1992, independent Ukraine has sought to act in its own maritime spaces in accordance with the provisions of international law, as well as to establish a border between Ukraine and the Russian Federation in the Sea of Azov and the Black Seas and the Kerch Strait .*

In 1992, Ukraine deposited with the Secretary-General of the United Nations a list of geographical coordinates of the points of the baselines from which the width of the territorial sea, exclusive economic zone and continental shelf of Ukraine in the Black Sea is measured [1], as well as a list of geographical coordinates of the points of the baselines from which

the width of the territorial sea, exclusive economic zone and continental shelf of our state in the Sea of Azov [2]. Thus, back in 1992, Ukraine declared the existence of its own maritime spaces in the Azov-Black Sea basin, in particular , the territorial sea of Ukraine in the Sea of Azov.  
(see Map-scheme 1 below)



Map-scheme 1 ( prepared for illustrative purposes only )



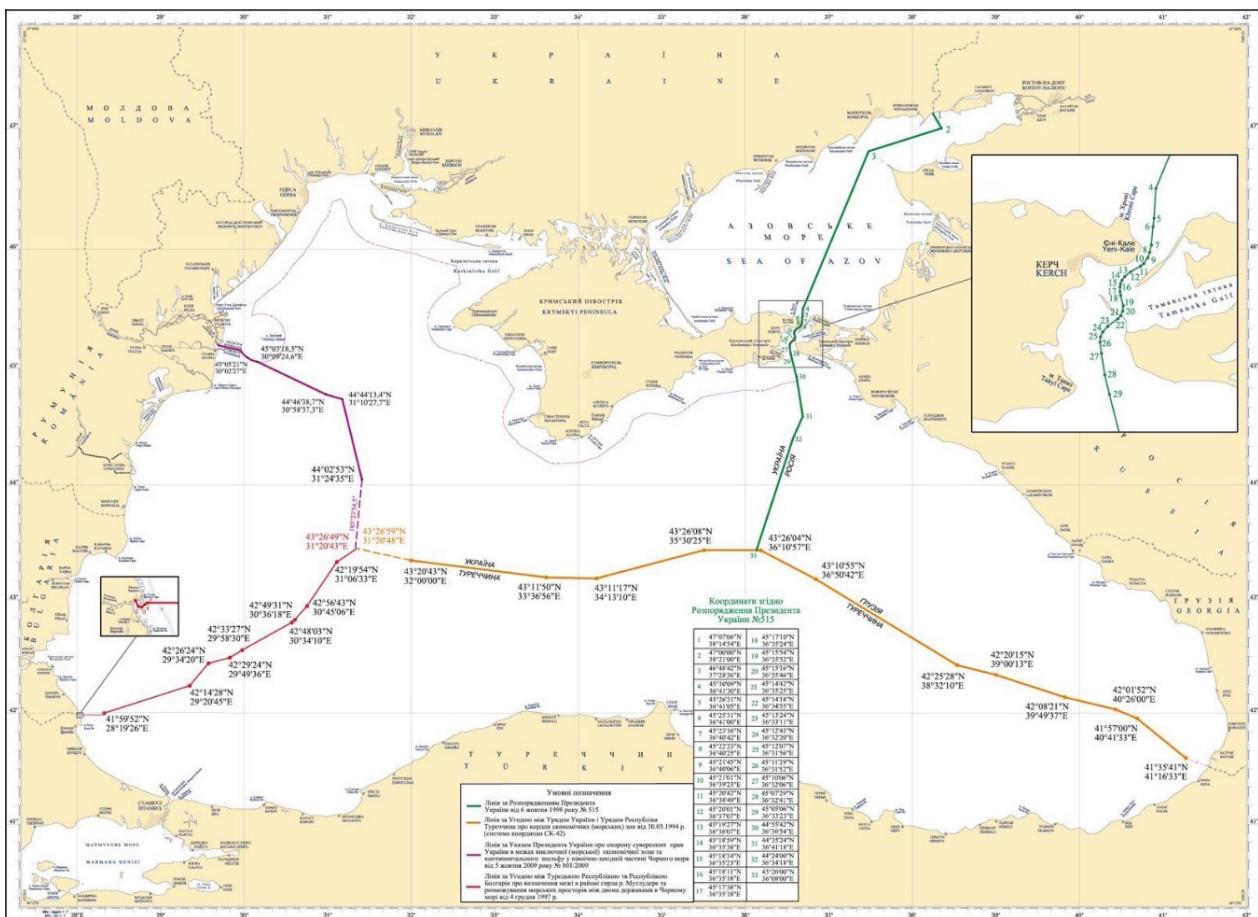
## IN FOCUS: MARITIME LAW

As evidenced by the content of the Protocol of the meeting of the delegations of Ukraine and the Russian Federation on determining the legal status of the Sea of Azov and the Kerch Strait and the delimitation of the continental shelf and the exclusive (maritime) economic zone in the Black Sea of October 17, 1996 [3], the Ukrainian delegation considered it necessary to carry out, in accordance with international law, the delimitation of the state border between Ukraine and the Russian Federation in the Sea of Azov and the Kerch Strait. The delimitation provides for granting the waters of the Sea of Azov and the Kerch Strait the status of internal waters of Ukraine and the Russian Federation. Resolving the issue of the passage of the state border between Ukraine and the Russian Federation in the water areas of the Sea of Azov, the Kerch Strait, and the Black Sea **will allow determining the border of sovereignty of each of the states in this region**, which in turn will contribute to rational management, conservation and balanced use of natural resources, environmental protection, and the fight against offenses [3]. This was the position of the Ukrainian side.

The position of the Russian delegation was that the legal status and regime of use of the Sea of Azov and the Kerch Strait are inseparably linked and form a single whole, and it would be in the interests of both states to assign the status of internal waters to the water area of the Sea of Azov and the Kerch Strait and to jointly use them **in the absence of any delimitation of their maritime spaces** [3].

The Russian position was illegal, but understandable, because when dividing the sea spaces in the Sea of Azov and the Kerch Strait in accordance with the provisions of the 1982 UN Convention on the Law of the Sea, Ukraine expands its sovereignty, receives sovereign and other rights to 2/3 or even 3/4 of the Azov-Kerch water area and the strategically important Kerch-Yenikalsky Canal. The latter, in fact, connects the Seas of Azov and the Black Sea. Russia did not want to allow this.

Despite the illegality of the Russian side's aspirations, the then President of Ukraine L. Kuchma, guided by the provisions of the Laws of



Map-scheme 2 (prepared for illustrative purposes only)

Ukraine «On the State Border of Ukraine», «On the Exclusive (Maritime) Economic Zone of Ukraine,» as well as the 1982 UN Convention on the Law of the Sea, by his Order «On the Protection of the State Border of Ukraine in the Azov and Black Seas and the Kerch Strait and Ensuring the Rights of Ukraine in the Exclusive (Maritime) Economic Zone and Continental Shelf in the North-Eastern Part of the Black Sea» dated October 6, 1998 No. 515, *obliged* state bodies to protect the state border along a line passing through points with geographical coordinates in the Azov and Black Seas and the Kerch Strait. Such a temporary state/sea border is valid until a final agreement is reached between Ukraine and the Russian Federation on the delimitation of the state border in the Sea of Azov and the Black Seas and the Kerch Strait and the delimitation of the exclusive (maritime) economic zones and the continental shelf in the north-eastern part of the Black Sea [4] .

The Treaty between Ukraine and the Russian Federation on the Ukrainian-Russian State Border of January 28, 2003 [5], ratified by the Law of Ukraine “On Ratification of the Treaty between Ukraine and the Russian Federation on the Ukrainian-Russian State Border” of April 20, 2004 No. 1681- IV [6], contains a provision that the settlement of issues relating to adjacent maritime spaces is carried out by agreement between the Contracting Parties in accordance with international law. At the same time, nothing in this Treaty prejudices the positions of Ukraine and the Russian Federation on the status of the Sea of Azov and the Kerch Strait as internal waters of the two states.

But as a result of the implementation of a provocation by Russian President V. Putin in late 2003 in the form of the start of the unauthorized construction of a dam from the Russian Taman Peninsula to the Ukrainian island of Tuzla, as well as the threat of an armed conflict between Ukraine and the Russian Federation that arose in connection with such a provocation, Ukraine made concessions and signed an extremely disadvantageous agreement with the Russian Federation on December 24, 2003 “On Cooperation in the Use of the Sea of Azov and the Kerch Strait” [7]. According to Article 1 of this agreement, the Sea of Azov and the Kerch Strait

are historically internal waters of Ukraine and the Russian Federation , and the Sea of Azov will be delimited by the state border line in accordance with the agreement between the Parties.

At the same time, Article 8, Part 1, of the 1982 UN Convention on the Law of the Sea [8], ratified by both Ukraine and Russia [9], clearly states that **internal waters may belong to only one state** , not two, as stated in the documents “squeezed” from Ukraine by Russia. In turn, **the Kerch Strait has international status under Article 37 of the 1982 UN Convention on the Law of the Sea.**

It should be added that the provision of the treaty that the Sea of Azov will be delimited by the state border line in accordance with the agreement between Ukraine and the Russian Federation was not implemented. Russia did not intend to fulfill its contractual obligations, as well as to comply with the provisions of international law.

Years passed. In 2014, Russia occupied Crimea and about 100,000 sq. km of Ukrainian maritime spaces in the Azov-Black Sea basin, and Ukraine lost access to colossal reserves of natural gas on its own offshore shelf.

On October 12, 2018, in order to protect national interests, repel armed aggression by the Russian Federation, strengthen the combat and mobilization readiness of the Armed Forces of Ukraine, other military formations and law enforcement agencies of Ukraine, and stabilize the socio-economic situation in the South and East of Ukraine, the National Security and Defense Council of Ukraine adopted a decision “On urgent measures to protect national interests in the South and East of Ukraine, in the Black and Azov Seas and the Kerch Strait.”

The National Security and Defense Council of Ukraine, among other things, obliged the Cabinet of Ministers to adopt a decision within a month to submit to the Verkhovna Rada draft laws on internal waters, territorial sea and adjacent zone of Ukraine with the determination of the coordinates of the median line, on amendments to some laws of Ukraine on the protection of the state border, in particular regarding the determination of the procedure and methods of involving units of the Armed Forces, other military formations and law

enforcement agencies in the performance of tasks to strengthen the protection (cover) of the state border and the sovereign rights of Ukraine in its exclusive (maritime) economic zone [10].

In our opinion, the decision of the National Security and Defense Council of Ukraine on the need to adopt a law on the maritime spaces of Ukraine with the definition of the coordinates of the median line can only be welcomed, since such an act of legislation is almost the only way for any coastal state to determine the boundaries of its own territorial sea and fully exercise sovereignty in this maritime zone in the event of ignoring the provisions of international law and/or refusal to resolve the dispute (conflict) using international legal mechanisms by a neighboring state whose shores are located opposite or adjacent to the shores of the aforementioned coastal state.

In the context of the issue raised, one should mention one of the provisions of Article 15 of the 1982 UN Convention on the Law of the Sea, which actually stipulates that any coastal state, as a rule, has the right to extend its territorial sea to the median line, each point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of both the given state and its neighboring state is measured.

Despite the above circumstances, the Government of Ukraine, as of the current date, unfortunately, has not made a decision to submit to the Verkhovna Rada a draft law on the maritime spaces of Ukraine with the definition of the coordinates of the median line. It is well known that on February 24, 2022, Russia launched a full-scale war against Ukraine, and Ukrainian seaports and coasts were under a Russian blockade. On September 20, 2022, the Verkhovna Rada of Ukraine adopted the Statement “On the aggression of the Russian Federation in the areas of the Black and Azov Seas and the Kerch Strait” [11].

In its Statement, the Ukrainian Parliament condemned the state policy of the Russian Federation regarding the progressive militarization of the areas of the Black and Azov Seas and the Kerch Strait, systematic cases of the Russian Federation complicating or blocking international

shipping, which undermines security and stability in the region and beyond, and noted the long-standing consistency and systematic nature of Russia’s policy aimed at causing progressive harm to Ukraine as a maritime state and hindering its maritime economic activities, as well as the de facto transformation by Russia of the Sea of Azov, which contains the territorial sea and exclusive economic zone of Ukraine, into its own «inland lake,» as well as the usurpation of the rights and jurisdiction of Ukraine as a coastal state in its maritime areas in the Black and Azov Seas and the Kerch Strait [11].

Ultimately, the Verkhovna Rada of Ukraine terminated the Treaty between Ukraine and the Russian Federation on Cooperation in the Use of the Sea of Azov and the Kerch Strait by its Law No. 2948-IX of February 24, 2023 [12]. As stated in the explanatory note to the draft law, the implementation of the draft of this document will make it possible to protect the national interests of the state in the Azov-Kerch waters, terminate the document that illegally restricts international shipping in the region, and bring the contractual and legal framework of Ukraine in line with the current state of relations with the Russian Federation. After denunciation of the Treaty, Ukraine will be able to determine the width of its territorial sea in the Sea of Azov and the Kerch Strait in accordance with the provisions of the 1982 UN Convention on the Law of the Sea, which will allow it to more effectively take measures to ensure national security and defense, repel and deter armed aggression of the Russian Federation from the sea. In addition, denunciation of the Treaty will formally allow Ukraine to invite US ships to conduct annual freedom of navigation operations (Freedom of Navigation Operations, FONOPs), conducting annual joint naval exercises with the United States, Great Britain and other NATO member states, as well as regular joint patrols in the Azov-Kerch Sea area with ships of the United States, Great Britain and other NATO member states [13].

The fact that part of the Sea of Azov is under Ukrainian sovereignty is also recognized by the international community. This fact is confirmed, among other things, by the European Parliament resolution “On the situation in the Sea of Azov” of October 25, 2018. Thus, in accordance with



paragraph 4 of this resolution, the European Parliament once again declares its support for the independence and territorial integrity of Ukraine, reaffirms Ukraine's sovereignty over the Crimean peninsula and part of the Sea of Azov, as well as Ukraine's absolute right to have full access to the Sea of Azov, as enshrined in the UN Convention on the Law of the Sea [14].

In turn, subparagraph 40 of paragraph 27 of the Maritime Security Strategy of Ukraine, approved by the Decree of the President of Ukraine dated July 17, 2024 No. 468/2024 [15], refers the issue of delimitation of maritime spaces in the Black and Azov Seas and the Kerch Strait with the Russian Federation in accordance with the norms of international law to one of the tasks of this Strategy. Given the above, as well as the provisions of the Constitution of Ukraine, we can come to the obvious conclusion that our state is faced with an urgent need to regulate the issue of the extension of Ukraine, as a coastal state, of its territorial sea to the median line in the Sea of Azov and the Kerch Strait and the northeastern part of the Black Sea by means of the Law of Ukraine. We consider it appropriate to also provide in this Law the right of the Cabinet of Ministers of Ukraine to temporarily suspend the exercise of the right of innocent passage by foreign vessels in certain areas of the territorial sea of Ukraine, if such suspension is essential for the protection of the security of Ukraine.

The above-mentioned Law will comply not only with the 1982 UN Convention on the Law of the Sea, but also with the UN Charter [16], in particular Article 51 of this document, which confirms the inalienable right of a member of the Organization to self-defense in the event of an armed attack on it.

In the event of the adoption of the Law of Ukraine "On the Territorial Sea of Ukraine in the Sea of Azov and the Kerch Strait and the North-Eastern Part of the Black Sea", we also recommend considering the advisability of applying against Russia the quasi-judicial procedure provided for by the UN Convention on the Law of the Sea and applied in 2016-2018 by East Timor – a small state in Oceania – against the great Australia. Timor unilaterally convened a special group of international mediators

under the auspices of the UN and defeated Australia, which was forced to submit to international law and sign a delimitation agreement. This is the only such precedent in the world so far. Of course, Russia is not Australia, and according to the recommendations of the UN special group, the current Russian political regime will not conclude a maritime delimitation agreement with Ukraine. But the application of such a procedure in 2024 or 2025 could bring enormous political dividends to our state now and prepare solid ground for the future delimitation of maritime spaces with Russia in accordance with the provisions of the law of the sea [17].

It should also be noted that the text of the draft «Law of Ukraine on the Territorial Sea of Ukraine in the Sea of Azov and the Kerch Strait and the North-Eastern Part of the Black Sea» has already been developed by the Institute of National Security and is an appendix to this article.

### Annex

#### LAW OF UKRAINE

On the territorial sea of Ukraine in the Sea of Azov and the Kerch Strait and northeastern part of the Black Sea

The Verkhovna Rada of Ukraine,

based on the Declaration on State Sovereignty of Ukraine and the Constitution of Ukraine,

Emphasizing that the sovereignty of Ukraine extends to its entire territory, which within the internationally recognized state border is integral and inviolable,

Reaffirming the inalienable sovereign right of Ukraine to restore and preserve its territorial integrity within the internationally recognized state border,

Guided by the Charter of the United Nations and the 1982 United Nations Convention on the Law of the Sea,

taking into account the Treaty between Ukraine and the Russian Federation on the Ukrainian-Russian State Border of January 28, 2003, ratified by the Law of Ukraine “On Ratification of the Treaty between Ukraine and the Russian Federation on the Ukrainian-Russian State Border” of April 20, 2004 No. 1681-IV ,

based on the Law of Ukraine “On the Termination of the Treaty between Ukraine and the Russian Federation on Cooperation in the Use of the Sea of Azov and the Kerch Strait” dated February 24, 2023 No. 2948-IX,

taking into account the Statement of the Verkhovna Rada of Ukraine “On the aggression of the Russian Federation in the areas of the Black and Azov Seas and the Kerch Strait”, approved by the Resolution of the Verkhovna Rada of Ukraine “On the Statement of the Verkhovna Rada of Ukraine “On the aggression of the Russian Federation in the areas of the Black and Azov Seas and the Kerch Strait” dated September 20, 2022 No. 2595-IX,

based on the provisions of the resolutions of the United Nations General Assembly concerning the territorial integrity of Ukraine, in particular «Territorial Integrity of Ukraine» of March 27, 2014 No. A / RES / 68/262 and «Humanitarian Consequences of Aggression against Ukraine» of March 21, 2022 No. A / ES -11/ L .2, which confirm the sovereignty, independence, unity and territorial integrity of Ukraine within its internationally recognized borders, including its territorial waters,

considering the long-standing and systematic policy of the Russian Federation aimed at causing progressive harm to Ukraine as a maritime state and hindering its maritime economic activities,

noting the de facto transformation of the Sea of Azov, which contains the maritime spaces of Ukraine, by the Russian Federation into its own “inland lake”, as well as the usurpation of the rights and jurisdiction of Ukraine as a coastal state in its spaces in the Sea of Azov and the Kerch Strait and the north-eastern part of the Black Sea,

## IN FOCUS: MARITIME LAW

taking into account the Decree of the President of Ukraine “On the Protection of the State Border of Ukraine in the Seas of Azov and Black Seas and the Kerch Strait and Ensuring the Rights of Ukraine in the Exclusive (Maritime) Economic Zone and the Continental Shelf in the North-Eastern Part of the Black Sea” dated October 6, 1998 No. 515,

considering the fact that on November 11, 1992, Ukraine deposited with the Secretary-General of the United Nations a list of geographical coordinates of the points of the baselines from which the breadth of the territorial sea, the exclusive economic zone and the continental shelf in the Black Sea is measured, as well as a list of geographical coordinates of the points of the baselines from which the breadth of the territorial sea, the exclusive economic zone and the continental shelf in the Sea of Azov is measured,

remaining committed to the course of political and diplomatic conflict resolution based on the principles and norms of international law, the Charter of the United Nations and the 1982 United Nations Convention on the Law of the Sea,

reaffirming the inalienable sovereign right of Ukraine to self-defense in accordance with Article 51 of the Charter of the United Nations,

adopts this Law, which aims to regulate the issue of the extension by Ukraine, as a coastal state, of its territorial sea to the median line in the Sea of Azov and the Kerch Strait and the northeastern part of the Black Sea.

### CHAPTER I GENERAL PROVISIONS

**Article 1.** Extension by Ukraine of its territorial sea in the Sea of Azov and the Kerch Strait and the north-eastern part of the Black Sea

1. The territorial sea of Ukraine in the Sea of Azov and the Kerch Strait and the north-eastern part of the Black Sea extends to the median line, each point of which is equidistant from the nearest points of the baselines from which the width of the territorial sea of Ukraine and the Russian Federation in the Sea of Azov and the Kerch Strait and the north-eastern part of the Black Sea is measured.

2. The median line specified in part one of this article passes through points with geographical coordinates, the list of which is specified in the appendix to this Law.

3. The sovereignty of Ukraine extends to the entire area of the territorial sea of Ukraine in the Sea of Azov and the Kerch Strait and the north-eastern part of the Black Sea. The said sovereignty also extends to the airspace above the territorial sea of Ukraine, as well as its bottom and subsoil.

**Article 2.** Suspension of the exercise of the right of innocent passage by foreign vessels in certain areas of the territorial sea of Ukraine

1. The Cabinet of Ministers of Ukraine may temporarily suspend the exercise of the right of innocent passage by foreign vessels in certain areas of the territorial sea of Ukraine if such suspension is essential for the protection of the security of Ukraine.

2. The suspension of the exercise of the right of peaceful passage specified in part one of this Article shall enter into force after its due publication.



**CHAPTER II  
FINAL PROVISIONS**

1. This Law shall enter into force on the day following the day of its publication.

2. The Annex to this Law is an integral part thereof.

3. The Ministry of Foreign Affairs of Ukraine shall ensure the immediate transmission of the text of this Law to the United Nations, the European Parliament, the Parliamentary Assembly of the Council of Europe, the OSCE Parliamentary Assembly, the NATO Parliamentary Assembly, and the governments and parliaments of foreign states.

4. The Cabinet of Ministers of Ukraine shall, within one month from the date of entry into force of this Law:

to develop and submit for consideration by the Verkhovna Rada of Ukraine draft laws to implement the provisions of this Law;

ensure the adoption of regulatory legal acts necessary to implement the provisions of this Law;

bring their regulatory legal acts into compliance with this Law.

to ensure that ministries and other central executive bodies bring their regulatory legal acts into compliance with this Law.

**Chairman  
of the Verkhovna Rada of Ukraine**

Appendix to the Law of Ukraine  
«On the territorial sea of Ukraine»  
in the Sea of Azov and the Kerch Strait and  
north-eastern part of the Black Sea»

### LIST

points with geographical coordinates through which the median line between the territorial seas of Ukraine and the Russian Federation in the Sea of Azov and the Black Sea and the Kerch Strait passes

The median line between the territorial seas of Ukraine and the Russian Federation in the Sea of Azov and the Black Sea and the Kerch Strait passes through the points with geographical coordinates:

- in the Sea of Azov:

...

- in the Black Sea:

...

- in the Kerch Strait:

...\*

\* In order to determine points with geographical coordinates, it is proposed to fully or partially use the points with geographical coordinates contained in the Decree of the President of Ukraine “On the Protection of the State Border of Ukraine in the Sea of Azov and the Black Seas and the Kerch Strait and Ensuring the Rights of Ukraine in the Exclusive (Maritime) Economic Zone and the Continental Shelf in the North-Eastern Part of the Black Sea” dated October 6, 1998 No. 515.

### References:

1. [https://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/UKR\\_1992\\_CoordinatesBlackSea.pdf](https://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/UKR_1992_CoordinatesBlackSea.pdf);
2. [https://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/UKR\\_1992\\_CoordinatesAzovSea.pdf](https://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/UKR_1992_CoordinatesAzovSea.pdf);
3. [https://zakon.rada.gov.ua/laws/show/643\\_236#Text](https://zakon.rada.gov.ua/laws/show/643_236#Text);
4. <https://zakon.rada.gov.ua/laws/show/187/99-pp#Text>;
5. [https://zakon.rada.gov.ua/laws/show/643\\_157#Text](https://zakon.rada.gov.ua/laws/show/643_157#Text);
6. <https://zakon.rada.gov.ua/laws/show/1681-15#Text>;
7. [https://zakon.rada.gov.ua/laws/show/643\\_205#Text](https://zakon.rada.gov.ua/laws/show/643_205#Text);
8. [https://treaties.un.org/doc/Treaties/1994/11/19941116%2005-26%20AM/Ch\\_XXI\\_06p.pdf](https://treaties.un.org/doc/Treaties/1994/11/19941116%2005-26%20AM/Ch_XXI_06p.pdf);
9. [https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg\\_no=XXI-6&chapter=21&Temp=mtdsg3&clang=en](https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=en);
10. <https://www.president.gov.ua/documents/3202018-25174>;
11. <https://zakon.rada.gov.ua/laws/show/2595-IX#Text>;
12. <https://zakon.rada.gov.ua/laws/show/2948-20#Text>;
13. <https://itd.rada.gov.ua/billinfo/Bills/pubFile/1580651>;
14. [https://www.europarl.europa.eu/doceo/document/TA-8-2018-0435\\_EN.html?redirect](https://www.europarl.europa.eu/doceo/document/TA-8-2018-0435_EN.html?redirect);
15. <https://www.president.gov.ua/documents/4682024-51461>;
16. <https://www.un.org/en/about-us/un-charter/full-text>;
17. <https://www.eurointegration.com.ua/articles/2024/05/29/7186959/>

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## How to Reduce Russia's Revenues from Maritime Crude Oil and Petroleum Products Exports

*The authors of the report represent a team that has been monitoring the movement of sea vessels for 15 years, and for the last 2.5 years, since April 2024, has been engaged in daily monitoring of the movement of tankers with Russian crude oil and petroleum products. Based on this experience, we argue that **fighting the «shadow fleet of Russia» is futile! Because it is impossible to fight what does not exist in nature.** There is a fleet of tankers that transport Russian crude oil and petroleum products around the world.*

The discussions around the size of the “price cap” are equally futile. Because it has never been and does not exist either. The mechanism of the so-called “price cap” has not worked and does not work, since it does not have and cannot have safeguards against falsification of documents on the cost. The conclusion of contracts with compliance with the “price cap” has been expressly prohibited by decree of the President of the Russian Federation since 2022 and is strictly controlled.

Public support for this trend in the world media and expert circles actually serves as a cover for the real circumstances that 30% of this crude oil is transported from Russian ports by tankers belonging to companies registered in EU countries (mainly in Greece), and up to 10% of this oil is delivered to transshipment sites near the coasts of EU countries in the Mediterranean Sea, from where it can be delivered to EU countries in small batches with forged documents in violation of the embargo.

The correct formulation of the task is to **fight for the reduction of Russian seaborne exports of oil and petroleum products as the main external source of financing and prolonging Russian aggression against the civilized world.** At the end of this

document, proposals are made for specific steps that could significantly reduce this source of financing for the Russian Federation's military capabilities.

The monitoring group of the Black Sea Institute of Strategic Studies and the BlackSeaNews editorial office, based on the results of its own monitoring of tanker traffic, presents an analysis and proposals regarding the sea export of Russian crude oil and petroleum products from the seaports of the Black and Baltic Seas for the period from April 1 to September 30, 2024.

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**Energy exports account for more than half of Russia's export revenues** : depending on world prices, its share in 2013–2021, that is, when it was still possible to use Russian statistics with caution, [according to the Center for Global Studies «Strategy XXI»](#), ranged from 54.3% to 68.8%.

It is important that **in the structure of revenues from Russian energy exports, the first place is taken by revenues not from natural gas exports, but from the export of crude oil and petroleum products**: 71.13% in 2021; the share of revenues from gas exports in that year was only 21.92%, and coal – 6.95%.



## IN FOCUS: SANCTIONS

After the outbreak of the War in 2022, Russian natural gas exports almost lost their main market in Europe. Therefore, **it can be assumed that the share of oil and petroleum products in the structure of Russian energy exports now significantly exceeds 70% .**

Thus, **revenues from the export of crude oil and petroleum products** are the largest external source of financing for Russia's military spending, including the purchase of military equipment and dual-use goods abroad. That is, **the trends in the export of Russian crude oil and petroleum products are one of the most important indicators of the further duration of the war...**

\*\*\*

Since April 2024, the Monitoring Group, continuing its «old» monitoring of sea exports of crude oil and petroleum products from Russian ports of the Black Sea (conducted since April 2022) , has begun monitoring sea exports from Russian ports of the Baltic Sea (in addition, its own monitoring of tankers in the Far East and the Northern Sea Route is conducted).

We fundamentally do not use any published monitoring data from foreign think tanks, as we have been convinced in practice that their methodology does not take into account war conditions - namely, the use of Russian electronic warfare equipment and/or physical interference in the operation of automated vessel traffic monitoring systems . This leads to a significant - up to 30% - distortion of the information obtained by their software and published.

### Statistical basis for planning

#### 1. Volumes of seaborne exports of crude oil of the Russian Federation in September 2024 (all tables below are based on our own monitoring data).

It is clear that neither Ukraine nor its allies have practically any influence on shipping in the North and Far East. However, this is not significant, because oil exports from two seas – the Black and Baltic – cover approximately 80% of total Russian seaborne exports of oil and oil products (see Table 1).

Table 1

| Ports of the Russian Federation | DWT of tankers, t | %      |
|---------------------------------|-------------------|--------|
| Baltic Sea                      | 11 628 374        | 59.02  |
| Far East                        | 4 496 847         | 22.82  |
| Black Sea                       | 3 462 318         | 17.57  |
| North                           | 113 905           | 0.58   |
| Together                        | 19 701 444        | 100.00 |

**At the same time, the most important in terms of volume and the most favorable in terms of political and geographical conditions for planning actions is, of course, the Baltic Sea (60% of maritime crude oil exports).**

## IN FOCUS: SANCTIONS

### 2. Number of tankers participating in Russian oil exports from ports of the Baltic and Black Seas (excluding LNG ).

Table 2

| <i>Tankers, units</i>                               | <i>04/2024</i> | <i>05/2024</i> | <i>06/2024</i> | <i>07/2024</i> | <i>08/2024</i> | <i>09/2024</i> |
|-----------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Crude oil of the Russian Federation, tankers</b> |                |                |                |                |                |                |
| - tankers from the Baltic Sea                       | 104            | 100            | 94             | 92             | 89             | 99             |
| - tankers from the Black Sea                        | 34             | 29             | 32             | 27             | 33             | 29             |
| <b>Total tankers</b>                                | <b>138</b>     | <b>129</b>     | <b>126</b>     | <b>119</b>     | <b>122</b>     | <b>128</b>     |
| <b>Russian petroleum products, tankers</b>          |                |                |                |                |                |                |
| - tankers from the Baltic Sea                       | 70             | 56             | 69             | 60             | 54             | 55             |
| - tankers from the Black Sea                        | 142            | 141            | 140            | 132            | 137            | 124            |
| <b>Total tankers</b>                                | <b>212</b>     | <b>197</b>     | <b>209</b>     | <b>192</b>     | <b>191</b>     | <b>179</b>     |
| <b>Total fleet</b>                                  | <b>350</b>     | <b>326</b>     | <b>335</b>     | <b>311</b>     | <b>313</b>     | <b>307</b>     |

\* All these tankers are included in databases (lists) that are regularly published on the Monitoring Group website in the [Blood Oil section](#) ). At the same time, for each vessel the following information is indicated: Name / IMO / DWT / Flag / Year built / Port of departure / Actual Time of Departure / Port of destination / Estimated or Actual Time of Arrival / Registered owner / Ship manager / Commercial manager

On average, 310 to 350 tankers operate from the ports of the Baltic and Black Seas per month: 120

to 140 of them transport crude oil, and 190 to 210 tankers transport petroleum products.

Taking into account repeated (cyclical) voyages, it is possible to roughly estimate the total number of tankers transporting Russian crude oil and petroleum products from the ports of the Baltic and Black Seas over the past 6 months at 900-1000 vessels (of which approximately 300-400 were crude oil tankers - *Type of ship Crude Oil Tanker* ). An accurate list without doubling can be quickly prepared as needed from existing monthly lists.

## IN FOCUS: SANCTIONS

### 3. Volumes of export shipments of crude oil and petroleum products from ports of the Baltic and Black Seas (excluding LNG ) for April-September 2024.

Table 3

| Places / tons                                          | 04/2024           | 05/2024           | 06/2024           | 07/2024           | 08/2024           | 09/2024           |
|--------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Crude oil of the Russian Federation, DWT , tons</b> |                   |                   |                   |                   |                   |                   |
| - crude oil from the Baltic Sea                        | 11 806 110        | 11 313 931        | 10 677 104        | 10 448 481        | 10 328 818        | 11 628 374        |
| - crude oil from the Black Sea                         | 4 066 358         | 3 498 137         | 4 135 544         | 3 385 130         | 4 203 250         | 3 462 318         |
| - ratio Black Sea/Baltic Sea                           | 34,4 : 65,6%      | 30,9 : 69,1%      | 38,7 : 61,3%      | 32,4 : 67,6%      | 28,9 : 71,1%      | 22,9 : 77,1%      |
| <b>Total crude oil</b>                                 | <b>15 872 468</b> | <b>14 812 068</b> | <b>14 812 648</b> | <b>13 833 611</b> | <b>14 532 068</b> | <b>15 090 692</b> |
|                                                        |                   |                   |                   |                   |                   |                   |
| <b>Russian petroleum products, DWT , t</b>             |                   |                   |                   |                   |                   |                   |
| - petroleum products from the Baltic Sea               | 3 731 761         | 2 467 673         | 3 306 525         | 2 862 773         | 2 639 950         | 2 707 343         |
| - petroleum products from Black Sea                    | 3 612 444         | 3 615 522         | 3 560 657         | 3 643 826         | 3 557 900         | 3 758 475         |
| <b>Total petroleum products</b>                        | <b>7 344 205</b>  | <b>6 083 195</b>  | <b>6 867 182</b>  | <b>6 506 599</b>  | <b>6 197 850</b>  | <b>6 465 818</b>  |
|                                                        |                   |                   |                   |                   |                   |                   |
| <b>Total oil and oil products, tons</b>                | <b>23 216 673</b> | <b>20 895 263</b> | <b>21 679 830</b> | <b>20 340 210</b> | <b>19 790 042</b> | <b>21 556 510</b> |

The total monthly volume of **crude oil exports** from the ports of the Baltic and Black Seas is about 14-16 million tons. The ratio of crude oil exports from the ports of the Black Sea to the ports of the Baltic Sea is approximately 1:3.

The total monthly export volume **of petroleum products** from the ports of the Baltic and Black Seas is about 6-7 million tons. The ratio of petroleum product exports from the ports of the Black Sea to the ports of the Baltic Sea is approximately 1:1.



## IN FOCUS: SANCTIONS

### 4. Analysis of Russian crude oil carriers from Baltic Sea ports in May and September 2024 by country of registration of the shipowner and/or manager ( Registered owner / Ship manager / Commercial manager ).

*Table 4*

| Country of registration of the shipowner | Deadweight of tankers, May 2024 | %            | Deadweight of tankers, September 2024 | %            |
|------------------------------------------|---------------------------------|--------------|---------------------------------------|--------------|
| Greece                                   | May 2024                        | 30,6         | 3 556 233                             | 30,6         |
| UAE - Russia                             | 1 880 378                       | 16,6         | 1 887 578                             | 16,2         |
| China                                    | 1 255 920                       | 11,1         | 1 471 507                             | 12,7         |
| FOC countries                            | 1 314 366                       | 11,6         | 1 120 966                             | 9,6          |
| Turkey                                   | 611 771                         | 5,4          | 1 072 714                             | 9,2          |
| India                                    | 819 630                         | 7,2          | 873 937                               | 7,5          |
| Azerbaijan                               | 326 211                         | 2,9          | 643 342                               | 5,5          |
| Moldova                                  | 536 535                         | 4,7          | 317 122                               | 2,7          |
| Singapore                                | 113 226                         | 1,0          | 198 544                               | 1,7          |
| Kuwait                                   | 112 147                         | 1,0          | 156 682                               | 1,3          |
| Pakistan                                 | -                               | -            | 115 605                               | 1,0          |
| Vietnam                                  | 654 290                         | 5,8          | 108 870                               | 0,9          |
| Cyprus                                   |                                 |              | 105 274                               | 0,9          |
| Kazakhstan                               | 232 902                         | 2,1          | -                                     | -            |
| <b>Total</b>                             | <b>11 313 931</b>               | <b>100,0</b> | <b>11 628 374</b>                     | <b>100,0</b> |

The distribution of the Russian crude oil transportation market from the ports of the Baltic Sea has hardly changed in six months. **More than 30% of the transportation is carried out by tankers of Greek shipowners. Together with tankers registered in Cyprus and Moldova (EU candidate countries), 34.2% of the tanker**

**transportation market belongs to companies from the «EU+» countries.** The share of tankers registered in «flags of convenience» (offshore countries, FOC countries), that is, in those where the real owners of the tankers can really be kept secret, is only 10-12%.

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### 5. Analysis of Russian crude oil carriers from Baltic Sea ports in September 2024 based on the technical condition and age of tankers.

The average age of 99 tankers transporting Russian crude oil from Baltic Sea ports in September 2024 is 15.7 years, which is not a critical indicator.

*with poor technical condition*” is unprofessional from the point of view of shipping practice. In fact, in world practice, vessels with a much older age can have a normal technical condition.

The main criterion for the technical condition of a tanker is its presence or absence in the «white lists», «black lists» or «gray lists» of international

*Table 5*

| Country of registration of the shipowner | Number of tankers in September 2024 | Average age of tankers, years |
|------------------------------------------|-------------------------------------|-------------------------------|
| Moldova                                  | 3                                   | 21,7                          |
| Pakistan                                 | 1                                   | 21                            |
| Cyprus                                   | 1                                   | 20                            |
| (FOC) countries                          | 9                                   | 19,7                          |
| Singapore                                | 2                                   | 19                            |
| Turkey                                   | 10                                  | 18,6                          |
| India                                    | 8                                   | 18                            |
| Azerbaijan                               | 6                                   | 16,8                          |
| China                                    | 11                                  | 16,5                          |
| Vietnam                                  | 1                                   | 14                            |
| UAE – Russia                             | 17                                  | 13,7                          |
| Greece                                   | 29                                  | 12,6                          |
| Kuwait                                   | 1                                   | 6                             |

Dissimination of the narrative in the world media **about the critical age of the tanker fleet and, accordingly, its poor technical condition do not correspond to reality**. It should be noted that the thesis that tankers older than 15 years are “*old tankers*

port control memorandums ( *memorandum of understanding on port state control* ) - Tokyo MOU, Paris MOU, etc.

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In September 2024, out of 99 tankers transporting Russian crude oil from Baltic Sea ports, **only 28 (i.e. 28.3%) are on the “black lists”** of international port control memorandum, i.e. have serious problems with their technical condition. In September 2024, out of 99 tankers transporting Russian crude oil from Baltic Sea ports, only 37 (i.e. 37.4%) are on the “gray lists” of international port control memoranda, i.e. have some problems with their technical condition that can be eliminated.

The largest number of tankers on the «blacklists» belong to shipowners from flag of convenience countries ( *FOC countries* ) – 8 out of 9; Azerbaijan – 6 out of 6; India – 4 out of 8. Of the 17 tankers owned by owners from the Russian Federation (UAE), only 3 are on the blacklists of port control memoranda. The largest “array” of tanker carriers (Greece – all 29 tankers) do not have any problems

with their technical condition.

### 6. Analysis of Russian crude oil carriers from Baltic Sea ports in September 2024 by insurance.

In September 2024, 99 tankers were transporting crude oil. 45 of them, that is, 45.5% or almost half, have P&I insurance policies . The rest are with insurance companies in India, China, etc. Thus, the information disseminated in the media about the “vast majority of uninsured tankers” is exaggerated.

### 7. Where were Russian crude oil and petroleum products transported from the ports of the Baltic and Black Seas in April - September 2024.

Table 6

| <i>Month, tons</i>                                                           | <i>04/2024</i>    | <i>05/2024</i>    | <i>06/2024</i>    | <i>07/2024</i>    | <i>08/2024</i>    | <i>09/2024</i>    |
|------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total Russian oil exports from Baltic Sea ports, tons                        | <b>11 806 110</b> | <b>11 313 931</b> | <b>10 677 104</b> | <b>10 448 481</b> | <b>10 328 818</b> | <b>11 628 374</b> |
| Russian crude oil from Baltic Sea ports to EU and STS ports *, tons          | 828 519           | 655 615           | 496 689           | 431 524           | 377 194           | 560 383           |
| Russian crude oil from Baltic Sea ports to ports outside the EU, tons        | 10 977 591        | 10 658 316        | 10 180 415        | 10 016 957        | 9 951 624         | 11 067 991        |
| Total Russian exports of petroleum products from Baltic Sea ports, tons      | <b>3 731 761</b>  | <b>2 467 673</b>  | <b>3 306 525</b>  | <b>2 862 773</b>  | <b>2 639 950</b>  | <b>2 707 343</b>  |
| Russian petroleum products from Baltic Sea ports to EU and STS ports *, tons | 877 976           | 396 243           | 431 203           | 168 974           | 227 072           | 517 858           |
| Russian oil products from Baltic Sea ports to ports outside the EU, tons     | 2 853 785         | 2 071 430         | 2 875 322         | 2 693 799         | 2 412 878         | 2 189 485         |
| Total Russian oil exports from Black Sea ports, tons                         | <b>4 066 358</b>  | <b>3 498 137</b>  | <b>4 135 544</b>  | <b>3 385 130</b>  | <b>4 203 250</b>  | <b>3 462 318</b>  |
| Russian crude oil from Black Sea ports to EU and STS ports , tons            | 199 352           | 157 327           | 275 850           | 580 047           | 897 066           | 636 059           |
| Russian crude oil from Black Sea ports to ports outside the EU, tons         | 3 867 006         | 3 340 810         | 3 859 694         | 2 805 083         | 3 306 184         | 2 826 259         |

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*Continuation of the Table 6*

| <i>Month, tons</i>                                                         | <i>04/2024</i> | <i>05/2024</i> | <i>06/2024</i> | <i>07/2024</i> | <i>08/2024</i> | <i>09/2024</i> |
|----------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total Russian exports of petroleum products from Black Sea ports, tons     | 3 612 444      | 3 615 522      | 3 560 657      | 3 643 826      | 3 557 900      | 3 758 475      |
| Russian petroleum products from Black Sea ports to EU and STS ports , tons | 869 882        | 549 518        | 454 546        | 637 442        | 578 701        | 823 089        |
| Russian oil products from Black Sea ports to non-EU ports, tons            | 2 742 562      | 3 066 004      | 3 106 111      | 3 006 384      | 2 979 199      | 2 935 386      |

\* *hereinafter STS ( ship - to - ship ) – oil transshipment operations at sea ship-to-ship*

Our monitoring' statistics irrefutably show that **a significant amount of Russian crude oil and petroleum products from the ports of the Baltic and Black Seas ends up in transshipments near the coasts of EU countries, and sometimes even directly to EU ports** in direct violation of the embargo.

Just **6 months** (April-September) of 2024, about 6.2 million tons of crude oil (7.1% of total volumes) and **6.5 million tons of petroleum products (16.6% of total volumes) were delivered to road transshipments and directly to several ports of EU countries.**

*Table 7*

| <i>Month, tons</i>                                                                                           | <i>04/2024</i> | <i>05/2024</i> | <i>06/2024</i> | <i>07/2024</i> | <i>08/2024</i> | <i>09/2024</i> | <i>In 6 months</i> |
|--------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|
| Total Russian crude oil exports from Black and Baltic Sea ports, tons                                        | 15 872 468     | 14 812 068     | 14 812 648     | 13 833 611     | 14 532 068     | 15 090 692     | 88 953 555         |
| Russian crude oil from Black and Baltic Sea ports to EU and STS ports , tons                                 | 1 027 871      | 812 942        | 772 539        | 1 011 571      | 1 475 767      | 1 196 442      | 6 297 132 (7.1%)   |
| Total Russian exports of petroleum products from ports of the Black and Baltic Seas, tons                    | 7 344 205      | 6 083 195      | 6 867 182      | 6 506 599      | 6 197 850      | 6 465 818      | 39 464 849         |
| Russian petroleum products from the ports of the Black and Baltic Seas to the ports of the EU and STS , tons | 1 747 858      | 945 761        | 885 749        | 806 416        | 805 773        | 1 340 947      | 6 532 504 (16.6%)  |

### Practical steps to reduce maritime transport of Russian crude oil and petroleum products

#### **Step 1.**

**The EU (or a coalition of EU and NATO member states located in the Baltic and Black Sea basins) should declare a «special period» regarding the application and/or temporary suspension of certain norms of international maritime law and international agreements relating to freedom of navigation, freedom of passage and transit, etc. until the end of Russian aggression.**

Since international maritime law, in particular the UN Convention on the Law of the Sea, is de facto “peacetime law”, it is impossible to influence these processes within its framework. Therefore, the measures to be developed should be based on the principle of a “special period,” during which partner countries and allies could officially introduce actions and measures that may not fully comply with the legal norms of maritime “peacetime law.”



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### Step 2.

The EU should categorically ban all EU shipowners from transporting Russian oil and petroleum products from Russian ports. This would quickly reduce the relevant volumes by 30% and create a tanker fleet deficit for Russia for some time.

### Step 3.

The EU should strengthen and make unambiguous the wording of the sanctions regime regarding the categorical ban on all EU ports from accepting tankers with oil and oil products that were loaded on board during raid transshipments. This will allow to quickly reduce the volumes of Russian oil and oil products entering the EU countries in violation of the embargo by up to 10%.

There are eight such districts:

- 2 – near the Mediterranean coast of North Africa – Morocco
- 1 – south of the Laconian Gulf near the island of K ythira – Greece/EU
- 1 – south of Chios Island – Greece/EU
- 1 – south of Lesbos Island – Greece/EU
- 1- off the coast of Malta – Malta/EU
- 1 - at the entrance to the Suez Strait - Egypt
- 1 - near the port of Haifa – Israel

### Step 4.

The EU (or a coalition of EU and NATO member states located in the Baltic Sea basin) should quickly include ALL tankers that have been recorded transporting Russian crude oil and petroleum products in the last 6 months in the

sanctions lists. These sanctions should prohibit the use not only of territorial waters, ports, berths, but also of pilotage and other maritime services in EU countries. Even the beginning of this process will have a huge impact on tanker shipowners.

### Step 5.

The EU (or at least a coalition of EU and NATO member states located on the shores of the Baltic Sea) should temporarily introduce mandatory pilotage in the Danish Straits, which connect the Baltic and North Seas. A ban on the use of pilotage and other maritime services for sanctioned vessels would create a reliable lock on the only way from Russian Baltic ports for tankers carrying «blood oil.»

### Step 6

Simultaneously with the development of these proposals, expert discussions should be held with specialists on the possible impact of these measures on world oil prices, as well as measures to compensate for the Russian Federation's countermeasures to undo the spiral of world prices.

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## **Social Changes in the Temporarily Occupied Crimea against the Backdrop of Full-Scale Russian Aggression Against Ukraine**

*An analysis of the social situation on the peninsula shows that Russia's goals in Crimea from the very beginning were not aimed at improving the lives of the population. The main task is to turn Crimea into a powerful military base, as well as to allow the Russian elite to use the recreational and other facilities of the peninsula. Crimeans in this configuration act only as service personnel for the implementation of Russian ambitions.*

One of the main promises of the Kremlin during the occupation of Crimea was to improve the material situation of the population, which was supported by a certain part of the Crimeans. At that time, the difference in incomes between the inhabitants of the peninsula and neighboring regions of Russia was quite significant: the average salary in Crimea in 2013 was 2850 UAH (\$ 356), in Sevastopol – 3114 (\$ 390). At the same time, the average salary in Krasnodar was twice as high – 24062 RUB (\$ 752). Salaries in Moscow and St. Petersburg seemed “spacey” to Crimeans – \$1500-2000. Russian “emissaries,” who regularly came to the peninsula in late February-early March 2014, promised similar incomes to Crimeans. It is enough to recall the visit of the odious leader of the LDPR V. Zhirinovskiy on February 28, 2014 in Sevastopol, where, along with promises of financial assistance, he distributed money to the townspeople to the joyous cheers of the crowd.

In the first years after the Russian occupation, a number of Crimeans did experience a certain increase in income, but not because of “large Russian salaries and pensions,” but because of the difference in the exchange rate used to convert hryvnias into rubles – 3–3.8. In addition, Ukraine continued to supply Crimea with goods, the prices of which remained lower than Russian ones. It should be noted that in dollar equivalent, the level of Russian salaries at that time did not exceed pre-occupation indicators. Thus, the average salary in 2015 in the “RC” ( the name of the Autonomous Republic of Crimea (ARC)

after the occupation – italics mine) is 22,440 rubles (\$367), in 2016 – 24,140 rubles (\$360).

But since 2015, prices in Crimea have been rising significantly: Russian goods are replacing Ukrainian ones, and after the cessation of trade with temporarily occupied Crimea due to the “civil blockade,” almost no Ukrainian products remain on the peninsula. So, over the course of several years, the price of basic food products has increased by 1.68 times, and in 2017 by another 75%. The “borscht index” is growing by one and a half times, and in 2017 by another 64% [1] . Within a few years, Crimeans realized that their incomes had not actually increased, because all increases were simultaneously “eaten up” by inflation and a significant increase in utility tariffs, which were much higher in Russia than in Crimea.

The increase in utility tariffs on the peninsula began in January 2015 and was supposed to end in 2017 with the Crimean tariffs reaching the average Russian level. But this process is being delayed until 2019: twice a year (in January and July), tariffs increased by 10-15% (annually by 20-30% for various services). After a short break in 2021, the increase returned again, and in 2023, tariffs were raised three times a year - by a few percent each time, so that it was not so noticeable to consumers. In the summer of 2024, tariffs will increase again - by an average of 9-13%. Thus, during the occupation, tariffs in Crimea increased by approximately 160%.

Prices for consumer goods have not grown so

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evenly. For example, the cost of a grocery set has increased by almost a third by 2020. However, according to observations by Crimeans, prices for some goods have increased even more. Journalists from the Feodosia publication “Kafa” in early 2022 estimated that a regular set of products has risen in price by 10% in a month, by 46% in a year, and by 189% in eight years [2].

At the same time, the rate of salary growth has not kept pace with price growth. During 2017–19, Crimean salaries increased to \$450–500, and

Crimeans noted that they had enough money only for the necessary things (food, daily expenses ) [4] .

The situation has not changed in subsequent years. So, the average salary of teachers in Sevastopol is over 46 thousand rubles. But on employment sites the offers are completely different – 23.8 thousand rubles. The modal salary (the one that is most often found) is 16 thousand rubles. That is, the vast majority of teachers in the city will receive a salary three times less than the declared average.

So, if the average salary in Crimea in 2023 is 47.3

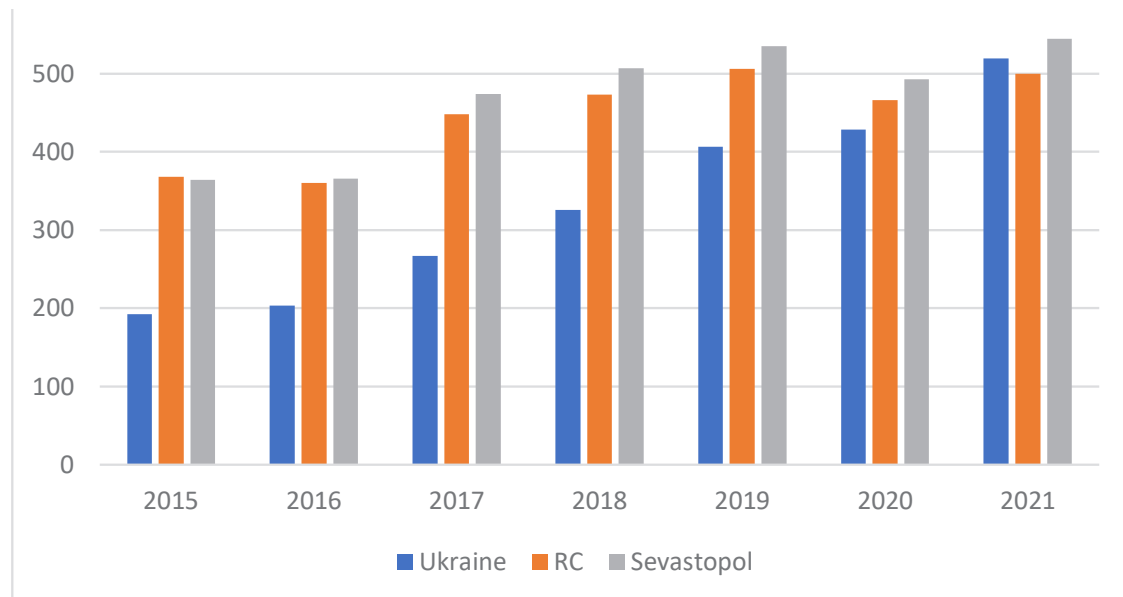


Fig. 1. Dynamics of average wage growth in mainland Ukraine and occupied Crimea in \$ (according to the State Statistics Service of Ukraine and occupation statistics)

since 2020 they have actually equaled the average Ukrainian salary.

So, during 2014–2023, the average salaries of Crimeans increased by 2.1 times in rubles and only by 30% in dollar terms (over the past three years, this growth was at the level of 3% in dollars). The salaries of Sevastopol residents increased by 1.9 times in almost ten years, but recently in dollar terms they even decreased by 3%. However, the average salary does not reflect the real situation with the incomes of the population. According to Ukrainian experts who monitored Crimean forums on the level of salaries in 2016–17, the average salary level then fluctuated within 10–15 thousand rubles (one and a half to two times less than official data) [3]. Accordingly, in 2017, almost 50% of

thousand rubles, then the median is already 30.5 thousand rubles (a third less). According to the occupation Crimeanstat, 30% of Crimeans will receive incomes in the range of 27–45 thousand rubles (\$300–500), over 45 thousand - 11%, over 60 thousand - 9.6%.

A similar picture is in Sevastopol: with an average salary of 47.6 thousand rubles, the median is 36.2 thousand, which is also received by approximately a third of employees. But in the city there is a different picture with higher incomes: 14.3% have over 45 thousand, 16% have over 60 thousand. This is due to the significant number of federal-level officials and the high share of military-industrial complex enterprises in the structure of the city economy, which have higher salaries.

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It should also be noted that in Sevastopol, the highest salaries are recorded not only in the financial sector, which is traditional, but also at manufacturing enterprises that are part of the Russian military-industrial complex. This indicates an increase in orders for them with the beginning of a full-scale war against Ukraine. The Russian head of the «RK» S. Aksyonov noted in the summer of 2023 that defense enterprises increased production output by 3.5 times in six months [5] .

Analyzing the growth of Crimean incomes, an interesting trend should be noted: during 2019-2021, salaries grew quite slowly (by 4-5% per year). The first more significant increase was in 2021 (against the backdrop of the COVID -19 pandemic), and the second (by 11%) in 2023 – against the backdrop of Russian aggression against Ukraine. This, first of all, indicates an increase in salaries in some industries necessary for waging war, and may also demonstrate a certain shortage of personnel who are trying to attract higher salaries. In 2023, the difference between the average salary in the “RK” and Sevastopol almost disappears – it is only 313 rubles. (previously it differed by about 2 thousand) [6] , which most likely signals the presence of economic problems in the city.

The situation with pensions is similar. Among the 548,800 Crimean pensioners, the majority will receive an old-age pension, the amount of which will also increase by a quarter during 2020-24 from 14 to 19,400 rubles (\$194-214). The average pension in Crimea is 18,000 rubles (almost \$200). Pensions for civil servants exceed the average pension by 36% [7].

Sevastopol pensioners (their total number is 113 thousand) have better pension security. The average pension in the city is 9% higher than in Crimea (19.6 thousand rubles or \$216), which is due to a significant percentage of military pensioners.

If the level of salaries on the peninsula begins to grow by 10-12% from 2022, then the growth of the average pension size begins in 2023. So, over the past two years, the average pension size in Crimea has grown by 17-18%, which is associated both with the Russian war against Ukraine and with the next «Putin elections.» All this requires ensuring support from the «nuclear electorate» that the Kremlin is trying to buy.

Analyzing the incomes of Crimeans in general, we have interesting facts. First, almost half of Crimeans

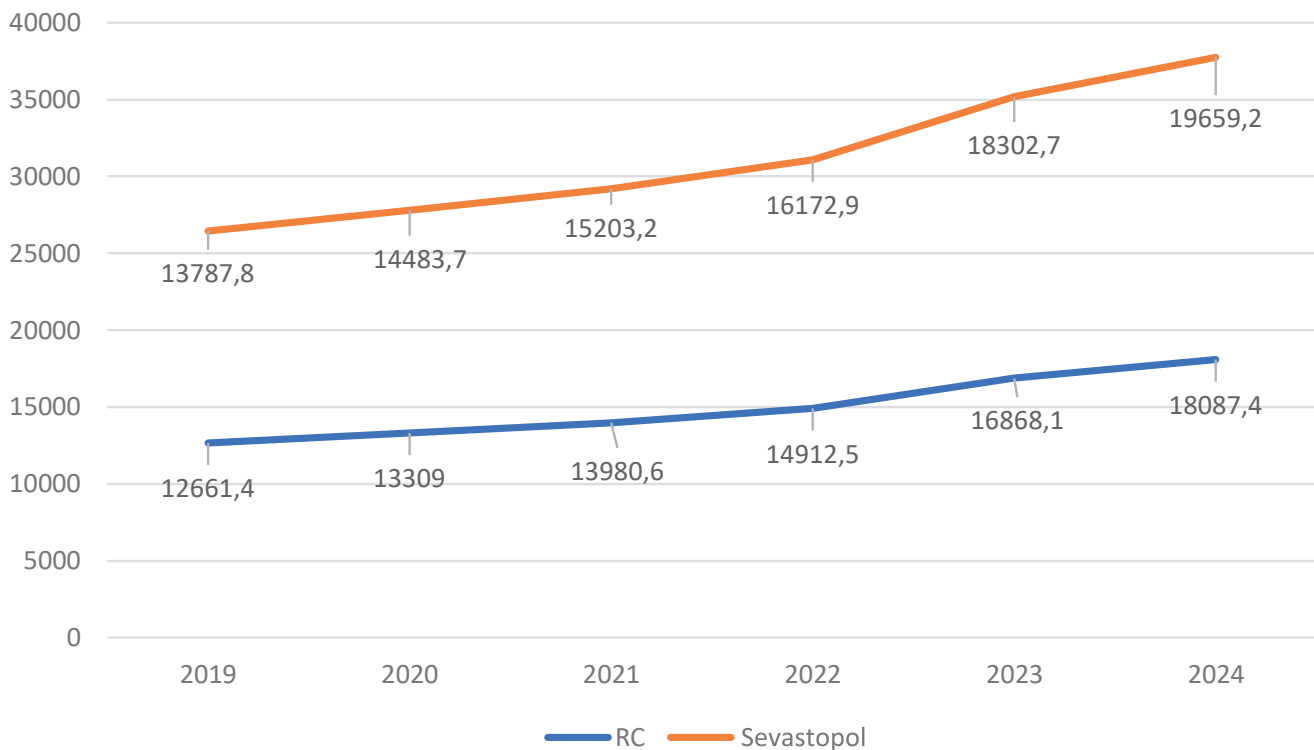


Fig. 2. Pension provision for residents of Crimea and Sevastopol during 2019-24 (in rubles)



## IN FOCUS: CRIMEA

have incomes up to 27 thousand rubles (48.9%); incomes within the median salary – 30.6%; above 45 thousand – 20.5%. In Sevastopol, respectively, incomes up to 27 thousand rubles – 36.9%; incomes within the median salary – 32.9%, above 45 thousand – 30.2%.

So, in the “Kyrgyz Republic” almost half of the population has incomes below the median salary. In Sevastopol, the picture is more proportional, but the cohort of people with high incomes is 10% higher than in Crimea as a whole. It should be noted that in recent years the volume of the cohort with the highest incomes has been increasing significantly. Thus, in Sevastopol in 2021 – immediately by 40%, in 2022 – by 24%, in 2023 – by another 25% (a total of 3 times) [8]. In the “Kyrgyz Republic” the situation is almost similar: we record an increase in the cohort of the richest by 45% in 2021, by 26% in 2022, by 28% in 2023 (a total of 3.5 times) [9]. At the same time, the cohort with income within the median salary in the «RK» is growing by a third, in Sevastopol - by 13%.

So, during the occupation in Crimea, the social differentiation of the population is increasing: the Gini Index gradually increases from 0.308 in 2015 to 0.342 in 2021 in the “Kyrgyz Republic”, and from 0.337 to 0.343 in Sevastopol. Over the past two years, official statistics have recorded its decrease. But the occupation authorities understand

that such a distribution of income causes significant dissatisfaction among Crimeans. That is why the “Program for the Development of Crimea until 2036” defines one of the priority tasks as reducing the Gini Index to 0.307 – that is, to the level of 2013.

Thus, Russia was unable to fulfill one of the main demands of Crimeans for social justice, which they expected from Moscow, perceiving modern Russia as a continuation of the USSR. But it turned out that only certain attributes remained from the Soviet model, such as the melody for the national anthem and a system of persecution for disloyalty to the regime. The residents of Sevastopol, some of whom dreamed of «returning to their native harbor», learned about this the fastest. During the events of 2014, they felt a certain subjectivity, choosing a «people’s mayor», and hoped that the Russian authorities would take their interests into account. After the first increases in utility tariffs and price hikes, Sevastopol pensioners began to take to the streets to protest under the slogans «We do not live - we survive», which dashed their dreams of the level of material security in the Russian Federation. The local authorities acted quite decisively: first, they sent the protesters away from the city center, and then they simply banned protests under various pretexts.

A classic example of the Russian authorities’ attitude to the problems of the Crimeans is the appeal of

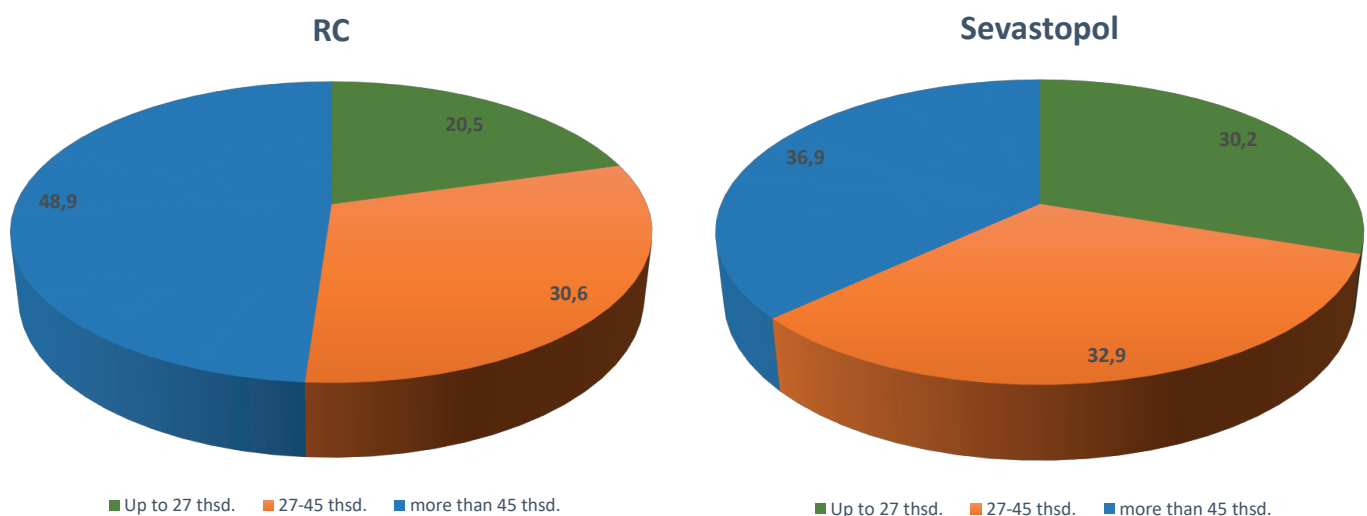


Fig. 3. Distribution by income level in «RC» and Sevastopol, in %

local pensioners to the then Prime Minister of the Russian Federation D. Medvedev with complaints about low pensions, which were not enough to live on. His cynical statement «There is no money, but you hold on!» shocked even staunch supporters of Russia.

So Crimeans quickly realized that they had no real way to influence the authorities. Therefore, they were left with writing comments or appeals under posts on social networks or on the websites of certain publications, which did not delete their complaints.

For example, one of the commentators assesses the situation with pensions in Sevastopol on the website of the city media ForPost. «Pensions of pensioners can and should be looked at more carefully. Let's take for comparison the current pension of 14 thousand rubles ( according to official data, the average pension is 18-19 thousand, but local residents are better informed about the real pensions of Crimeans - italics mine). The maintenance of a dog in a shelter is 15 thousand, the maintenance of a prisoner is 33 thousand rubles per month! Let's be sad: a dog will receive more than a pensioner, and a prisoner will receive twice as much!», - the Sevastopol resident notes sarcastically.

The largest increase in wages over the past two years has been recorded in such industries as: metallurgical production (+50% in Sevastopol); production of metal products (+26%); production of electrical equipment (by 17% in Sevastopol and 30% in «RK»); production of electronics and optics (31-36%); mechanical engineering (23-30%); machine repair (22-25%), as well as in the transport sector – by a quarter. So, as we can see, wages in the military-industrial complex demonstrate the greatest growth dynamics. In addition, starting in 2022, salaries in the information industry are increasing (by 30% in total), because the Kremlin needs propagandists to ensure the information component of the war. We add that for the first time since the occupation, the payment of printing workers has increased significantly, which indicates the need to publish agitation and propaganda materials. But in some areas, we even record a decrease in wages. Thus, in Sevastopol, salaries in the field of education and scientific activity decreased by 17%, for Crimean

pharmacists - by 23%, etc. [10].

Thus, a significant increase in salaries is characteristic only for those industries that are necessary for waging war. But such a disproportion allows us to demonstrate the growth of salaries on the peninsula as a whole. So, on paper, the financial situation of Crimeans is improving, but in real life everything looks completely different. Prices for goods and services in Crimea are growing very quickly: according to local residents, they are already the same as in Moscow, although the salaries of Crimeans lag behind Moscow by 3 times.

Since Russian statistics are used to «playing» with numbers, the real level of inflation does not correspond to reality. But we can analyze the level of material well-being of Crimeans using their purchasing power, which is decreasing. Thus, in 2022, Crimeans could afford to buy: sunflower oil and flour - 9% less, butter - 20%, rice - 23%, buckwheat - 58% less than in 2018. The situation is even worse in Sevastopol, where almost all products have become significantly more expensive. As a result, Sevastopol residents could buy: fish - 13% less, sugar - 14%, meat and eggs - 16%, milk - 17%, flour - 20%, butter - 30%, buckwheat - 52%. Accordingly, despite reports by the Russian authorities in Crimea about the “substantial improvement” of the lives of Crimeans, they spend 45% of their income on food, 30% on non-food goods, and 22% on services. [11] It is not surprising that the occupied Crimea ranks 74th in Russian rankings in terms of consumer demand.

In 2020, the Russian Accounting Chamber acknowledged that the federal target program with a budget of over a trillion rubles failed to “bring the standard of living of Crimeans to the average Russian indicator and eliminate disparities in regional development.” The average salary on the peninsula lags behind the average Russian one by 36%, 22% behind the salary in neighboring Krasnodar, and 11% behind the average salary in the Southern Federal District.

An analysis of the Federal Target Program expenditures shows that only 10% was planned for the social sphere (the lion's share was for the

## IN FOCUS: CRIMEA

implementation of infrastructure projects, such as the bridge across the Kerch Strait, the construction of the Tavrida highway, the energy bridge and the gas pipeline from the territory of the Russian Federation, etc.). The social sphere was financed on a residual basis. The money was mainly directed to the construction of kindergartens and schools (a large number of immigrants from Russia caused a significant shortage of places in them), the construction of a medical center near Simferopol on the basis of the Semashko regional hospital, a new hospital in Yalta, and the modernization of a number of medical institutions. But an emergency hospital has been built in Sevastopol since 2016 - during this time only 10% of the work has been done. And this is far from an isolated case - a similar fate befell the sewage treatment plants in Sevastopol and Koktebel, which are desperately needed, but for various reasons the construction is being delayed.

An important social indicator is the significant decrease in the birth rate in Crimea recently - compared to 2013, the number of births decreased by 34% in Crimea (in 2023 - 15,796 babies compared to over 24 thousand in 2013). Over the past three years, the birth rate has decreased by 13%. In Sevastopol, the decline is not so rapid - a decrease of 11% over 10 years.

Combined with the increasing mortality rate, this creates serious demographic problems for the peninsula: the natural growth rate is negative and in recent years has fluctuated within the range of minus 5-6 in the «Kyrgyz Republic» (in 2013 minus 1.5) and minus 4-5 in Sevastopol (in 2013 - minus 2.2).

But, despite such a rapid decline in the birth rate and the reported large-scale construction and reconstruction of kindergartens (163 in 10 years), the number of children covered by preschool education in the “Kyrgyz Republic” increased by only 15.7% (from 50 to 65.7%). The situation is different in Sevastopol: in 2013, 68% of children in the city were covered by preschool education, in 2022 – 65.3% [12]. During 2022-2023, we observe a decrease in the number of children attending kindergartens by 3% in the “Kyrgyz Republic” and by 11% in Sevastopol. This may be due to both a decrease in the birth rate and the departure of families of Russian security forces and officials from Crimea against the background of successful strikes by the Armed Forces of Ukraine on Russian military bases on the peninsula.

The occupation has significantly affected the medical care of Crimeans: the number of medical personnel in Crimea is gradually decreasing: if in 2013 there

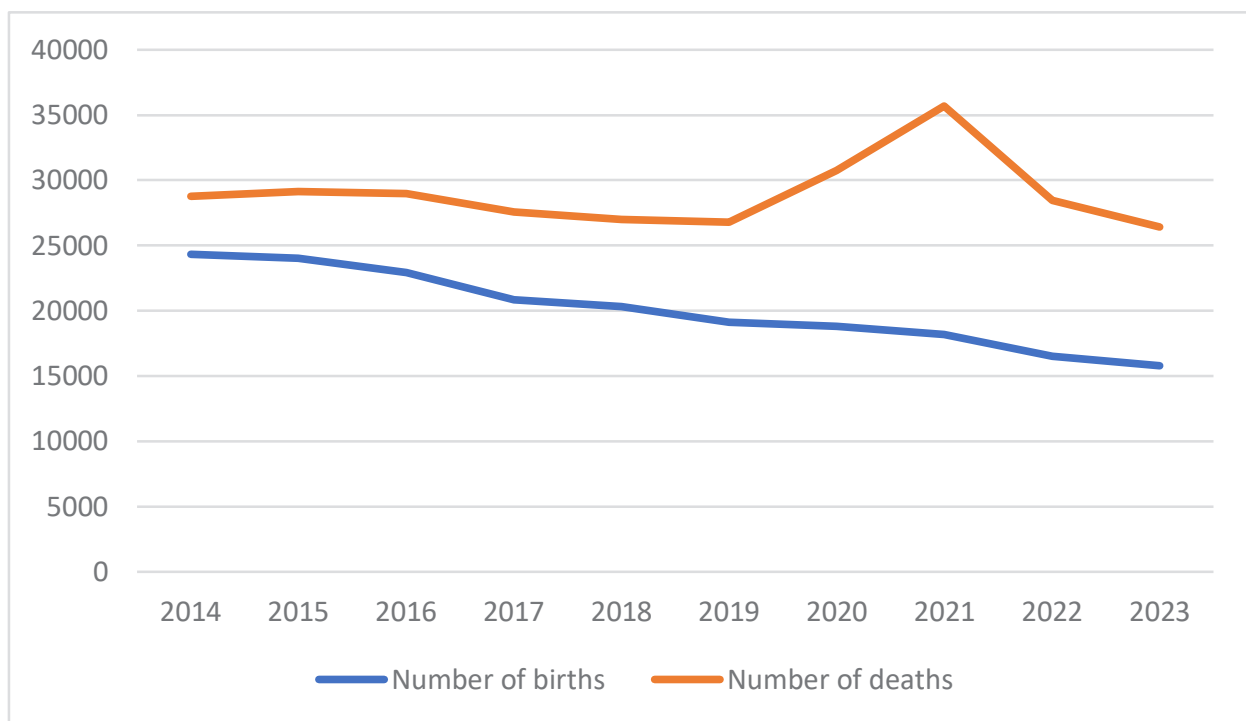


Fig. 4. Dynamics of birth and death rates in the «RC» (2014-2023)

were 9,121 doctors working in the ARC, then in 2017 there were 8,444. Since 2021, the situation has been improving, but within a year the number of doctors in the “ARC” has decreased again, as has the number of medical staff [13].

In Sevastopol, the situation is even worse: according to official data, the population has increased by a third (according to unofficial data, it has doubled), while the number of doctors has increased by only 24%, and the number of medical personnel by 11%. The situation with hospital beds in the city is complicated: before the occupation there were 3,380 (88 per 10,000), in 2023 – 3,364 (60 per 10,000) [14]. And these are the calculations of official statistics. If we take into account the more real population size, the number of hospital beds will be even smaller: about 50 per 10,000, and the number of doctors – 362 per 100,000 (before the occupation – 500).

Due to this state of the city’s medicine, Sevastopol residents constantly complain about the quality of medical care and the inability to receive medical services on time. Let’s give an example with the story of a woman who in May 2024 turned to a surgeon with pain in her knee. The doctor prescribed painkillers and dietary supplements, as well as a referral for an X-ray at the end of June. “Has medicine in our country deteriorated to such an extent that we have to wait more than a month for an X-ray?” the woman asks a rhetorical question, telling the local media about the situation. Commentators under her story add that this is not an isolated case, but systemic things. “Waiting for an X-ray for two to three weeks is a typical situation. And for an ultrasound scan, the standard wait is about a month. Half of the good doctors from the public sector of Sevastopol have fled. Those who remained are surviving with difficulty – both morally and physically,” notes one of the commentators. Another gives a verdict on the healthcare system: «Sevastopol medicine is located in the same place where the Sevastopol «elected» government sits. Moreover, every year it grows like wildfire...».

As of March 1, 2024, the city lacked 190 doctors (mainly internists and pediatricians, as well as neurologists and anesthesiologists) and 177

paramedics. The temporarily occupied Autonomous Republic of Crimea has a similar problem: there is a shortage of 500 doctors and 1,000 paramedics.

Against the backdrop of the Russian war against Ukraine, Crimean medical facilities are beginning to be used to accommodate wounded Russian soldiers. Back in 2022, a ward was allocated for the Russian military in the Sak city hospital and a completely renovated hospital in Sevastopol (named after Dasha Sevastopolskaya) was completely given over. According to the Crimean human rights organization Crimea SOS, the recently built Semashko Medical Center (near Simferopol) was also given over to the Russian military [15]. In conditions of a shortage of hospital beds and medical workers, this creates new problems for local residents, who lose the opportunity to receive any medical care.

A serious problem for Crimeans is obtaining free medicines and, in general, buying medicines, the number of which is rapidly decreasing. First of all, the medicines will be given to wounded Russian soldiers, and civilians will be given what is left. In the conditions of reduced funding, Crimeans cannot receive preferential medicines - this problem is especially serious for cancer patients and diabetics, as Crimeans report on social networks.

“Simferopol district. There are no medicines for diabetics. They treat me like a fool when I apply to the Ministry of Health, they send me to a clinic,” writes a Crimean. He is supported by another resident of the peninsula, who notes that “there are no medicines for people on social benefits in Simferopol.” “Painkillers for money. They have completely lost their sense of shame. And people are leaving Yevpatoria in search of medicines,” the woman summarizes. And there are hundreds of such comments [16].

So, despite record investments in the Crimean economy (over 1.7 trillion rubles), the Russian authorities have failed to address key social problems. Accordingly, in Russian rankings, «RK» and Sevastopol tend to occupy the last positions.

Thus, in the general rating of Russian regions in 2022



(from RIA Novosti), both «entities» (Sevastopol and «RK») are in the last third of the list, respectively, in 66th and 69th places. That is, at the level of such Russian regions as the Amur Region, Altai Krai, etc. The southern regions of the Russian Federation neighboring Crimea have much better indicators: Krasnodar Krai - 9th place, Rostov Region - 15th, Stavropol Krai - 39th.

In terms of population income, the situation is even worse: «RK» ranks 77th, and Sevastopol ranks 59th. It should be noted that the situation is worse than in Crimea in such Russian regions as Karachay-Cherkessia, Kalmykia, and Ingushetia. In terms of family well-being, they are also in the penultimate positions: 75th for Crimea and 76th for Sevastopol.

The forecast rating of when residents of Russian regions will receive a salary of 100 thousand rubles (about \$ 1,000 today) is interesting. Thus, more than half of Crimeans will be able to receive such a salary no earlier than in 11 years, two-thirds - in 15. In Sevastopol, the indicators are almost similar - in 11.6 and 16 years, respectively. This again ensures the last positions in the ranking - 77th for «RK» and 79th for Sevastopol.

The occupation authorities of the peninsula boast of the growth in the pace of housing construction. Indeed, according to this indicator, Sevastopol ranks 17th, and the «Kyrgyz Republic» – 42nd. But in terms of the level of housing availability for local residents, both «entities» are in the last positions («Kyrgyz Republic» - 82, Sevastopol - 84). Indeed, housing in Crimea is not available to local residents, only Russians could buy it. However, in 2024, a decrease in mortgage lending on the peninsula by 60% is recorded, which indicates a loss of interest among Russians in Crimean real estate.

The situation with the level of car affordability is not better: in Sevastopol, only 2.2% of residents can buy a car on credit worth up to 2.6 million rubles (less than \$ 30 thousand) ; 9.4% - up to 1 million rubles ( \$ 11 thousand). In «RK» the indicators are even worse: 1.7% and 7.8, respectively. In Russian ratings, these are, respectively, 68th and 77th positions.

Finally, in the overall quality of life ranking, Crimea, despite its unique climatic advantages and resort status, ranks only 45th, behind such Russian regions as Kaluga Oblast (12), Tula Oblast (17), Lipetsk Oblast (18) or Kursk Oblast (24). Krasnodar Krai, which is neighboring Crimea, is in the top five (4) [17] .

All this affects the mood of Crimeans who have not received what was promised in 10 years. Moreover, the situation of many of them has worsened, but they are afraid to talk about it publicly. Although some still talk about it. For example, a resident of Sevastopol complains that she cannot afford anything on her salary: there is only enough money for food and the most necessary things. “With Ukraine, I could travel, buy much more. But now the salaries are small, and the prices are Moscow,” she says. A Crimean pensioner complains about the high prices of medicines, which is why there is almost no money left from his pension. If it were not for the fear of persecution by the Russian authorities, there would be much more such comments. Because in private conversations, Crimeans express many complaints against the Russian authorities, talking about the deterioration of their financial situation.

Thus, the analysis of the social situation on the peninsula shows that from the very beginning, Russian goals in Crimea were not aimed at improving the lives of the population - this becomes a small side effect of the implementation of the Federal Target Program in some areas. The main task is to turn Crimea into a powerful military base, as well as to allow the Russian elite to use the recreational and other facilities of the peninsula. Crimeans in this configuration act only as service personnel for the implementation of Russian ambitions.

The full-scale Russian invasion of Ukraine in 2022 only exacerbated existing social problems on the peninsula, demonstrating to the inhabitants of the peninsula their real place in the Russian social system, where people act only as a tool for the implementation of the Kremlin’s geopolitical ambitions.

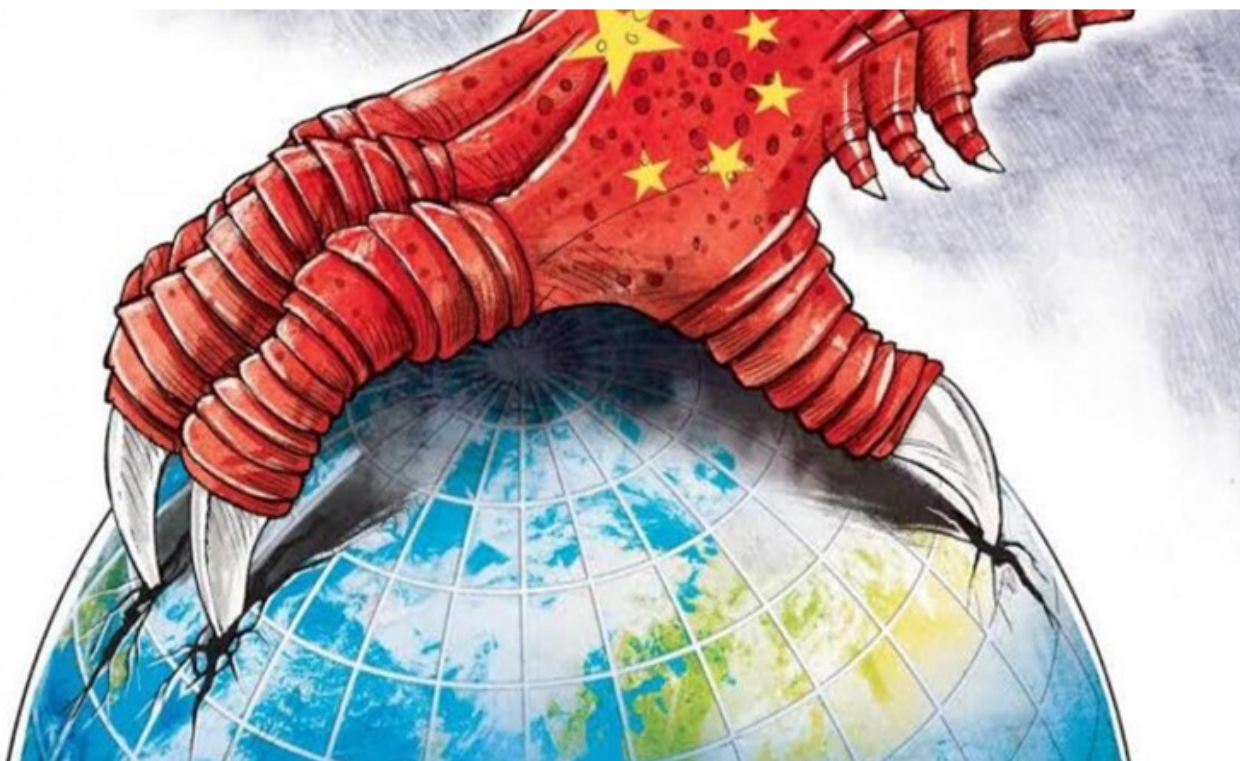
### References:

1. «Gray Zone». Crimean Peninsula: Four Years of Occupation. K., 2018. P.52-53.
2. Prices on the market of Feodosia. URL: [https://kafanews.com/novosti/186243/tsenyna-rynke-feodosii-kapusta-kak-rvanulavverkh\\_2022-02-13](https://kafanews.com/novosti/186243/tsenyna-rynke-feodosii-kapusta-kak-rvanulavverkh_2022-02-13)
3. «Gray Zone». Crimean Peninsula: Four Years of Occupation. K., 2018. P. 52.
4. Sasse, Gwendolyn. Terra incognita. The public mood in Crimea, ZOIS Report 3/2017. R.10-14.
5. The Crimean «defense» increased its output by 3.5 times. RIA Novosti. 14.06.2023.
6. According to the occupation Crimean statistics
7. According to the occupation Crimean statistics
8. Statistical collection «Sevastopol in figures 2023». S., 2024. S. 62.
9. Statistical collection «Republic of Krym in figures 2023», 2024. P. 75.
10. According to the occupation Crimean statistics
11. According to the occupation Crimean statistics
12. Statistical collection «Sevastopol in figures 2023», 2024; Statistical collection «Republic of Krym in figures 2023», 2024
13. Statistical collection «Republic of Crimea in figures 2023», 2024
14. Statistical collection «Sevastopol in figures 2023». S., 2024
15. KrymSOS: the hospital in occupied Simferopol was given over to the needs of the Russian military. 06/21/2023. URL: <https://krymsos.com/ru/krymsos-likarnyu-v-okupovanomu-simferopoli-viddaly-pid-potreby-vijskovyh-rf/>
16. War does not heal. In Crimea, there is a shortage of medical personnel and medicines. Crimea. Realii. 13.02.2024. URL : <https://ru.krymr.com/a/krym-nablyudayut-nekhvatku-medpersonala-lekarstv/32818288.h>
17. All ratings from the RIA Novosti Rating portal

*Expert Group for China Studies,  
Center for Global Studies «Strategy XXI»*

## The Predator's Advance: PRC's Intelligence Capabilities

*Over the past two decades, China has significantly expanded its intelligence capabilities. Among the Chinese organizations involved in espionage are government agencies, the People's Liberation Army (PLA), state-owned enterprises, private companies, individual citizens, and more than 35 universities under the supervision of the State Administration for Science, Technology and Industry for National Defense. The United Front Work Department of the Communist Party of China (CPC) Central Committee and the Liaison Office of the Political Department of the PLA, particularly targeting Taiwan, are also engaged in intelligence gathering. This constitutes a unique hybrid of extensive intelligence practices involving wide segments of the population in data collection, combined with sophisticated cyber warfare methods. Close attention should be paid to the activities of Chinese technology companies such as Huawei and ZTE, which can secretly access confidential and personal information in the systems and equipment they service and sell, as well as their affiliates or lobbyists. We believe that equal vigilance is required regarding the lobbying efforts of the PRC in Ukraine's Parliament and Government*



### 1. Overview of PRC intelligence agencies

The primary goal of the Communist Party of China (CPC) is to maintain control and internal stability. To achieve this, Chinese leaders continuously expand the country's economic, diplomatic, and military presence internationally while reinforcing its domestic positions. Geopolitical tensions and

rivalries in the Asia-Pacific region are increasing, prompting China's military to consistently bolster its forces, resources, and technologies to protect its interests and counter the U.S. «rebalance» strategy in the region. In this way, the CPC ensures its legitimacy through economic growth and maintaining stability within the PRC.

China's 13th Five-Year Plan (2016-2020) focused on enhancing technological innovation and implementing socio-economic reforms. The «Made in China 2025» initiative and the «Artificial Intelligence Development Strategy» are just two of several programs aimed at expanding China's global influence and strengthening its economic leadership. China also seeks to extend its soft power, as evidenced by its development projects in sub-Saharan Africa and South Asia [1].

To achieve its goals, China has developed extensive intelligence networks. **Chinese intelligence is fundamentally different from that of other countries. Its uniqueness lies in involving the entire society in espionage, with every citizen contributing to intelligence gathering [2].** Moreover, China has established a unique system of digital espionage, penetrating various fields such as information, industrial policy, economics, politics, and academia through numerous programs. This is done to strengthen its military security by stealing technologies, know-how, and other resources abroad.

China's primary areas of interest are industrial development and the theft of foreign assets in the form of intellectual property, technological advancements in industrial and defense sectors, scientific discoveries, and more. State institutions and organizations, commercial entities, individual entrepreneurs, Chinese emigrants, and domestic and foreign researchers are engaged in these activities.

**The Chinese espionage system is unlike others and is based on the «thousand grains of sand» concept. Instead of investing in costly forms of espionage, China prefers using large numbers of amateurs, including Chinese businesses, civilians, and academics [3].**

**It is said that if a beach were the target of intelligence activities, the Chinese would send a thousand tourists, each tasked with taking a single grain of sand. Upon their return, they would be asked to shake out their towels, enabling Chinese intelligence and government to know more about the sand than anyone else [4].**

China's intelligence services can broadly be divided into civilian and military branches. The Ministry of State Security (MSS) resembles a hybrid of the CIA and FBI in the United States or reflects the structure of the Soviet KGB. The MSS employs officers tasked with intelligence and counterintelligence operations domestically and abroad and ensuring internal security.

The MSS consists of a central ministry, provincial departments, and countless municipal bureaus—all capable of carrying out operational tasks. However, most of their efforts are focused on monitoring threats to China's state security, including those posed by foreigners within their jurisdictions. This information monitoring has self-serving purposes, with MSS officers identifying and tracking high-value individuals over extended periods with the goal of eventual recruitment.

The Ministry of Public Security (MPS) serves as China's national police force and mirrors many of the functions and structure of the MSS. Since the establishment of the MSS in 1983, the MPS lost most of its counterintelligence functions, which were transferred to MSS officers. However, as the national police force, the MPS has expanded its budget and capabilities, overseeing national databases, enhancing cyber capabilities, and managing urban surveillance networks. These developments have allowed the MPS to re-enter the sphere of state security.

The MSS conducts most of its intelligence operations from mainland China, as its espionage officers are generally restricted from leaving the country. This limitation has resulted in a focus on analyzing open-source information and data obtained through cyberattacks on personal records [5]. When a target is identified for recruitment, MSS agents fabricate identities and backgrounds to establish contact with the individual. Efforts are often made to lure the target to China, where deeper intelligence activities are undertaken. This reliance on domestic operatives stems from policies implemented in the 1970s under Deng Xiaoping, which prohibited using diplomatic cover for espionage. MSS's success can be seen in Taiwan, where China has developed a significant network of informants.



In the People's Liberation Army (PLA) of China, intelligence organizations are subordinate to the General Staff Department. The Second and Third Departments are the Chinese equivalents of the American Defense Intelligence Agency (DIA) and National Security Agency (NSA), respectively. Intelligence units are present in various structures within the PLA: the staffs of the Navy, Air Force, and the Second Artillery Corps, as well as the Bureau of Technical Intelligence.

While much of the PLA's military intelligence infrastructure operates domestically, defense attachés and covert information gatherers work abroad [6]. For example, in March 2022, Taiwan detained a «retired» PLA captain, Zhen Xiaojiang, who led a spy network in Taiwan before fleeing to Xiamen, a port city in China's Fujian Province and home to a PLA unit [7]. Zhen managed to recruit eight high-ranking Taiwanese military personnel, including a retired major general, creating one of Taiwan's largest known «communist spy networks.» This network involved active and retired officers of Taiwan's Air Force and Army. Zhen, who obtained Hong Kong residency in 2005, frequently visited Taiwan under the guise of tourism or business, participating in political and commercial events. His primary objectives were to gather intelligence on military assets such as the Mirage-2000 fighter, Hsinchu Leshan radar station, and other sensitive targets. In 2014, Taiwan's Investigation Bureau dismantled the network, initiating investigations and legal proceedings.

Chinese intelligence services include [8]:

Ministry of State Security

Ministry of Public Security and its subordinate  
People's Armed Police

People's Liberation Army of China (PLA), which  
comprises:

- Unit 61889 (Military Unit 8341) – State Protection Regiment
- General Staff Department
- Second Department
- Third Department
- Fourth Department
- General Political Department
- International Liaison Department (China

Association for International Friendly Contact)

- Navy Intelligence of the PLA
- Sixth Research Institute of the PLA Air Force

New China News Agency (Xinhua)

### 1.1. Ministry of State Security

The MSS of the People's Republic of China (Guojia Anquan Bu [Guoanbu]; 国家安全部) is the primary security agency, encompassing both civil intelligence and counterintelligence operations.

The MSS prioritizes recruiting agents within China. Potential candidates are sought among all groups of foreigners visiting the country, including diplomats, government officials, academics, journalists, and businesspeople. Recruitment methods are considered harsh by Western standards, such as offering release from prison in exchange for cooperation. The MSS recruits agents to spy on their home governments, conduct influence operations benefiting China, engage in business intelligence, and acquire restricted technologies.

The MSS serves as the main intelligence and security agency in China. It is responsible for counterintelligence, foreign intelligence, and political security. The Ministry is divided into various bureaus, each focused on a particular region:

The MSS serves as the main intelligence and security agency in China. It is responsible for counterintelligence, foreign intelligence, and political security. The Ministry is divided into various bureaus, each focused on a particular region:

- **Bureau No. 1:** Responsible for intelligence gathering and counterintelligence in the Beijing region
- **Bureau No. 2:** Responsible for intelligence gathering and counterintelligence in the Shanghai region
- **Bureau No. 3:** Responsible for intelligence gathering and counterintelligence in the Guangdong region
- **Bureau No. 4:** Responsible for intelligence gathering and counterintelligence in the Jiangsu region
- **Bureau No. 5:** Responsible for intelligence gathering and counterintelligence in the Zhejiang region

## IN FOCUS: CHINA

- **Bureau No. 6:** Responsible for intelligence gathering and counterintelligence in the Fujian region
- **Bureau No. 7:** Responsible for intelligence gathering and counterintelligence in the Shandong region
- **Bureau No. 8:** Responsible for intelligence gathering and counterintelligence in the Henan region
- **Bureau No. 9:** Responsible for intelligence gathering and counterintelligence in the Hubei region
- **Bureau No. 10:** Responsible for intelligence gathering and counterintelligence in the Hunan region

The MSS has international operations divisions responsible for foreign intelligence and counterintelligence. These divisions are tasked with gathering information about foreign governments, organizations, and individuals, protecting Chinese interests abroad, and identifying and neutralizing actions by foreign intelligence services that pose a threat to China.

The MSS's international operations divisions include:

- First department: responsible for collecting foreign intelligence and counterintelligence in Asia, Europe, and the Americas.
- Second department: responsible for collecting foreign intelligence and counterintelligence in Africa, the Middle East, and Oceania.
- Third department: responsible for collecting foreign intelligence and counterintelligence in Taiwan and Hong Kong.

The MSS focuses primarily on areas such as political, economic, and military intelligence, as well as technology, cybersecurity, and counterterrorism. It has a strong presence in Chinese communities abroad and in countries where Chinese citizens live and work, along with a network of agents in foreign governments, organizations, and companies to gather information and influence their activities. The operations and areas of interest of the MSS shift depending on the situation.

In addition to its regional divisions, the MSS is functionally divided according to established practices. The standard administrative structure of Chinese government ministries includes: personnel bureau, policy research bureau, finance and accounting bureau, training and education bureau.

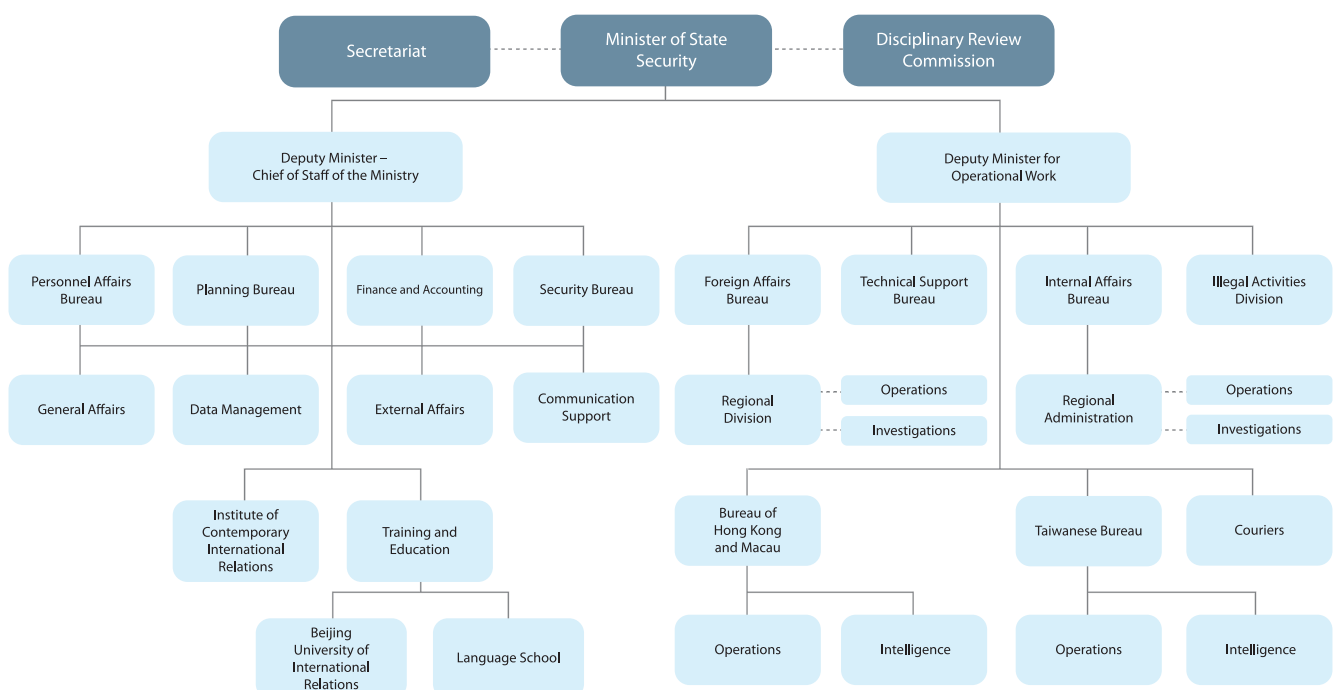


Fig. Structure of the Ministry of State Security of the People's Republic of China

Source: [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)

## IN FOCUS: CHINA

The General Affairs Department oversees logistics, printing, libraries, transportation, housing, and catering. The Secretariat coordinates schedules and directs information flow. Additionally, the ministry must have an operational department for executing ongoing tasks. Ministries conducting sectoral research also have independent research institutes. The Institute of Contemporary International Relations serves as the analytical arm of the MSS. The Discipline Inspection Commission represents the Central Committee of the Chinese Communist Party (CCP) within each ministry.

The MSS deploys personnel abroad under both covert and official covers, including organizations such as the Xinhua News Agency, the Chinese People's Association for Friendship with Foreign Countries, the Ministry of Foreign Affairs, the Ministry of Defense, the United Front Work Department of the Chinese Communist Party (CCP), the CCP's International Liaison Department, and trade missions.

The MSS's intelligence methodologies are not fundamentally different from those of other countries' intelligence services. However, China applies them

in its own unique way. The MSS employs large numbers of Chinese citizens living or traveling abroad for information gathering. This approach creates challenges for U.S. law enforcement because, when individuals transfer small pieces of information sporadically, it becomes difficult to prosecute them for espionage. **Most Chinese intelligence activities are not highly sophisticated operations; instead, their sheer volume compensates for their lack of sophistication.**

To gather information and conduct intelligence activities in the US, as of 1992, the MSS utilized:

- 1,500 Chinese diplomats and trade representatives
- 70 offices and institutions
- 40,000 Chinese students arriving annually
- 10,000 visitors annually within 2,700 delegations
- A large ethnic Chinese community abroad

It is reasonable to assume that this capacity has significantly expanded since then.

The most productive Chinese method for legally acquiring foreign technology is to send scientists abroad for studies or exchange programs. The second



*Photo: Illustrative photo*

*Source: <https://japan-forward.com/book-review-chinese-spies-from-chairman-mao-to-xi-jinping-by-roger-faligot/>*



most successful method involves Chinese state-owned enterprises purchasing American companies that have access to the desired technologies. The third method entails agents operating under the cover of Hong Kong companies purchasing high-tech equipment.

In the latter case, Chinese agents are often surprisingly candid with American sellers about the intended use of the equipment. This can be attributed to either a lack of subtlety or the mentality of Hong Kong Chinese, who view all business dealings as inherently legitimate. **Chinese businesspeople often perceive the unlawful acquisition of advanced technology not as a criminal act but simply as a routine business transaction.**

A fundamental element of Chinese espionage is the use of third countries to manage operations. Before establishing diplomatic relations with the United States, China used agents recruited in Europe to gather information about the U.S. The MSS actively seeks to infiltrate U.S. intelligence agencies and policymaking institutions.

Another critical task of the MSS is monitoring Chinese dissident groups. It employs covert infiltration techniques within student and dissident organizations. Additionally, Beijing utilizes education departments at embassies to systematically intimidate dissident students and hinder their activities. Intelligence operatives at embassies also aggressively recruit students.

The MSS and the PLA's Department of Military Intelligence (DMI) often invite lecturers for recruitment purposes because they:

1. Possess unique knowledge in fields of interest to the MSS or DMI.
2. Have access to policymakers and other potential recruitment targets.

Recruitment methods targeting journalists are often simplistic. For instance, a phone call offering access to classified information, which is typically a trap. Another crude method is the use of sexual entrapment. Despite its simplicity, this tactic has been successful in some cases. One of the most infamous incidents was the recruitment of French diplomat Bernard Boursicot in 1969 through a

relationship with opera singer Shi Pei Pu, who was later revealed to be a male impersonating a woman. Boursicot was arrested in France in 1985.

The MSS is much more adept at recruiting individuals of Chinese descent abroad than non-Chinese foreigners. Beijing assumes ethnic Chinese individuals harbor a degree of loyalty to China. They are often recruited in a manner similar to Chinese citizens: initially by appealing to their «duty» to help their ancestral homeland, and subsequently by threatening repercussions for relatives living in China. Notably, the Soviet KGB used the theme of «helping China» to recruit spies against the PRC, persuading targets that they were aiding the Chinese people rather than the Chinese government.

The MSS uses a range of approaches to recruit and train Chinese citizens for espionage operations abroad. Recruits are categorized as long-term agents (to be activated later if needed) and short-term agents. During recruitment, officials emphasize their concern for the agent's safety and claim that no information is worth risking the agent's well-being. However, they also threaten potential recruits with travel bans if they refuse and punishment in the case of betrayal.

Short-term agents are typically students studying abroad or refugees in border regions



### 1.2. Intelligence Bureau of the Joint Staff Department of the Central Military Commission

Previously, the organization was known as the Intelligence Department of the General Staff Department, the Second Department, or simply 2PLA. It is the second-largest organization engaged in human intelligence (HUMINT). Also referred to as the «Second Department» (Er Bu), it collects tactical, strategic, and technological intelligence.

The Second Department operates three intelligence analysis bureaus, an analytics division, and military research institutes. The first two of these three bureaus produce and disseminate intelligence analyses focused on specific geographic regions. The Fourth Bureau focuses on the CIS and Eastern Europe. The Fifth Bureau analyzes the United States and other Western nations. The Sixth Bureau deals with Asian countries bordering China. The role of



the Seventh Bureau, which specializes in science and technology, is to research and develop technologies. It oversees six research institutes, emphasizing the Second Department's far-reaching ambitions to spy on foreign science and technology advancements. The Second Department operates independently from its civilian counterpart, the MSS, in matters of technical support.

Besides the functional bureaus responsible for the collection and analysis of intelligence, the Second Department has a set of administrative units: the Archives Bureau, the Confidential Information Bureau, the Security Bureau of the Central Military Commission (Zhongwei jingwei ju)—this unit is rather a department than a bureau. It is responsible for the physical security of commission members and the heads of the general departments. It also has certain jurisdiction over the security operations of the Second Department.

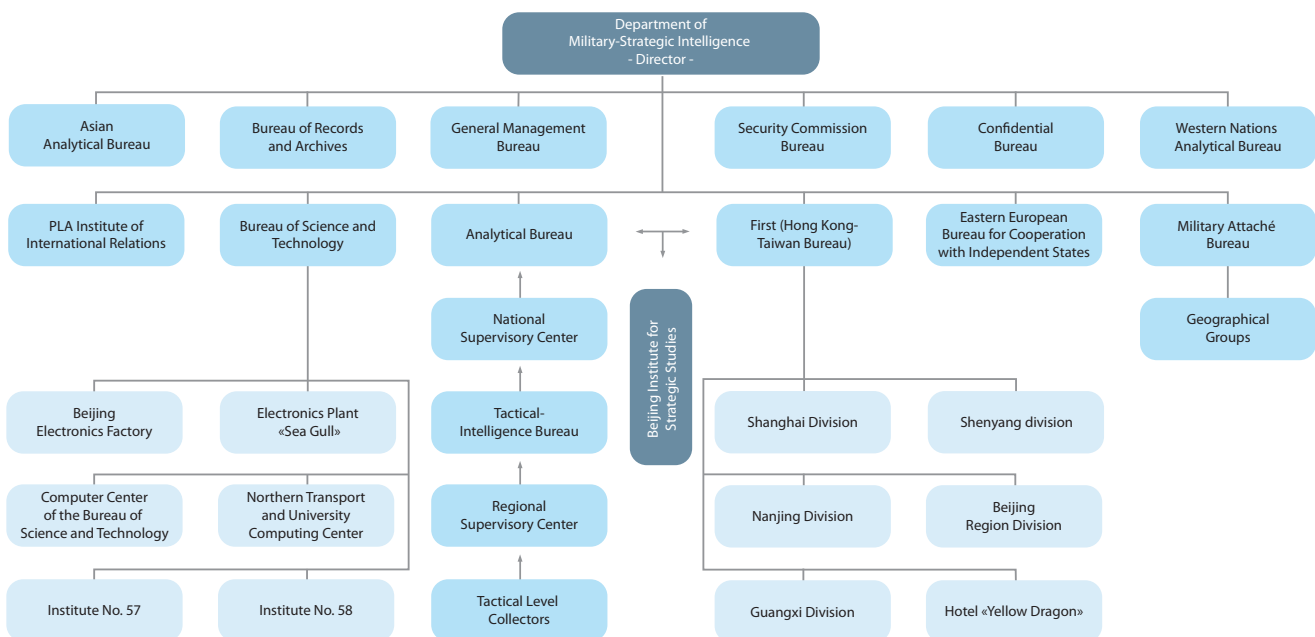
The political unit of the Second Department is subordinate to the General Political Department of the Chinese Communist Party (CCP), reflecting the system of control implemented by the party. The GPD is responsible for counterintelligence. The GPD has two separate hierarchies, parallel to military subordination, in the form of political commissars and committees

In addition to gathering intelligence and acquiring military technologies, the Second Department has a long history of attempting to influence foreign countries through covert operations, such as providing financial and logistical support to insurgents. In the early 1960s, guerrilla warfare schools for foreigners were established at military academies in Nanjing and Wuhan. These schools trained insurgents from Algeria, Angola, Botswana, Cameroon, both Congos, Guinea, Indonesia, Kenya, Malawi, Malaysia, Mozambique, Niger, Nigeria, Portuguese Guinea, Rhodesia, Rwanda, South Africa, Thailand, and other third-world countries.

«Police Outposts» is the informal name for surveillance points controlled by Chinese authorities and intelligence services to monitor Chinese citizens abroad.

These outposts operate under the guise of «compatriot organizations» or «aid centers»—ostensibly as non-governmental organizations established for «noble purposes.» However, in reality, they serve as hubs for agents aiming to monitor Chinese nationals and spread Chinese influence.

An investigation by the Spanish NGO Safeguard Defenders, published in September 2022, revealed that China had established 54 overseas police stations



*Fig. Structure of the Department of Military-Strategic Intelligence*

worldwide, including two in the Netherlands. The report also identified three such outposts in the United Kingdom and three in Canada.

According to Safeguard Defenders, these police stations were used by Chinese police to conduct operations on foreign soil and to pressure Chinese citizens into returning home to face prosecution.

China's Ministry of Foreign Affairs dismissed the Dutch claims as «completely false,» stating that the «service centers» were intended to assist foreign nationals with tasks such as renewing driver's licenses.

The stories of two American spies further substantiate the theory that the MSS seeks to lure potential informants to mainland China before making an official recruitment pitch. Kevin Mallory, a former CIA officer, was sentenced by a U.S. federal court to 20 years in prison for attempting to provide classified documents from the U.S. Department of Justice to a Chinese agent. Mallory was facing financial difficulties when he was approached via LinkedIn by a Chinese «headhunter.» An MSS operative then facilitated a phone call between Mallory and another individual. After two trips to Shanghai, Mallory agreed to sell defense secrets to his new Chinese contacts [9].

## 2. Commercial Intelligence

In June 2021, President Joe Biden signed an executive order titled «Protecting Americans' Sensitive Data from Foreign Adversaries.» This document specifically highlighted the threat posed by China and emphasized the need to safeguard against the unrestricted sale, transfer, or access to sensitive U.S. citizen data, including personal information, health information, and genetic data [10].

Previously, President Donald Trump had taken steps to curb Chinese influence by banning Huawei operations in the U.S. and prohibiting popular apps like TikTok and WeChat, both of which are controlled by Chinese entities [11]. The primary reason for these actions was the threat of industrial espionage by Chinese intelligence through data collection on U.S. citizens. Joe Biden later rescinded these bans.

Trump also signed an executive order in the final days of his presidency banning Alipay, WeChat Pay, and six other Chinese apps. He broadly described the threat posed by «Chinese connected software applications,» which could «access personal electronic devices, such as smartphones, tablets, and computers» [12]. Essentially, all Chinese software was regarded as potential spyware. To justify the decision, Trump cited India's precedent of banning «over 200 Chinese software applications nationwide.» Despite Biden's revocation of the ban, discussions about the transfer of «American data» continue to dominate U.S. political circles.

On December 14, 2022, Republican Senator Marco Rubio introduced a bipartisan-supported bill to ban the Chinese social network TikTok. The primary reason cited for the move was the potential use of the app for surveillance on Americans [13].

The new bill addresses the ban on apps from any social networks controlled by China or Russia, or those under their influence.

Another example is ByteDance, founded in 2021 by Chinese entrepreneur Zhang Yiming. Before ByteDance launched Douyin (the Chinese version of TikTok) and TikTok internationally, one of its first products was the news service Toutiao. By 2017, Toutiao had over 700 million users in China. ByteDance later developed an international version of the service called TopBuzz, aimed primarily at an American audience. In 2018, TopBuzz had a U.S. audience of 40 million, but the service was shut down in 2020. Former employees claimed that ByteDance used the platform to spread pro-China messages among Americans and censored content critical of the Chinese government.

Information about U.S. officials is particularly valuable to Chinese intelligence. U.S.-China technological connections and collaboration provide opportunities for the Chinese government to collect personal data on Americans. For example, Beijing can pressure Chinese tech companies to provide internal data on American users. Under Chinese law, companies are obligated to comply with such requests. U.S. officials have publicly stated that Huawei «has the capability to secretly access

sensitive and personal information in the systems it operates and sells,» and that «data from Huawei routers ultimately ended up in hands that appeared to be state-linked» [14].

The Chinese government uses a range of incentive mechanisms to encourage its domestic enterprises to conduct economic espionage abroad. This strategic mobilization of China's entrepreneurial sector is supported by the National Intelligence Law (adopted in 2017, Articles 7 and 14), which requires Chinese organizations and citizens to assist state intelligence when necessary [15]. This law has also driven Chinese industrial giant Huawei to support espionage efforts.

One of Chinese intelligence's interests is obtaining geolocation data on U.S. citizens, which can be easily purchased from online brokers. Certain sectors, including the mobile app ecosystem, involve relatively small American companies that may hold geolocation data for a million or more individuals [16]. At the same time, the greatest threat to U.S. and other nations' national security comes from Chinese intelligence targeting individuals with access to classified information. To protect national interests, U.S. counterintelligence issues new guidelines and imposes restrictions on officials' use of high-risk online platforms. This includes platforms like LinkedIn, which Chinese intelligence actively exploits to identify individuals with access to state secrets.

Open-source social media platforms, such as LinkedIn, provide valuable reference information about individuals and create an environment where people can be «cultivated» or «prepared» for espionage [17]. These platforms are ideal for engaging with potential informants. According to German intelligence, MSS operatives, posing as «headhunters,» targeted over 10,000 German politicians, scientists, and other professionals through LinkedIn. These headhunters contact individuals via LinkedIn, lure them with attractive offers, and eventually invite them to China, where the primary intelligence gathering begins. This was reported by the German Federal Ministry of the Interior in 2016. Germany's BND intelligence service stated that China's espionage efforts were

focused on industries, research, technology, and the military, in addition to gathering intelligence on Germany.

According to U.S. prosecutors, China successfully recruited several Americans to spy for Beijing using information from their public LinkedIn profiles. William Evanina, then-director of the National Counterintelligence and Security Center, stated in 2019 that LinkedIn is the best platform for Chinese intelligence to gather information [18]. Several Chinese spies recruited through LinkedIn, the professional networking platform owned by Microsoft, have been caught and convicted in the U.S. [19].

Beijing has created market incentives for economic espionage, particularly in strategic sectors, and many Chinese citizens view state protection and support as a means to advance their careers. For instance, Jing Hanjuan, an employee of Motorola, attempted to leave the U.S. with the company's intellectual property worth several hundred million dollars, intending to start her own business or boost her status in a Chinese telecommunications firm that also collaborated with the PLA. She was detained at the airport [20].

PLA intelligence has been linked to several significant breaches of U.S. citizens' personal data through infiltrations of personnel management databases, such as those of Marriott Starwood, United Airlines, and Anthem [21].

For example, health insurance companies are under close surveillance by Chinese intelligence agencies, as they hold vast amounts of personal information on millions of American citizens, including full names, Social Security Numbers (SSNs), employment and income data, and passport numbers. Additionally, airline operators possess flight histories. Often, this information includes details about substance abuse, gambling addiction, and psychiatric care histories. Data collected from these breaches is compiled into a database by Chinese intelligence services, which aim to identify U.S. citizens for intelligence collection, ultimately using the information to recruit American informants

Regarding China's industrial espionage in Japan, while less frequent compared to other countries, the issue has recently gained significant attention. One of the most notable cases involved extracting trade secrets from a Japanese company employee through LinkedIn. Other incidents include:

- In November 2018, a data leak involving a former executive of Kawashima Seisakusho, a manufacturer and seller of electronic communication equipment, was uncovered.
- In June 2019, a former employee of Nissha, an electronic component manufacturer, was arrested for leaking trade secrets and joining a Chinese company. He was later sentenced to imprisonment.

Such isolated incidents may merely represent the tip of the iceberg. A «security clearance system» for access to classified information has yet to be implemented in Japan's private sector due to opposition from the Japan Federation of Bar Associations (JFBA). Additionally, economic security issues remain under-addressed; as of April 2020, no government agency was specifically tasked with collecting and analyzing information on this matter.

Nonetheless, Japan is aware of the seriousness of the issue. For instance, as early as 2009, the National Police Agency cited a German intelligence report warning that China «is believed to have been collecting information on cutting-edge science and technology through complex and diverse means over an extended period.» This includes sending researchers, engineers, and international students to companies engaged in advanced technologies or defense-related industries in Japan.

A prominent case was the 2007 data breach at Denso, Japan's largest auto parts manufacturer. A Chinese employee was arrested for stealing product designs. The individual was even labeled a «military spy,» as they had worked at a military facility in China.

Another case involved Yamaha Motor in 2007, where executives were arrested on suspicion of attempting to export agricultural-use drones to a Beijing aviation company. Yamaha's models were reportedly used in developing Chinese unmanned helicopters.

In October 2018, Osaka Prefectural Police charged a former employee (45 years old), dismissed for disciplinary reasons, with violating the Unfair Competition Prevention Act. The employee leaked smartphone-related technology from Sekisui Chemical (Osaka) to a Chinese company. The Chinese company had approached the former employee via common social networking services (SNS), demonstrating how China's industrial espionage network is encroaching on individuals' daily lives.

In 2018, an employee of Chaozhou Sanhuan Group, a telecommunications equipment manufacturer in Guangdong, China, contacted a former employee via LinkedIn. The ex-employee had written on LinkedIn about their research on «conductive fine particles,» an electronic material used in smartphone touch panels. After deepening the relationship and inviting the former employee to China several times, the Chinese company proposed sharing technical information, saying, «You can enhance your status as a researcher in your company.» Between August 2018 and January 2019, the former employee emailed electronic files and images related to the production process of «conductive fine particles» to the Chinese company. However, the Chinese company provided no information in return, leaving the Japanese company exploited in a one-sided manner.

Meanwhile, the Indian government has consistently implemented measures to counter Chinese espionage, including banning Chinese mobile apps and media companies. Democracies worldwide are increasingly reassessing their relationships with China, prioritizing the protection of national interests.

The China Aerospace Science and Technology Corporation (CASC) and the China Aerospace Science and Industry Corporation (CASIC) are leading suppliers of Chinese military missiles, launch vehicles, and satellites. These corporations send dozens of scientists abroad annually to countries such as Australia, France, Italy, Japan, Russia, Ukraine, the United Kingdom, and the United States [22].



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CASC operates globally through its subsidiary, the China Academy of Launch Vehicle Technology (CALVT), which develops space launch vehicles and intercontinental ballistic missiles. CALVT runs six joint laboratories in Europe and the UK, focusing on fields such as additive manufacturing, aerospace materials, and control systems.

CALVT has experience funding ostensibly civilian technologies with dual-use potential for missile systems. In 2013, it established the Overseas Artificial Heart Research and Development Institute in collaboration with RWTH Aachen University in Germany and the Swiss Northwestern University of Applied Sciences. An article by the state-run Xinhua News Agency noted that artificial heart technology closely resembles missile control system technology.

### 3. Academic Espionage

Individuals working in companies and services with access to unique technologies and trade secrets are a key focus of Chinese intelligence efforts. Estimates suggest that China has approximately 500 talent recruitment programs designed to attract academic and professional minds from the West to collect information and technologies for China's development [23].

For developed economies, such espionage poses significant dangers. For example, China is rapidly overtaking the U.S. in aerospace technologies, and espionage threatens the U.S. in communications, security, and critical infrastructure resilience, as well as its ability to project military power globally. Annual U.S. losses from intellectual property theft

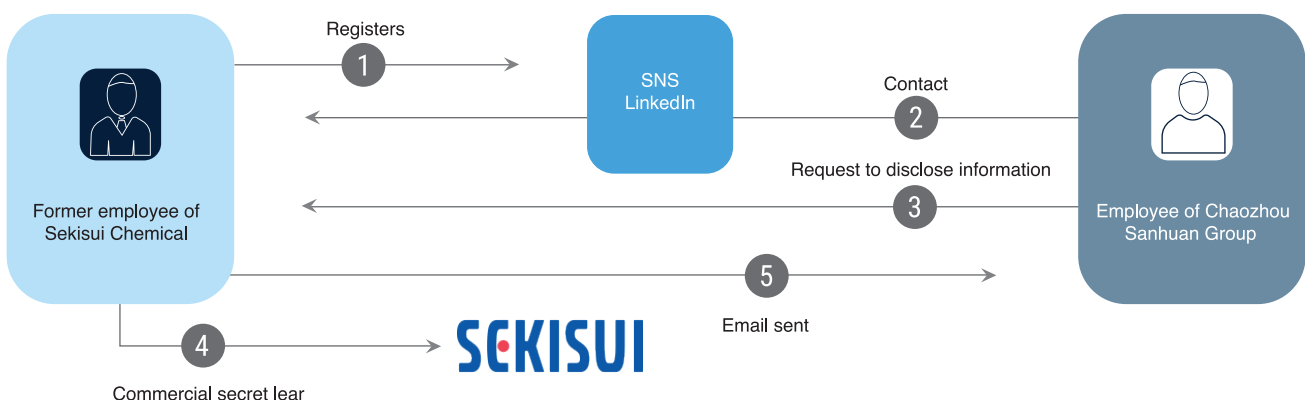
by China are estimated at \$360 billion.

To facilitate technology acquisition, China has established an official system under the Institute of Scientific and Technical Information of China (ISTIC) to collect and catalog foreign scientific publications and other public information [24]. Chinese researchers request research materials and industry briefings on emerging fields. ISTIC has played a pivotal role in developing master's programs with leading computer science universities, convening professional associations, and publishing professional literature—all legally conducted. ISTIC representatives claim that acquiring foreign technological information reduces research costs by 40-50% and time by 60-70%.

**A significant portion of China's scientific espionage is conducted not by professional spies but by scientists and technologists who know precisely what they want to collect and why.** These individuals are amateurs in espionage but experts in their fields. They often focus on acquiring components for systems or entire systems themselves, as such information is frequently not highly classified—or is perceived by the U.S. and its firms as less critical. China aims to leverage existing technologies to improve its own products and projects [25].

Chinese intelligence also identifies potential informants or individuals to recruit by purchasing or hacking databases from data brokerage companies. Chinese intelligence agencies emphasize that their espionage targets are not limited to government institutions but also include the private sector. Data

### Diagram of the Information Leak Incident to a Chinese Company



brokerage firms, especially those specializing in «people search,» are prime targets.

These brokers, such as Acxiom, Datalogix, and PeekYou, collect third-party information on millions of Americans, including names, phone numbers, locations, email addresses, Social Security Numbers, education, employment, marital status, and social media profiles [26]. This information helps Chinese operatives identify potential targets.

For example, in 2008, the Federal Trade Commission (FTC) took action against data brokerage firms Reed Elsevier (a leading global provider of professional information solutions in science, medicine, law, risk management, and B2B) and Seisint for severe security lapses that allowed identity thieves to exploit their databases.

Research conducted for the China Defence Universities Tracker reveals that most Chinese universities are engaged in defense-related research, training scientists for the defense industry, collaborating with military conglomerates, and participating in classified projects. At least 15 civilian universities have been involved in cyberattacks, illegal exports, or espionage. China's defense industry conglomerates control agencies in nine universities and have sent thousands of their staff abroad for training since 1999 [27].

This raises concerns for governments, universities, and companies collaborating with partners in the People's Republic of China. There is always a risk that such partnerships may be exploited for surveillance, human rights violations, or advancing military objectives.

For example, the Australian government plans to establish a National Research Integrity Office to protect scientific and technological developments from foreign interference and enforce export controls. The office aims to use the China Defence Universities Tracker system to enhance visa applicant screening and research funding decisions.

In China, a characteristic feature of its academic environment is the military-civil fusion, which has strengthened the integration of academia

with defense and security. In 2017, the Party Secretary of the Beijing Institute of Technology, a leading institution for defense research, stated that universities must «stand at the forefront of military-civil fusion» [28].

Chinese universities form one of three pillars of the National Defense Science and Technology Innovation System. Military-civil fusion is tied to the Double First-Class University Plan, a government initiative aimed at transforming 98 top Chinese universities into world-class institutions by 2050. A 2018 policy document emphasized that universities should integrate into the «military-civil fusion system» and promote the «bidirectional transfer and transformation of military and civilian technological achievements.» This highlights the importance of international cooperation and foreign talent acquisition in enhancing Chinese universities and scientific collaboration. At least 68 Chinese universities are part of the defense system or are controlled by the State Administration for Science, Technology, and Industry for National Defense (SASTIND).

A 2018 report by the Australian Strategic Policy Institute (ASPI) titled «*Picking Flowers, Making Honey: The Chinese Military's Collaboration with Foreign Universities*» revealed that between 2007 and 2017, China sent over 2,500 scientists to study and work in foreign universities. Many used civilian cover or deceptive means to go abroad, acquiring skills and knowledge valuable to the Chinese military. It is believed that all of them are members of the Chinese Communist Party (CCP) and returned to China on instruction.

To help universities, companies, and policymakers navigate interactions with Chinese research institutions, Australia created the China Defence Universities Tracker, a database categorizing institutions as very high, high, medium, or low risk. Of the 92 institutions classified as «very high risk,» 52 are associated with the People's Liberation Army (PLA), 8 work in security or intelligence, and 20 are civilian universities alongside 12 major defense conglomerates.

Many Chinese universities began as military

institutions but later transformed into civilian universities that are increasingly competitive in global research rankings.

The «Seven Sons of National Defense» group consists of leading universities in China with deep integration into the military and defense industries. Each year, over 10,000 graduates from the Seven Sons enter the defense research sector. Ph.D. graduates from these universities are particularly in demand, with nearly half of them pursuing careers in the defense sector. Major state defense conglomerates specializing in aircraft, missiles, naval vessels, weaponry, and military electronics are among their top employers, alongside high-tech companies like Huawei and ZTE.

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For example, a student from one of the Seven Sons universities was accused of collaborating with the Ministry of State Security (MSS) to steal jet engine technology. In 2018, U.S. authorities arrested Su Yangyun in Jiangsu for allegedly attempting to steal engine technology from GE Aviation. According to a U.S. Department of Justice indictment, an official at the Nanjing University of Aeronautics and Astronautics (NUAA) helped Su identify and target foreign individuals. The indictment states that an NUAA collaborator contacted a GE Aviation engineer, inviting him to deliver a lecture at a college. The NUAA representative introduced the engineer to Su Yangyun, who used a pseudonym and claimed to represent the Jiangsu Science and Technology Association. Su then cultivated the engineer and requested confidential information about jet engine fan blades. NUAA confirmed that Su Yangyun was also a graduate student at the university.

Research conducted for the China Defence Universities Tracker identified 101 agreements signed between the State Administration for Science, Technology, and Industry for National Defense (SASTIND) (or its predecessor COSTIND) and other agencies since 1999 regarding «joint construction.» A total of 61 universities are subordinate to these agencies. The China Defence Universities Tracker highlights that these agreements demonstrate how defense industry conglomerates exert control over nine universities.

Through these agreements, SASTIND aims to transform institutions into «universities with national defense characteristics,» increasing their involvement in defense technology education and research while deepening collaboration with defense companies. This has led to the establishment of numerous defense laboratories and «disciplines with national defense characteristics» in civilian universities, particularly in the last decade. More than 150 universities have obtained security certifications allowing them to participate in classified projects for the development of weapons and defense equipment.

Every year, 2,000 «National Defense Technology Students» receive scholarships sponsored by defense conglomerates or China's nuclear weapons program to study in specific fields. After graduation, they are required to work for their sponsor for five years.

1. The China Defence Universities Tracker has identified over 160 defense laboratories in civilian universities, categorized into three main types: Key National Defense Science and Technology Laboratories

2. Key Discipline Laboratories for National Defense

3. Key National Defense Laboratories of the Ministry of Education

These laboratories are the most well-funded and prestigious defense research facilities, enjoying a status equivalent to that of national key laboratories.

According to Shandong University, which hosts three defense-related laboratories, its mandate is to expand local scientific and technological innovations

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for national defense, cultivate and concentrate high-level scientific and technological talents, and actively participate in international academic exchanges and collaborations. One of these laboratories has been accused of conducting cyberattacks.

Many of these defense laboratories conceal their military affiliations in official English translations of their names. For example, National Defense Science



*The logo of the «Seven Sons of National Defense» Group – leading universities in China with deep integration into the military and defense industry.*

Source: <https://www.dataabyss.ai/platform-resources/seven-sons-tracker>

and Technology Key Laboratories often refer to themselves simply as «National Key Laboratories,» while Key Defense Discipline Laboratories are often labeled as «Fundamental Science Laboratories.»

The military involvement of the «Seven Sons of National Defense» is more widely recognized compared to other institutions, such as the University of Electronic Science and Technology of China (UESTC) in Chengdu. This university houses seven defense research laboratories and 10 research fields related to defense, including electronics, signal processing, interference resistance, optics, and radar-absorbing materials. UESTC is also linked to China's nuclear program. In 2012, it was added to the U.S. government's list of restricted entities to limit the export of American technologies.

Representatives of UESTC reportedly collected information under the guise of being researchers from the China Academy of Engineering Physics (CAEP), suggesting that UESTC acted as a proxy for China's nuclear weapons program. Simultaneously, UESTC's High Power Radiation Key Laboratory collaborates with CAEP.

UESTC has also been implicated in the implementation of surveillance technology in Xinjiang, where approximately 1.5 million ethnic Uyghurs and other minorities have reportedly been detained in internment camps. The Dean of the School of Computer Science and Engineering manages a company that supplies video surveillance systems to the authorities in Xinjiang.

UESTC's international partnerships continue to grow and expand annually. For instance, in 2016, it established a joint college with the University of Glasgow in China, offering electronics degrees. UESTC also operates a joint research center for fiber-optic technology with the University of New South Wales (UNSW) in Australia.

The China Defence Universities Tracker has identified at least 15 civilian universities involved in espionage, violations of export controls, or flagged by the U.S. government as proxies for China's nuclear weapons program. Four of the «Seven Sons» are directly implicated in espionage or export control violations. For example, Harbin Engineering University has been tied to five cases, including the theft of missile technologies from Russia.

The establishment of defense laboratories fosters close relationships between researchers and the military, which can facilitate espionage. A Taiwanese report citing unnamed intelligence officials claimed that an office at Wuhan University was actually a bureau of the PLA's intelligence agency. The same Wuhan University laboratory collaborated with an Australian university and even sent an invited researcher to one of its Australian partner institutions.

The MSS directly oversees at least two universities: the University of International Relations in Beijing and the Jiangnan Social University in Suzhou. These



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institutions train intelligence officers and conduct research to support MSS operations. The University of International Relations has exchange agreements with universities in Denmark, the United States, France, and Japan [29].

MSS also uses civilian universities for training, research, technical consulting, and potentially direct involvement in cyber-espionage. For instance, cybersecurity firm ThreatConnect found links between Southeast University and the cyberattack on Anthem, one of the largest U.S. healthcare organizations. Four of China's 12 state defense conglomerates have a significant presence in foreign universities. Their work spans military electronics, aviation technology, and missiles. These companies aim to enhance their access to world-class training, expertise, and technologies through exchanges and joint laboratories with international universities.

Many international collaboration projects involve organizations subject to U.S. government export restrictions, such as:

- Monash University: «Monash University and the Commercial Aircraft Corporation of China signed a Memorandum of Understanding to accelerate aircraft development,» press release, May 16, 2017.
- University of Technology Sydney (UTS): «New Joint Research Center IET with CETC,» press release, April 26, 2017.
- University of Manchester: «Partnership with the Chinese Aero Engine Corporation,» media release.
- University of Manchester Aerospace Research Institute: «Joint China-UK Laboratory for Advanced Control Systems Technology,» undated.
- China Academy of Launch Vehicle Technology (CALT): «China-UK Joint Laboratory for Advanced Control Technology,» May 14, 2016.
- CALT: «Rocket Institute established four overseas research institutions,» May 13, 2016, and more.

The Aero Engine Corporation of China (AECC) and the Aviation Industry Corporation of China (AVIC) are the primary suppliers of aviation technologies to the People's Liberation Army (PLA). AECC

develops aviation engines, while AVIC holds a monopoly on supplying military aircraft to the PLA. Both AECC and AVIC have expanded their relationships with foreign universities through joint laboratories, training programs, and partnerships in Europe. China's military aviation has long relied on turbine technologies from other countries, and the Chinese Communist Party (CCP) aims to develop domestic capabilities in this field, which can be enhanced through its joint laboratories. AECC's subsidiary, the Beijing Institute of Aeronautical Materials (BIAM), manages three joint laboratories in the United Kingdom—two at the University of Manchester and one at Imperial College London.

AVIC has established two joint laboratories with Imperial College London and the University of Nottingham. Its laboratory at Imperial College focuses on topics related to aircraft design and manufacturing, such as ultralight aviation components and metal-forming techniques. The laboratory is led by a participant in the Chinese government's Thousand Talents Program (a recruitment scheme for foreign scientists).

The Commercial Aircraft Corporation of China (COMAC), described by China's Ministry of Industry and Information Technology as a defense industry conglomerate, has also expanded its ties with foreign universities. Monash University signed a memorandum of cooperation with COMAC in 2017, agreeing to host COMAC researchers and conduct joint research on aerospace materials. Through this partnership, the university supplied components for COMAC's flagship aircraft, the C-919, which many Chinese analysts believe could be converted into a military surveillance aircraft.

Chinese defense aviation companies are also forging connections with Europe and Australia through research collaborations and training programs. Over the past decade, more than 700 AVIC engineers and managers have been sent to study at universities in the United Kingdom, the Netherlands, and France. By 2020, the conglomerate planned to send 1,200 of its researchers to institutions including Cranfield University, the University of Nottingham, and the French Aerospace Institute. In 2016, the Australian Research Council allocated AUD 400,000 to a

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| Country     | Host institution                                         | Joint lab or investment                                                                       | Year founded       | PRC partner              | Areas of research                                                                                       |
|-------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------|--------------------------|---------------------------------------------------------------------------------------------------------|
| Australia   | Monash University                                        | Joint research and development centre                                                         | 2019               | COMAC                    | 3D printing <sup>a</sup>                                                                                |
| Australia   | Monash University                                        | Investment in aircraft manufacturing research                                                 | 2017               | COMAC                    | 3D printing, material analysis and treatment <sup>b</sup>                                               |
| Australia   | University of Technology Sydney                          | Australia–China Research Innovation Centre in Information and Electronics Technologies        | 2017               | CETC                     | Big data, artificial intelligence, quantum information, advanced materials and electronics <sup>c</sup> |
| UK          | University of Manchester                                 | BIAM – University of Manchester Technology Centre                                             | 2017 <sup>d</sup>  | AECC                     | Aircraft engine coatings, modelling and simulation <sup>e</sup>                                         |
| UK          | University of Manchester                                 | Sino-British Joint Advanced Laboratory on Control System Technology <sup>f</sup>              | 2016 <sup>g</sup>  | CALT                     | Control systems, multi-agent systems, robotics <sup>h</sup>                                             |
| UK          | Imperial College London                                  | Advanced Structure Manufacturing Technology Laboratory                                        | 2016 <sup>i</sup>  | CALT                     | Metal forming technology, process modelling                                                             |
| UK          | University of Exeter                                     |                                                                                               |                    |                          |                                                                                                         |
| UK          | University of Birmingham <sup>j</sup>                    | EU Horizon 2020 project on manufacturing aerospace components <sup>k</sup>                    | 2016 <sup>l</sup>  | AECC's BIAM <sup>m</sup> | Additive manufacturing <sup>n</sup>                                                                     |
| Austria     | TU Graz                                                  | Sino-Austrian Electronic Technology Innovation Centre                                         | 2015 <sup>o</sup>  | CETC                     | Smart water management, <sup>p</sup> internet of things <sup>q</sup>                                    |
| UK          | University of Manchester                                 | BIAM – University of Manchester Graphene Aerospace Materials Centre                           | 2015 <sup>s</sup>  | AECC                     | Graphene for aircraft engines <sup>t</sup>                                                              |
| Germany     | RWTH Aachen University <sup>u</sup>                      | Artificial Assisted Heart Overseas Research and Development Institution                       | 2013 <sup>v</sup>  | CALT                     | Artificial hearts, axial flow pumps (potential dual use for missile control systems) <sup>w</sup>       |
| Switzerland | Northwestern University of Applied Sciences <sup>x</sup> |                                                                                               |                    |                          |                                                                                                         |
| UK          | Imperial College London                                  | AVIC Centre for Structural Design and Manufacture                                             | 2012               | AVIC                     | Aircraft design and materials, aircraft structural integrity <sup>y</sup>                               |
| UK          | University of Strathclyde                                | Space Mechatronic Systems Technology (SMeSTech) Laboratory                                    | 2012               | CALT                     | Mechatronic systems, satellites <sup>z</sup>                                                            |
| UK          | University of Nottingham                                 | University Innovation Centre                                                                  | 2012 <sup>aa</sup> | AVIC                     | Thermal coatings for turbine blades, impact damage <sup>bb</sup>                                        |
| UK          | Imperial College London                                  | BIAM – Imperial Centre for Materials Characterisation, Processing and Modelling <sup>cc</sup> | 2012 <sup>dd</sup> | AECC <sup>ee</sup>       | Aeronautical materials, <sup>ff</sup> lithium-ion batteries, aircraft windshields <sup>gg</sup>         |

*Fig. Foreign university partners of China's state-owned military-industrial complex conglomerates*

joint project between the University of Adelaide and AECC on «high-performance rubber-based materials.»

The China Electronics Technology Group Corporation (CETC) is a leading Chinese manufacturer of military electronics, including radars and drones. CETC is also a major supplier of integrated surveillance systems, facial recognition cameras, and mobile applications linked to human

rights violations in Xinjiang. Hikvision, a major producer of security cameras, is a subsidiary of CETC.

Since 2014, CETC has expanded its relationships with foreign universities, establishing joint laboratories in Europe and Australia. Its partnership and joint laboratory with the Graz University of Technology in Austria, focusing on electronic information technologies, laid the foundation for

CETC's European headquarters in Graz.

CETC's relationship with the University of Technology Sydney (UTS) has garnered significant media attention. Discussions about an official partnership began in 2014, and they agreed to establish a joint center for information and electronic technologies by 2017. Initially, the center aimed to secure up to AUD 20 million from CETC over five years. In addition to research on artificial intelligence, quantum information, and big data, the center was also designed as a training hub for CETC personnel.

The partnership continues after a review in 2019, although UTS reportedly withdrew from three joint projects with CETC after concerns were raised by the Australian Department of Defense. Commentators also noted potential collaboration between UTS and CETC on «public safety video analysis.»

The China Academy of Engineering Physics (CAEP) is responsible for the research, development, and production of China's nuclear weapons. CAEP also engages in the development of lasers, directed-energy weapons, and conventional arms. The academy has been expanding its international presence to attract top specialists to assist China in developing nuclear weapons. Since 2000, CAEP researchers have published more than 1,500 papers with international co-authors.

In 2012, CAEP established the High-Pressure Science and Technology Advanced Research Center (HPSTAR) to better attract international talent. The Beijing-based center claims to “aspire to science without borders” and uses English as its official language, but its affiliation with CAEP is omitted from its English-language website. HPSTAR is headed by a Taiwanese-American scientist recruited in 2012 through the Thousand Talents Program, which CAEP has used to recruit at least 57 foreign scientists.

CAEP also sends large numbers of its staff abroad for training. In 2015, an academy official stated that hundreds of young CAEP researchers were sent overseas for training each year. For instance, Zhou Tingting, a researcher at CAEP's Institute of Applied Physics and Computational Mathematics, worked

as a visiting scholar at the California Institute of Technology (Caltech). The institute specializes in the design and computational modeling of nuclear warheads and has been implicated in at least two espionage cases. Since 1997, it has been included on the U.S. government's list of restricted organizations. While at Caltech, Zhou published research on polymer-bonded explosives, which was funded by the U.S. Office of Naval Research. Polymer-bonded explosives are used in the detonation mechanisms of nuclear warheads. Before joining CAEP, Zhou was educated at the Beijing Institute of Technology, one of the «Seven Sons of National Defense»

#### 4. Lobbying and corruption tools

In investigations published on April 25, 2022, the U.S. Federal Bureau of Investigation (FBI) noted that China may use confidential medical, financial, or other personal information to blackmail or recruit American officials and parliamentarians [30].

In 2020, the U.S. Department of Treasury issued new rules granting CFIUS (Committee on Foreign Investment in the United States) the authority to review covered transactions involving «sensitive personal data» of over one million individuals. The definition of sensitive personal data includes genetic data. Compared to other types of personal information, genetic data is less widely available, making it harder for Beijing to acquire. China could use genetic data to identify and physically track U.S. government officials, including covert agents, during their global travels. As genetic information is immutable, its exposure would have lifelong consequences and be difficult to remedy.

The case involving the dating app Grindr illustrates how U.S. restrictions have prevented Chinese companies from acquiring diverse types of personal data on Americans. In 2019, CFIUS forced a Chinese company to divest from Grindr, which had a large American user base, potentially including many U.S. officials who privately share information about their HIV status and sexual activities on the app. Such information is highly valuable to Chinese intelligence, remains relevant for decades, and is difficult to find elsewhere online. By blocking this acquisition, CFIUS eliminated one of the easiest



paths for China to obtain a unique cache of personal data critical to national security.

A 2021 Norwegian government report revealed that Grindr's new American owners regularly share users' IP addresses, GPS locations, ages, and genders with numerous third parties but do not distribute data about users' sexual preferences or health.

In an executive order in 2020, President Trump required a Chinese company to divest from Stayntouch, a cloud service helping hotels manage property operations. Stayntouch has access to guest data, and its software can even be used to access hotel rooms. This raised concerns that China could exploit Stayntouch's software to gather critical data or real-time information on the travel activities of U.S. officials. Such databases are invaluable for recruiting and bribing American officials or embedding operatives within intelligence agencies. The U.S. authorities have previously charged individuals recruited by the Chinese to secure influential positions. In 2010, the FBI arrested Glenn Duffie Shriver for nearly joining the CIA while being paid by the Ministry of State Security (MSS) [31].

In the United Kingdom, MI-5 issued a memo warning civil servants that Chinese operatives were using LinkedIn to target government officials (Burgess 2015). William Evanina, head of U.S. counterintelligence, also confirmed that Chinese intelligence services employed fake LinkedIn profiles to recruit Americans with access to government and commercial secrets [32]. Since Chinese intelligence officers rarely operate outside mainland China, they are more likely to exploit the openness of social networks.

In 2019, Australian media reported on Chinese state interference in its political system, involving significant monetary support provided to an Australian citizen—who was later found dead—to run for parliament [33].

In Japan, scandals periodically arise regarding donations to politicians from foreign nationals (such contributions are illegal and can only be made by Japanese citizens). Among such donors, Chinese

nationals occasionally appear. Over the past 15 years, there have been several such cases involving both ruling-party politicians and opposition members.

Another major scandal involved allegations that members of Japan's ruling Liberal Democratic Party (LDP) received financial contributions from several Chinese companies between 2005 and 2017 related to plans to build an «integrated resort» in Japan (essentially a casino).

More recently, a member of parliament from the same LDP, also a candidate for a ministerial post, reportedly «voluntarily» engaged a Chinese woman as a «diplomatic secretary,» sought her assistance in fundraising for political purposes, and regularly consulted her on various current matters.

### **5. The Chinese diaspora as an overseas intelligence resource**

The Overseas Chinese Affairs Office and the Ministry of Education closely monitor Chinese nationals living abroad. The former maintains ties with overseas Chinese communities and sponsors various Chinese professional associations. The Ministry of Education monitors Chinese students in other countries and supports student and academic associations [34]. Both agencies assist in mobilizing Chinese expatriates and emigrants for visible displays of support when Beijing desires, such as during the 2008 Olympic torch relay.

In May 2022, a U.S. citizen and four Chinese intelligence officers were charged with spying on prominent dissidents, human rights activists, and pro-democracy advocates. «We will not tolerate the PRC or any authoritarian government exporting repressive measures into our country,» said Matthew G. Olsen, Assistant Attorney General for the Department of Justice's National Security Division [35].

According to court documents, Wang Shujun, 73, of Queens, New York, along with Feng He (aka Boss He, of Guangdong), Jie Ji (of Qingdao), Ming Li (aka Elder Tang and Little Li, of Guangdong), and Keqing Lu (aka Boss Lu, of Qingdao), allegedly participated in espionage and a transnational scheme to persecute dissidents in the U.S. and abroad. Wang



was arrested on March 16 on a criminal complaint and will face trial, while He, Ji, Li, and Lu remain at large.

The documents state that Wang Shujun acted as a covert intelligence agent within his own community, spying on and reporting confidential information about prominent pro-democracy activists. The charges exposed and disrupted a PRC operation that endangered the safety and freedom of Chinese nationals in the United States due to their pro-democracy beliefs and activism.

Until recently, the Chinese government's aggressive tactics were confined within its borders, but increasingly, the PRC has targeted its own citizens in the U.S. and worldwide.

According to court documents, Wang Shujun is a well-known scholar and writer who helped establish a pro-democracy organization in Queens opposing the current communist regime in China. Since 2011, he used his position and status within the Chinese diaspora and dissident communities to secretly collect information about prominent activists and human rights defenders on behalf of the MSS (Ministry of State Security) and the PRC. He focused on individuals and activities deemed subversive by the PRC, including Hong Kong pro-democracy activists, Taiwan independence supporters, as well as Uyghurs and Tibetans.

As stated in the indictment, Wang communicated and provided information to the MSS using encrypted messaging apps, emails, and in-person meetings in China. He frequently recorded the information he collected in email "diaries" that were accessible to the MSS. These "diaries" contained details of his private conversations with prominent dissidents, as well as the activities of pro-democracy activists and human rights organizations. At least one Hong Kong pro-democracy activist and dissident, referred to in the indictment as «Hong Kong Dissident #1,» was later arrested by the PRC after being reported by Wang to the MSS.

Additionally, state media outlets, such as *Xinhua* and *The New China News Agency*, outline intelligence-gathering activities in their statutes. The Overseas

Chinese Affairs Office and the Ministry of Education also participate in intelligence operations, maintaining contact with Chinese nationals abroad [36].

### 6. Cyber activities

In an investigative report by Mandiant, a company specializing in cybersecurity, researchers found compelling evidence linking the PLA Unit 61,398 to cyberattacks. The unit's tasks include electronic reconnaissance and infiltration of defense information systems. The report concluded that IP addresses from several data breaches were traced to China, specifically to a building used by the PLA. A dedicated fiber-optic communications infrastructure had been established in Shanghai to serve «national security» purposes. Evidence from investigations into the breaches of the OPM and Anthem Health Insurance corroborates the involvement of PLA Unit 61,398 in the cyberattacks. The attacks on OPM and Anthem employed the PlugX backdoor tool, the same tool previously used by Chinese hacker groups to target political activists in Hong Kong and Tibet [37].

The FBI described China's intelligence activities as «the greatest long-term threat to the U.S. information domain.» Over recent years, Chinese intelligence has stolen substantial U.S. military secrets, including aircraft designs [38].

While U.S. national security secrets are protected by robust technological, physical, and personnel controls, China often begins by seeking confidential but non-classified data, which can later be leveraged to obtain classified information. U.S. officials believe China collects and analyzes vast amounts of personal data on Americans to identify potential intelligence targets or other strategic opportunities. Some U.S. intelligence personnel suggest these methods allowed Beijing to quickly identify covert CIA personnel worldwide, enabling it to monitor or hinder their operations.

Although all personal data of U.S. citizens deserves strong protection, specific categories warrant particularly stringent safeguards. For instance, data on U.S. military personnel in non-classified

positions holds some intelligence value for China but does not fall under the strictest protections.

U.S. security agencies maintain extensive personnel information caches in non-classified, internet-connected systems (e.g., the Defense Travel System), inherently more vulnerable to Chinese hackers than classified systems. Washington considers the practical advantages of such systems' internet connectivity to outweigh the risks of Chinese espionage.

China has a strong interest in monitoring India's development and deployment of nuclear weapons, missile systems, IT capabilities, and space and satellite programs, among other strategic relationships. China attempts to manipulate decision-making processes, gather intelligence, conduct offensive counterintelligence, and engage in sabotage, leveraging both human and technical assets. Indian media has repeatedly reported on thwarted Chinese espionage operations, though these incidents likely represent just the tip of the iceberg. Reports mention professional Chinese intelligence networks operating across India, with agents conducting traditional espionage. In 2013 and 2018, suspected Chinese agents were apprehended. Additionally, Chinese surveillance ships were caught spying on Indian bases near the Andaman Islands in 2013 and 2019, as well as during the Malabar trilateral exercises in 2018. In 2019, high-tech PLA balloons were reportedly detected conducting reconnaissance flights over Tibet near the Indian border [39].

A third of all cyberattacks targeting India's military sector originate from China. Reports also warn that 42 popular Chinese mobile apps actively gather intelligence on India's security sector. In 2010, Chinese hackers reportedly stole information on India's missile system, along with emails and other personal data from the Dalai Lama's office. Concerns were also raised in 2009 about the establishment of 24 China study centers and approximately 30 firms in Nepal along the Indian border, which were suspected of collecting intelligence and expanding China's influence in Nepal.

In April 2015, a cybersecurity engineer at the U.S.

Office of Personnel Management (OPM) detected unusual outbound traffic during routine network maintenance. OPM's network had been breached, though the perpetrators and duration of the breach were initially unclear. When it was discovered that the domain name was linked to the alias «Steve Rogers» (a Marvel superhero), PLA Unit 61398 became the prime suspect. The breach involved data on over 4 million federal employees. OPM's digital archives contain approximately 18 million copies of «Standard Form 86,» a 127-page questionnaire used for background checks and continuous evaluation of individuals in national security roles. These forms include sensitive personal information such as Social Security Numbers (SSN), residential and educational histories, employment records, details of close relatives and associates, health records, and confidential details such as substance abuse, gambling addiction, and psychiatric treatment histories [40].

Subsequent investigations revealed other data breaches attributed to the Chinese government. In 2018, two Chinese hackers were charged with breaching U.S. Navy personnel files, stealing the personal data of over 100,000 Navy employees. The second-largest U.S. health insurer, Anthem, experienced a data breach affecting over 80 million current and former affiliates. Although the stolen data did not include private medical records or credit card numbers, it targeted personal identification data, including SSNs, income information, birth dates, street, and email addresses. Similarly, during an attack on Community Health Systems in August 2014, the personal information of over 4.5 million patients was stolen, focusing on names, addresses, birth dates, phone numbers, and Social Security Numbers rather than intellectual property or financial/medical records.

Cyberattacks in Japan occur across various levels, from the theft of credit cardholder information sold to Japanese fraud rings to attacks on government institutions and corporate websites.

One of the most notable cases occurred in 2014 when Keidanren (the Japan Business Federation) suffered an attack. A virus sent via email to an employee in the department managing economic cooperation between Japan and China infiltrated the system. The

virus remained in the organization's servers for two years.

Another case involved cyberattacks on around 200 organizations, including the Japan Aerospace Exploration Agency (JAXA). The Tokyo Metropolitan Police referred a member of the Chinese Communist Party residing in Japan to the district prosecutor's office for registering under a false name on rented servers in Japan five times between September 2016 and April 2017.

A report titled «*The Real State of Chinese Cyberattacks*,» published by the Defense Infrastructure Development Association in 2016, detailed 17 major Chinese cyberattacks on Japan's virtual space from 2000 to 2015.

### 7. Conclusions and recommendations for Ukraine

1. Over the past 20 years, China has significantly expanded its intelligence capabilities. Chinese intelligence activities are carried out by various entities, including government agencies, the PLA, state-owned enterprises, private companies, individual citizens, and over 35 universities subordinate to the State Administration of Science, Technology, and Industry for National Defense. The tradecraft of the Ministry of State Security (MSS) improved between 2016 and 2020, partly in response to U.S. counterintelligence measures.
2. More than 90% of espionage activities are conducted by ethnic Chinese, and over 80% of the operatives are men. In 2014, 2015, and 2017, the National People's Congress and the State Council of China issued directives requiring all Chinese citizens and companies, whether inside or outside China, to cooperate in intelligence gathering. Severe penalties are prescribed for non-compliance.<sup>3</sup>
3. The MSS uses social networks to target foreigners with access to sensitive information. Recruitment attempts vary widely in quality. The MSS employs China's border and visa control system to identify potential recruits and manage covert agents.
4. Nearly half of China's global intelligence efforts are aimed at military and space technologies. China's efforts to gather foreign scientific and technological information align closely with the priorities outlined in strategic government planning documents, such as Made in China 2025, Space Science and Technology in China, Roadmap to 2050, and the 13th Five-Year Plan.
5. China's «whole-of-society» approach to intelligence gathering undermines the U.S. economy, diplomatic influence, and military capability. Moreover, China's actions threaten the national and economic security of Europe through espionage and pressure on governmental organizations and businesses.
6. Unlike many countries that conduct intelligence activities to counter hostile or potentially hostile nations, much of China's intelligence work focuses on developing its own industries and acquiring foreign resources and assets.
7. Almost half of China's traditional intelligence activities (political and military secrets) and covert operations are directed against Taiwan. The United Front Work Department of the Chinese Communist Party (CCP) Central Committee and the Political Department Liaison Office of the PLA also focus on Taiwan, engaging in information collection.
8. The highly politicized nature of CCP-driven intelligence management affects operational standards and the quality of intelligence. Chinese intelligence services have a long history of political purges by the CCP. Adherence to the CCP's ideological views about the West limits Chinese intelligence collectors and analysts, leaving little incentive to provide intelligence that contradicts the party's worldview. These constraints suggest the MSS is unlikely to see significant improvement in the near future. While advancements in targeting, recruitment, and operational sophistication (e.g., combining

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human and cyber intelligence) have been made in the past 20 years, systemic issues such as politicization, lack of standardization, poor operational security, oversight failures, and task duplication at the provincial level persist.

9. Chinese intelligence employs a variety of tactics, including cyberespionage, to gain remote access to classified information, gather intelligence, leverage human assets, and exert political influence. This is achieved through entities like the CCP's United Front Work Department and collaborations with overseas Chinese communities and diaspora associations (the "thousand grains of sand" concept). The approach blends extensive public data collection with sophisticated cyber operations.
10. A thorough monitoring effort is required, both publicly by non-governmental organizations and through counterintelligence by the Security Service of Ukraine (SBU), to track the activities

of pro-Beijing lobbying within the Ukrainian Parliament and Government. Close attention should be paid to the operations of Chinese technology companies such as Huawei and ZTE, which have the potential to secretly access confidential and personal information through the systems and equipment they install and maintain, as well as through their subsidiaries or lobbyists.



### Список використаних джерел:

1. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
2. <https://breakingdefense.com/2020/10/the-5-faces-of-chinese-espionage-the-worlds-first-digital-authoritarian-state/>
3. <https://theprint.in/opinion/china-has-an-intelligence-gathering-architecture-unlike-any-other/502590/>
4. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
5. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
6. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
7. <https://daydaynews.cc/en/hotcomm/1797028.html>
8. <https://irp.fas.org/world/china/index.html>
9. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
10. <https://carnegieendowment.org/2022/04/25/limiting-chinese-national-security-espionage-pub-86902>
11. <https://breakingdefense.com/2020/10/the-5-faces-of-chinese-espionage-the-worlds-first-digital-authoritarian-state/>
12. <https://carnegieendowment.org/2022/04/25/limiting-chinese-national-security-espionage-pub-86902>
13. [https://forbes.ua/news/u-kongres-ssha-vnesli-zakonoproekt-pro-zaboronu-tiktok-14122022-10499?fbclid=IwAR2ot-tFg3nS7VjX72UMpWymmj-jD-OPv8u5eMwGMkwsd\\_vn3UJfn7w1ReA](https://forbes.ua/news/u-kongres-ssha-vnesli-zakonoproekt-pro-zaboronu-tiktok-14122022-10499?fbclid=IwAR2ot-tFg3nS7VjX72UMpWymmj-jD-OPv8u5eMwGMkwsd_vn3UJfn7w1ReA)
14. <https://breakingdefense.com/2020/10/the-5-faces-of-chinese-espionage-the-worlds-first-digital-authoritarian-state/>
15. <https://theprint.in/opinion/china-has-an-intelligence-gathering-architecture-unlike-any-other/502590/>
16. <https://carnegieendowment.org/2022/04/25/limiting-chinese-national-security-espionage-pub-86902>
17. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
18. <https://carnegieendowment.org/2022/04/25/limiting-chinese-national-security-espionage-pub-86902>
19. <https://theprint.in/opinion/china-has-an-intelligence-gathering-architecture-unlike-any-other/502590/>
20. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
21. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
22. <https://www.aspi.org.au/report/china-defence-universities-tracker>
23. <https://breakingdefense.com/2020/10/the-5-faces-of-chinese-espionage-the-worlds-first-digital-authoritarian-state/>
24. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
25. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
26. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
27. <https://www.aspi.org.au/report/china-defence-universities-tracker>
28. [ibid.](#)
29. [ibid.](#)
30. <https://carnegieendowment.org/2022/04/25/limiting-chinese-national-security-espionage-pub-86902>
31. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
32. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
33. <https://theprint.in/opinion/china-has-an-intelligence-gathering-architecture-unlike-any-other/502590/>
34. <https://warontherocks.com/2015/08/a-guide-to-chinese-intelligence-operations/>
35. <https://www.justice.gov/opa/pr/us-citizen-and-four-chinese-intelligence-officers-charged-spying-prominent-dissidents-human>
36. <https://theprint.in/opinion/china-has-an-intelligence-gathering-architecture-unlike-any-other/502590/>
37. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)
38. <https://carnegieendowment.org/2022/04/25/limiting-chinese-national-security-espionage-pub-86902>
39. <https://theprint.in/opinion/china-has-an-intelligence-gathering-architecture-unlike-any-other/502590/>
40. [https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen\\_jspg\\_v15.pdf](https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/chen_jspg_v15.pdf)

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## Rosatom's Interests in the Central Asia Region

*Central Asia (CA) is a region of geostrategic significance, driven by abundant natural resources and a complex network of international actors engaged in a new phase of regional competition. Several countries in the region have shown increased interest in nuclear energy generation as a sustainable and reliable energy source. In recent years, Russia's state atomic energy corporation, Rosatom, has intensified its activities in Central Asia, sparking debates and concerns about Russia's true motives, geopolitical ambitions, potential energy security strategies, and their impact on regional dynamics.*

*This article aims to provide a comprehensive analysis of Rosatom's interests and motives in Central Asia, with a focus on the company's investments, partnerships, and planned projects in the region.*

With the onset of Russia's full-scale war against Ukraine in February 2022, the global nuclear market faced the impact of a geopolitical stress test in Europe. The war highlighted the problem of total dependence of certain European countries and the United States on Russian nuclear technologies and raw materials. While European countries are striving to diversify their sources of nuclear fuel to gradually reduce reliance on Russian suppliers, Rosatom has intensified its efforts to enter the nuclear generation segment of energy markets in so-called «friendly countries,» particularly within the Eurasian Economic Union.

The state corporation Rosatom serves as the central holding company of Russia's nuclear industrial complex, encompassing both civilian and military components. Rosatom's extensive network of affiliated companies includes several key subsidiaries: JSC «Rosenergoatom Concern,» responsible for operating nuclear power plants in Russia; JSC «Afrikantov Experimental Design Bureau for Mechanical Engineering,» a major scientific and production center specializing in the development of nuclear reactors; engineering company «Atomstroyexport,» which constructs nuclear power plants both domestically and abroad;



*Photo: Uranium extraction  
Source: Reuters*

JSC «TVEL,» which produces nuclear fuel and provides services related to the fuel cycle; the «TENEX» group of companies, under the umbrella of «Atomenergoprom,» which exports nuclear materials and services, including uranium enrichment; the Federal State Unitary Enterprise «Atomflot,» which manages Russia's nuclear icebreaker fleet; and JSC «Rosatom Overseas,» which promotes Russian nuclear technologies and services abroad.

To ensure its business presence in Central Asia, the regional center «Rosatom Central Asia» was established in 2014, directly engaging in activities across the region. The corporation has offices in Kazakhstan (Astana), Uzbekistan (opened in 2019), and Kyrgyzstan (opened in 2023).

Rosatom's activities extend beyond the nuclear sector. The corporation offers a comprehensive “turnkey” approach, which is regarded as a significant competitive advantage. Foreign analysts have noted that despite the sanctions pressure on the Russian state due to its unprovoked war against Ukraine, Rosatom has become the most profitable company in the energy sector, a position previously held by Gazprom before the war.

Rosatom has an extensive portfolio of energy projects. Russian nuclear exports had been growing rapidly even before the war in Ukraine, but they have since gained additional momentum. Russia has modernized its nuclear technologies and transitioned to VVER-1200 reactors (Water-Water Energy Reactors). According to various estimates, Rosatom serves clients in over 50 countries worldwide. The corporation holds a particularly significant share in two aspects of nuclear fuel production—conversion and enrichment—where it controls 38% and 46% of global capacities, respectively [12]. Rosatom supplies fuel to 78 power reactors in 15 countries, accounting for 17% of the global nuclear fuel market. Notably, the fuel company TVEL, part of the Rosatom conglomerate, has set strategic goals to increase its share of the global nuclear fuel market to 22% by 2030.

Ukraine's experience confirms that any Russian state-owned company functions as a tool of Russia's

military-political leadership in its aggressive foreign policy campaigns. Rosatom's dominance in the global nuclear industry is based on three key pillars: an aggressive business strategy, comprehensive political support, and the ability to offer favorable financing terms through state-backed loans. At the same time, the economic multiplier effect for recipient countries of “peaceful atom” technologies is undeniable.

According to [Rosatom's Strategy](#) approved by its Supervisory Board in April 2020, the company aims to transition «from global leadership in the nuclear industry to global technological leadership.» Additionally, the goal is to achieve revenue of 4 trillion rubles by 2030, with the majority of this revenue coming from foreign orders and over 40% generated by new products. Consequently, finding new markets is a fundamental component for the successful implementation of this strategy. As [reported](#) by CEO Alexey Likhachev, as of June 2024, Rosatom was constructing 39 nuclear power units abroad and an additional 7 within Russia.

Rosatom's interest in the Central Asian region can be explained by several key factors. First, the region's substantial uranium reserves make it a critical source of raw materials for producing nuclear fuel for Russia's nuclear energy industry. Rosatom actively signs long-term agreements with Central Asian countries to secure a stable and reliable supply of uranium for its reactors. Moreover, the growing demand for energy in Central Asia presents a commercially attractive market for Rosatom's nuclear technologies and expertise. By forming partnerships and joint ventures in the region, Rosatom aims to expand its market share and strengthen its position as a global leader in the nuclear sector.

None of the five Central Asian republics currently operate nuclear power plants. However, Kazakhstan and Uzbekistan are significant players in the global uranium market. Both nations believe that their growing economies, coupled with challenges related to climate change and environmental security, necessitate the development of nuclear energy as a low-carbon solution to pressing issues. According to Rosatom's analysis, there is increasing global demand for small nuclear power plants (SNPPs),

with up to [30-40 GW](#) of small reactor capacity expected to come online in the next 10-15 years. This explains Rosatom's active promotion of SNPP construction in Kyrgyzstan and Uzbekistan. At the same time, Central Asian countries are taking steps to diversify their investment portfolios.

**Kazakhstan** remains a critical partner for Russia in the nuclear generation sector, despite the lack of operational nuclear power plants in the country, thanks to its substantial uranium deposits. Kazakhstan hosts the International Atomic Energy Agency (IAEA) Low-Enriched Uranium (LEU) Fuel Bank, located at the Ulba Metallurgical Plant in Ust-Kamenogorsk. This project is designed to ensure guaranteed fuel supplies to various countries in case of disruptions in the open market or other supply mechanisms for low-enriched uranium.

Currently, the partnership between key companies, namely Rosatom and Kazakhstan's national operator Kazatomprom (responsible for importing and exporting uranium, rare metals, and nuclear fuel for power plants), encompasses several main areas: uranium mining and supply; nuclear fuel production; transfer and development of nuclear technologies; and joint ventures and efforts in third countries to promote nuclear technologies, fuel supply, and related services. Beyond Russia, Kazatomprom has established significant strategic ties with Japan and China. The company held a [10% stake](#) in Westinghouse Electric, which it sold in 2017. Additionally, Canadian and French companies are active in Kazakhstan's uranium sector, engaging in mining and other aspects of the fuel cycle.

For a long time, the issue of building nuclear power plants in Kazakhstan was avoided due to the Soviet nuclear legacy tied to nuclear weapon testing in the Semipalatinsk region, which caused serious environmental damage and health issues for the local population. However, the growing energy demand driven by population growth and dynamic economic development has placed the uneven distribution of power-generating capacity on the national agenda.

According to Kazakhstan's [Concept for the Development of the Fuel and Energy Complex for 2023-2029](#), approved by Government Decree

No. 724 on June 28, 2014 (as amended), the total capacity of Kazakhstan's power plants is 19,024.3 MW. As of January 1, 2023, the wear and tear on major equipment at power plants was 57%, with some facilities, such as Uralsk and Kentau CHPs, reaching 85-88%. In 2023, electricity consumption totaled 115.06 billion kWh, up 1.9% from the previous year, while electricity generation remained at the 2022 level of 112.82 billion kWh. Given these figures, the electricity capacity deficit was 1,519 MW, which was offset by imports from the Russian Federation. Accordingly, the projected electricity capacity balance for 2024-2030 indicates a significant capacity shortfall of up to 6.2 GW by 2030 [7].

It is worth noting that between 1973 and 1999, Kazakhstan operated a sodium-cooled fast reactor, the BN-350 (350 MW capacity), located at the Mangyshlak Nuclear Power Plant in Aktau. In addition to providing electricity to the city, the BN-350 was used for plutonium production and water desalination to meet local needs. The reactor's design life officially ended in 1993, and [with financial support from the U.S.](#), decommissioning began. Notably, Tenex provided assistance to Kazakh partners on these matters.

Today, Kazakhstan is actively conducting experiments and research using three research reactors: the VVR-K reactor at the Institute of Nuclear Physics in Almaty and two installations, IVG.1M (a water-cooled heterogeneous nuclear reactor, an upgraded version of the IVG.1) and IGR, at the National Nuclear Center of Kazakhstan in Kurchatov [39].

According to Presidential Decree No. 121 of the Republic of Kazakhstan dated February 2, 2023, «On Approving the Strategy for Achieving Carbon Neutrality of the Republic of Kazakhstan by 2060,» it is envisaged that «nuclear power plants will be included in the energy structure as a stable energy source.» Considering that the most problematic energy zone in Kazakhstan is in the southern region, additional generating capacities are planned to be built there. Officials from Kazakhstan's Ministry of Energy have identified several potential sites for constructing a nuclear power plant, including



the village of Ulken in the Almaty region on the shores of Lake Balkhash. This site is considered a priority as it lies within the «North-South» power transmission line zone and is located close to key consumers in the southern region of the country.

Kazakhstan's policy of balancing and multi-vector approaches is evident in its nuclear energy development efforts. For the construction of the country's first nuclear power plant since independence, several potential nuclear technology suppliers are under consideration, including the China National Nuclear Corporation, Korea Hydro & Nuclear Power Co., Russia's Rosatom, and France's EDF. Initial estimates suggest that the construction could cost \$10–12 billion. According to preliminary estimates by Kazakhstan Nuclear Power Plants LLP, the project is [expected](#) to take 11 years to complete, from the referendum and site and technology approval in 2024 to commissioning in 2035.

Given the public's sensitivity to nuclear energy issues due to historical traumatic experiences, at the behest of Kazakh President Kassym-Jomart Tokayev, the decision to construct nuclear power units will be made through a nationwide referendum, scheduled for this autumn. To prepare for the referendum, public hearings are being held across the republic and are expected to conclude in August of this year. At the same time, there is some skepticism as to whether public opinion can influence the final decision regarding the selection of a supplier, given that the Russian side has already announced its plans to build a nuclear power plant in Kazakhstan, clearly anticipating a positive tender decision.

Although the construction of nuclear power plants represents a long-term measure to maintain Central Asian countries within Russia's sphere of influence, access to Kazakhstan's uranium resources holds equally significant importance for Rosatom. In turn, collaboration with Rosatom potentially opens new markets and opportunities for Kazatomprom, particularly in countries where Rosatom is involved in building and operating nuclear power plants. Simultaneously, there is an exchange of technological expertise and the development of human capital in Kazakhstan's energy sector, leading

to deeper economic and political ties between the two countries. To support the sector's human capital needs, a Kazakh branch of the National Research Nuclear University «MEPhI» (MEPhI Kazakh Branch) was established in 2022, preparing specialists in nuclear energy and IT [11].

As of August 2024, public discussions had been held in the country. Based on the results of a nationwide referendum on the construction of a nuclear power plant held on October 6, 2024, [71.12%](#) of Kazakhstan's citizens voted in favor of building the plant. Notably, Kazakhstan is considering an international consortium model for constructing the nuclear power plant, aiming to combine leading global companies with advanced technologies. Whether this model proves viable remains to be seen.

Kazakhstan holds [12%](#) of the world's uranium reserves and is the global leader in natural uranium production, accounting for 43% of global uranium output in 2022. According to leading companies in the uranium mining and processing market, the market is expected to grow in the long term as more countries plan to launch nuclear projects or increase nuclear energy production to meet greenhouse gas emission reduction targets. According to the IAEA Red Book 2020, global uranium demand could reach up to 100,000 tons per year by 2040 [9].

In the integrated annual report of JSC NAC Kazatomprom for 2023, as of the beginning of the year, Kazakhstan's proven uranium reserves were estimated at 990,000 tons. Of 56 explored deposits with balance uranium reserves, the company, along with its subsidiaries, affiliates, and joint ventures, is developing 26 deposits grouped into 14 uranium mining enterprises, while the remaining 42 deposits are in reserve. The deposits are concentrated in the Kyzylorda, Turkestan, North Kazakhstan, and Akmola regions [15].

The primary export [markets](#) for the products include China, South and East Asia, North America, and Europe. The group sells uranium and uranium products through long-term and short-term contracts, as well as on the spot market via its Swiss subsidiary trading company, Trading House KazakAtom (THK).

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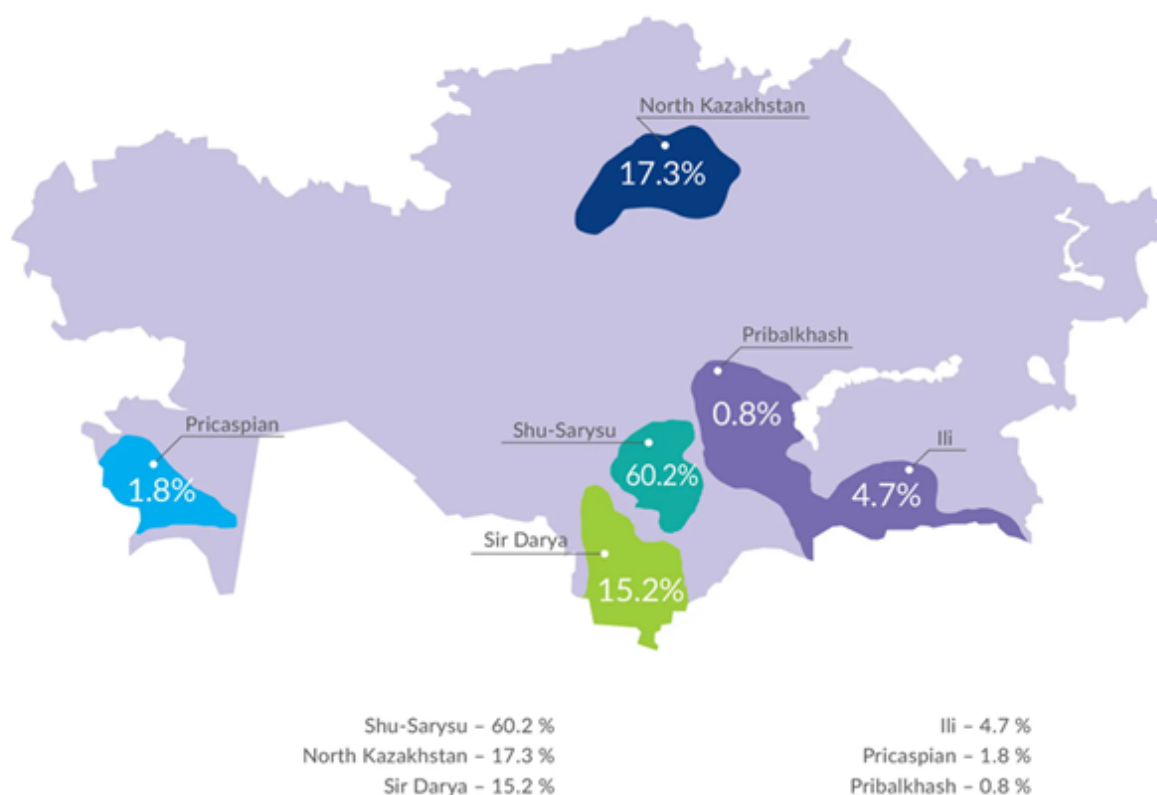
Notably, of the 14 mining enterprises, only two are fully owned by Kazatomprom as 100% ultimate beneficiaries: RU-6 and LLP «Kazatomprom — SaUran,» which operate across five uranium deposits. According to Kazakh law, the rights to mine uranium in Kazakhstan are exclusively held by the national company. However, nearly half of Kazakhstan's minable uranium is extracted by foreign companies with which Kazatomprom has established joint ventures (JVs).

It is worth highlighting that Rosatom extracts uranium from five Kazakh deposits: Northern Khorasan (Khorasan-1 section), Inkai (Block 4), Akdala, Zarechnoye, and all seven available sections of the Budenovskoye deposit in the Turkestan region. Rosatom's subsidiaries, primarily JSC «Uranium One Group» and more recently the «Stepnogorsk Mining and Chemical Combine» (founded by Uranium One Group), along with Rosatom's «Nuclear Fuel Cycle Logistics Center,» act as co-founders and hold a presence of more than 40% in half of the 12 JVs. The story of Kazakhstan's largest uranium deposit, Budenovskoye, now controlled

by Russian entities, became public knowledge through Kazatomprom's 2022 financial report. It is evident that the Russian partner enjoys a privileged position in Kazakhstan's uranium mining sector. However, China General Nuclear Power Group, through its subsidiaries, also participates in mining operations at no fewer than five deposits.

An important aspect of balancing Rosatom's influence in Kazakhstan's uranium sector involves engaging Western companies, not only in mining but also in uranium ore processing. Western players in Kazakhstan's uranium industry include France, Canada, the United States, the United Kingdom, and Japan. However, under current conditions, a complete cessation of Kazatomprom's cooperation with Rosatom seems unlikely.

The creation of artificial logistical constraints to secure competitive advantages has become a common tactic employed by the Russian side, particularly towards its partners, aiming to construct an illusion of the inevitability of partnership with Russia. In the current geopolitical climate, the



Map of uranium deposits in Kazakhstan.

Source: <https://qazmonitor.com/news/132/kazakhstan-is-the-worlds-biggest-uranium-producer-so-what>

**need for uninterrupted uranium product supply to Western markets has brought the development of an alternative route to the forefront—namely, the Trans-Caspian International Transport Route (TITR), also known as the Middle Corridor. Kazatomprom has been using the TITR to ship uranium products via Azerbaijan since 2018. According to the company’s report, «Several physical shipments were made via the Trans-Caspian International Transport Route in 2023 to end recipients in Romania, the United States, and Canada. By the end of 2023, 64% of all uranium shipments from Kazakhstan to Western countries were successfully delivered via TITR» [15]. At the same time, for Kazakhstan, having an alternative route provides an opportunity to strengthen the country’s negotiating position with Russia.**

The cooperation between Rosatom and the **Republic of Uzbekistan** (RUz) encompasses uranium mining and processing, nuclear power plant construction, and the development of human resources and expertise in nuclear energy. The country is exploring nuclear energy as a means to diversify its energy mix, reduce reliance on natural gas, and meet the growing demand for electricity.

Uzbekistan’s electricity demand stands at 69 billion kWh, with nearly 85% of this energy produced by burning natural gas (approximately 16.5 billion cubic meters) and coal (2.3 million tons), while 15% is generated by hydroelectric plants [19]. According to the Ministry of Energy of Uzbekistan, gross electricity production in the country amounted to 78.0 billion kWh in 2023 (compared to 74.3 billion kWh in 2022 and 71.3 billion kWh in 2021). Projections by the Ministry of Energy indicate that by 2030, this figure will reach 120.8 billion kWh. However, according to the Ministry of Energy’s report, “*Electricity Production Indicators in the Country for 2016–2023*,” the volume of electricity supplied to consumers in the previous year amounted to 66.1 billion kWh [16]. The deterioration of the electrical grid poses a significant threat to any strategic plans if the physical infrastructure required to deliver electricity to end-users is not addressed. The central element of the Russian-Uzbek nuclear partnership is the construction of Uzbekistan’s first

nuclear power plant, negotiations for which began in 2017. This nuclear project holds significant importance for Uzbekistan as it represents a step towards achieving energy self-sufficiency and decarbonizing the economy. Notably, Uzbekistan demonstrates a more favorable public perception of nuclear energy compared to other Central Asian countries, making it well-positioned to lead the region in nuclear energy development.

According to the intergovernmental agreement signed in 2018, the Russian consortium planned to construct a two-unit nuclear power plant with VVER-1200 reactors near Lake Tuzkan in the Jizzakh region, with a total capacity of 2.4 gigawatts. As outlined in [Presidential Decree No. PP-4165](#) of February 7, 2019, “*On Approving the Nuclear Energy Development Program in the Republic of Uzbekistan for 2019–2025*,” construction was to commence in 2022, with the plant set to become operational by 2028.

Uzbekistan’s strategy aligns with broader regional goals of enhancing energy security and reducing greenhouse gas emissions. In May 2024, the reorganization of the nuclear agency Uzatom under [Presidential Decree No. PP-188](#), “*On Measures to Implement the Investment Project for Nuclear Power Plant Construction*,” placed the agency directly under the Cabinet of Ministers, solidifying the institutional framework for nuclear energy development in the country.

In May 2024, Moscow and Tashkent signed an updated [agreement](#) for the construction of Central Asia’s first nuclear power plant in Uzbekistan’s Jizzakh region. The new project, a Russian small modular nuclear power plant (SMR), will generate 330 MW and feature six reactor units. The project is based on the RITM-200N water-cooled reactor, an adaptation of ship-based reactor technology for land use, with a thermal capacity of 190 MW, an electrical capacity of 55 MW, and a service life of up to 60 years [53]. *Rosatom* will serve as the general contractor for the project, with local companies also involved in the construction. It is noteworthy that this revised proposal is significantly smaller than the original project agreed upon in 2018.

According to the Russian side, the SMR project is currently under discussion between Rosatom and the Uzatom agency regarding contractual terms for construction. The parties are addressing technical issues such as integrating the SMR into the energy system, working in conjunction with renewable energy sources, reducing water consumption for the plant's operation, and maximizing electricity generation while considering the site's climatic conditions. Media reports indicate that Rosatom is proposing a «dry cooling tower» design for Uzbekistan—a technically more complex solution that is becoming increasingly relevant in light of the growing water scarcity in Central Asia.

Beyond Russia, other players, such as South Korea's Hyundai, have expressed interest in small modular nuclear power plants in Uzbekistan. Hyundai offers its advanced modular reactors based on integrated systems (SMART), which use high-pressure water for cooling. Despite their small size, these reactors can generate up to 110 MW of energy [14], and their compact and mobile design allows them to be installed in remote mountainous areas of Central Asia.

It is worth noting that nuclear power plants serve as a base-load generation source that operates continuously, and when combined with flexible generation options, they can ensure stable consumption and predictable electricity export volumes. With the construction of a nuclear power plant, the development and modernization of electricity grids, and enhanced regional connectivity, Uzbekistan has the potential to become a significant exporter of electricity, thus increasing its influence on the energy landscape of Central Asia. Such progress would position Uzbekistan as a leader in regional energy cooperation.

While collaboration with Rosatom offers Uzbekistan new opportunities, it also provides the Russian company with favorable conditions to expand its influence into other sectors, such as renewable energy projects, nuclear medicine, and environmental management. Stable electricity supply would drive the country's industrial growth, resolving issues of energy shortages and outages. Moreover, the construction and operation of a nuclear power plant

would create additional jobs not only within the newly developed economic sector but also stimulate the labor market in related industries.

Although Uzbekistan's uranium reserves are smaller than those of Kazakhstan, it remains one of the world's leading uranium producers. During the Soviet era, the republic supplied the majority of uranium for the Soviet military-industrial complex. **According to IAEA data, Uzbekistan ranks seventh globally in uranium reserves and fifth in uranium production. The State Committee on Geology of Uzbekistan reports that the country's explored and estimated uranium reserves amount to 185,800 tons**, including 138,800 tons of sandstone-type deposits suitable for in-situ leaching and 47,000 tons of black-shale-type deposits, which are more expensive to mine. Significant sandstone-type uranium reserves are concentrated in the Central Kyzylkum region [5], a 125-kilometer-wide strip stretching approximately 400 kilometers from Uchkuduk in the northwest to Nurabad in the southeast.

Uranium production in Uzbekistan is state-controlled and regulated. The sole uranium mining enterprise in the country is the state-owned company *Navoiuran*, established in early 2022 as a result of the transformation of the *Navoi Mining and Metallurgical Combine* (NMMC). The NMMC was divided into three entities: *Navoi Mining and Metallurgical Combine JSC*, the NMMC Fund, and the state enterprise *Navoiuran*. The joint-stock company is responsible for mining gold and silver, while uranium is extracted by *Navoiuran*. Currently, *Navoiuran* operates 18 uranium deposits through three mining divisions located in the Navoi, Samarkand, and Bukhara regions of Uzbekistan. Key prospective [sites](#) for uranium extraction include North Kukhnur, Aktau, South-East Jengeldi, Shimoliy Bukinoy, Ingichki, Agron, Nurkon, Ziokon, and Tukaktau, among others.

A trend of increasing uranium production has been observed, growing from 2,385 tons in 2015 to 3,560 tons in 2022. According to [Presidential Decree No. PP-319](#) of July 14, 2022, «On measures to increase uranium mining and processing volumes and transform the State Enterprise Navoiuran in 2022—



2030,» *Navoiuran* aims to expand the uranium mineral resource base to 100,000 tons and double the volumes of uranium mining and processing. Additionally, President Shavkat Mirziyoyev has set an ambitious target of [7,100 tons](#) of uranium production by 2030, to be achieved through investment projects involving foreign companies.

In Uzbekistan's uranium sector, the French company *Orano* has established a joint venture with Uzbekistan's State Geology Committee, named [Nurlikum Mining LLC](#), which is engaged in exploration in the Jengeldi area of the Navoi region. In November 2022, *Orano*, the State Geology Committee, and *Navoiuran* signed a strategic cooperation agreement to form an alliance for developing new uranium mines in Uzbekistan. Additionally, Japanese and Chinese joint ventures are active in the republic's uranium sector, particularly focusing on extracting uranium from black shale deposits. It is notable that all uranium mined in Uzbekistan is exported to global processing companies, such as *Orano* (France), *ConverDyn* (USA), *Cameco* (Canada), and *CNEIC* (China).

Cooperation with *Rosatom* could theoretically involve joint ventures for uranium mining and processing, leveraging Uzbekistan's resources and *Rosatom*'s technological expertise. Since Russian reactors are often designed to operate with fuel assemblies tailored to specific technologies, access to Uzbekistan's uranium deposits could hold strategic significance for Russia. Historically, there have been attempts by Russian entities to establish a foothold in this sector. For instance, in January 2006, *Techsnabexport* signed a memorandum with NMMC and the State Geology Committee to create a joint venture for uranium mining at the Aktau deposit. Initially planned to commence operations by late 2006, the venture failed to materialize after four years of negotiations, and Russia exited the project in mid-2010 [15]. Russia also proposed enriching Uzbekistan's mined uranium through the «International Uranium Enrichment Center» at the Angarsk Electrolysis Chemical Plant but failed to gain Uzbekistan's interest. For now, it appears that Russia has focused its efforts on uranium projects in Kazakhstan, though it is unlikely to abandon attempts to penetrate Uzbekistan's uranium market.

A crucial aspect of *Rosatom*'s long-term presence in Uzbekistan's emerging nuclear sector is its contribution to workforce development, essential for establishing a sustainable nuclear energy industry. In 2019, the first overseas branch of the National Research Nuclear University MEPhI was opened in Tashkent. According to public sources, the Tashkent branch produced its second cohort of bachelor's graduates this year—[55 specialists](#) for Uzbekistan's nuclear energy sector, many of whom plan to continue their education at the master's level. Uzbek specialists are trained under Russian programs, preparing them for the operation and maintenance of Russian-designed nuclear installations. Additionally, *Rosatom* is assisting Uzbekistan in developing national standards and practices for nuclear regulation. Uzbekistan represents the second pillar, after Kazakhstan, in *Rosatom*'s Central Asian strategy to deepen dependence on the Russian nuclear complex in the region.

For *Rosatom*, **Kyrgyzstan** represents a potential market for nuclear technologies and services, including the construction and maintenance of nuclear power plants, nuclear fuel supply, and services in training and support. Additional areas of bilateral cooperation include uranium tailings remediation and nuclear medicine.

According to the Kyrgyz Energy Calculation Center, Kyrgyzstan [consumed](#) 17.2 billion kWh of electricity in 2023, an 8% increase from 15.9 billion kWh in 2022. Total electricity losses in 2022 amounted to approximately 2.4 billion kWh [17]. Consumption is expected to continue rising. Presidential Decree No. UP-178 of July 24, 2023, «On the State of Emergency in the Kyrgyz Energy Sector,» declared an energy emergency from August 1, 2023, to December 31, 2026. Due to shortages, Kyrgyzstan periodically imports electricity from Turkmenistan, Kazakhstan, and Russia.

Kyrgyzstan possesses significant mineral resources, including uranium deposits. From 2019 to 2022, the country implemented a moratorium on uranium mining. *Rosatom*'s participation in potential uranium mining projects in Kyrgyzstan could facilitate access to these resources, securing supply chains

for nuclear fuel and other raw materials essential for operational activities. The Kyrgyz government views uranium as a potential future source of foreign currency through exports. Reports have also surfaced about Kyrgyzstan's intention to send 50 individuals annually to Russia for training in rare earth metals and uranium development.

Kyrgyzstan has had no plans to construct nuclear power plants, with its energy needs historically met by hydropower. Approximately 90% of Kyrgyzstan's electricity is generated from hydropower, with the remaining 10% coming from thermal power plants. The country is exploring options to diversify its energy mix and reduce its reliance on hydropower, which is vulnerable to seasonal fluctuations. In this context, *Rosatom's* expertise in nuclear energy is of interest to Kyrgyzstan as a potential avenue for developing a stable and reliable energy source, enhancing energy security.

The idea of building small modular nuclear power plants has received support from Kyrgyz President Sadyr Japarov, as it could address the issue of insufficient generation capacity. In January 2022, during World EXPO 2022 in the United Arab Emirates, *Rosatom* and the Ministry of Energy of Kyrgyzstan signed a memorandum of cooperation for constructing small nuclear power plants. Similar to Uzbekistan, *Rosatom* has proposed the RITM-200N reactor for Kyrgyzstan. In January 2023, *Rosatom* announced it was exploring the possibility of building a two-unit RITM-200 facility in the country. However, the high seismic activity in Kyrgyzstan and neighboring regions poses significant challenges for determining an optimal site for such a facility. According to Kyrgyz officials, the project for a small modular nuclear power plant might not materialize for at least another 10 years.

A significant issue in Kyrgyzstan is related to uranium tailings. Systematic neglect of radioactive waste disposal during Soviet times and the post-independence period has resulted in severe environmental contamination. For example, Mailuu-Suu in the Jalal-Abad region in southern Kyrgyzstan hosts more than 20 uranium tailing sites containing nearly 2 million cubic meters of toxic material. Another legacy site is Min-Kush in the

neighboring Naryn region. Numerous smaller sites across Kyrgyzstan still require cleanup efforts [6].

Russia continues remediation activities in Kyrgyzstan under the Interstate Target Program «Reclamation of Uranium Production Facilities,» implemented under the Commonwealth of Independent States (CIS) framework. As part of this program, *Rosatom* has completed reclamation work at five sites in Kyrgyzstan and Tajikistan and continues work on two others.

Journalists have highlighted that Russia may use Kyrgyzstan to [replenish](#) its uranium reserves by taking «uranium tails»—depleted uranium hexafluoride—for further processing. These materials can be enriched to the necessary level for use in nuclear fuel assemblies or buried in Russia, circumventing legal restrictions. Such developments offer a win-win scenario for *Rosatom*, tying Kyrgyzstan to Russian nuclear services in the long term.

Like in other Central Asian countries, *Rosatom* is promoting nuclear technologies in Kyrgyzstan that are not directly related to constructing and operating reactors. In 2023, *Rosatom* signed a [memorandum](#) of cooperation with Kyrgyzstan on applying nuclear technologies in healthcare. The agreement includes establishing a radiopharmaceutical pharmacy and a molecular imaging center at the National Center of Oncology and Hematology (NCOH). These facilities aim to implement advanced diagnostic and treatment methods for oncology and other diseases. According to *Rosatom's* official website, the company «donated a GT-4K technetium-99m generator» to NCOH. This generator is used for diagnostic procedures in oncology, cardiology, neuroendocrinology, and other fields. By developing nuclear medical infrastructure, *Rosatom* not only addresses healthcare needs but also creates additional financial opportunities for itself.

The development of the nuclear industry requires highly qualified personnel. The lack of nuclear energy specialists in Kyrgyzstan, who could manage and maintain nuclear power plants, creates a scenario where, if a nuclear power plant is built, it would likely be operated by Russian nuclear

specialists, similar to the arrangement for nuclear power plants in Turkey. Additionally, through its projects, *Rosatom* could influence Kyrgyzstan's regulatory framework in the nuclear energy sector, facilitating further integration of the energy sectors of the two countries.

Despite discussions about nuclear power plants, it seems that the Kyrgyz government remains committed to harnessing the vast [potential](#) of hydropower, solar, and wind energy to promote economic growth, ensure uninterrupted electricity supply, and achieve net-zero emissions by 2050. Moreover, Kyrgyzstan and Tajikistan are part of the «Central Asia – South Asia» (CASA-1000) project, which focuses on exporting hydropower from these countries to Afghanistan and Pakistan, keeping hydropower development a priority. Simultaneously, *Rosatom* is [working](#) with Kyrgyz authorities on an investment project to construct renewable energy facilities in Kyrgyzstan with a capacity of up to 1 GW. The relevant agreement between *Rosatom's* wind energy division and Kyrgyzstan's Ministry of Energy was signed in March of this year.

In 2023, the initiative group «Green Kyrgyzstan» conducted a survey on nuclear power plant construction in the country. Over 3,000 respondents from all regions of Kyrgyzstan, aged 25 to 75 and representing various social backgrounds, participated. They were asked to answer 28 questions. According to the [“Analysis of the Survey to Determine the Level of Acceptance of the Initiative for Building a Nuclear Power Plant in Kyrgyzstan”](#) most respondents (89%) associated nuclear power plant construction with electricity shortages. However, more than half (78.9%) believed the country was not ready to build a nuclear power plant. Over 60% of participants favored imposing a moratorium on nuclear power plant construction.

The public's unfavorable perception of nuclear energy in Kyrgyzstan, stemming from low awareness, negative associations with nuclear accidents, fears of radioactive leaks, and a lack of trust—primarily due to nuclear waste disposal during the Soviet era—will remain a significant obstacle to developing nuclear energy in the country. The question of whether *Rosatom* has ambitions to

establish nuclear energy generation in **Tajikistan** remains open. Most of Tajikistan's electricity is produced by hydropower plants, with the country's hydropower potential estimated at 527 billion kWh annually. Official statistics indicate total electricity production in 2020 was 19.6 billion kWh, while consumption stood at 18.1 billion kWh. According to the [Tajik energy ministry](#), electricity production reached 20.6 billion kWh in 2021, 21.4 billion kWh in 2022, and 21.7 billion kWh in 2023.

As with the region overall, Tajikistan faces challenges with electricity shortages and outdated energy infrastructure. Approximately 40% of the country's electricity is used for aluminum smelting in Tursunzoda [13]. According to the *Barki Tojik* energy holding, Tajikistan exported 2.6 billion kWh of electricity in 2023, with 1.6 billion kWh sent to Afghanistan and the remainder to Uzbekistan and Kazakhstan. At the same time, Tajikistan imported [18.6 million kWh](#) of electricity from Uzbekistan and Kyrgyzstan last year. Understandably, Tajikistan shows little interest in pursuing nuclear energy development.

The Republic of Tajikistan had plans to launch a research reactor. The Argus nuclear research reactor, built in 1991 in Dushanbe, was designed to operate on 21% enriched uranium but was never loaded with fuel. Although officials initially expressed interest in acquiring fuel and operating the reactor, in 2007 Tajikistan requested the International Atomic Energy Agency (IAEA) to dismantle the reactor and replace it with a particle accelerator. In 2015, President Emomali Rahmon approved the reconstruction of the Argus reactor. As part of the 2016–2020 State Program for the restoration and subsequent use of the «[Argus-FTI](#)» reactor, both Russian and Chinese specialists were involved in its reconstruction. The updated Argus-FTI was initially planned to be operational by 2020, but delays have persisted. The program's primary funding sources included investments and financial support from China. The total cost for restoring and launching the nuclear facility was estimated at \$35 million.

In November 2023, during a visit by Tajikistan's president to Moscow, an agreement was signed between the National Academy of Sciences of

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Tajikistan and the Kurchatov Institute Research Center. The agreement outlined joint research in nuclear technologies. Currently, discussions are underway regarding the potential restoration of the reactor to support nuclear medicine, particularly for producing molybdenum-99 and strontium-89 isotopes, which are critical for treating cancer.

Although Tajikistan currently has no operational nuclear reactors and does not extract uranium ore, the country still houses significant sources of radiation as a legacy of the Soviet era. Tajikistan has the largest number of nuclear waste dumps in the region. The government collaborates closely with the IAEA to identify the exact locations of these dumps, optimize waste management strategies, and raise public awareness about the risks.

One of the primary areas of cooperation between Tajikistan and *Rosatom* is the decontamination of radioactive waste sites. In July 2014, the government of Tajikistan approved the [National Concept for the Rehabilitation of Uranium Ore Processing Tailings Storage Sites for 2014–2024](#). According to the United Nations Economic Commission for Europe (UNECE), as of 2017, about 55 million tons of radioactive waste from Soviet-era uranium mining activities were stored in 10 uranium tailings sites spanning 170 hectares in northern Tajikistan. Most of this waste consists of processing residues stored at unsecured facilities [8]. The largest dump, holding approximately 12 million tons of radioactive waste, is located in Taboshar, Sughd Province, north of Khujand. *Rosatom* reported the completion of decontamination efforts at this site in October 2023.

Russia and Tajikistan signed their first agreement on cooperation in the peaceful use of nuclear energy, formalized by Tajikistan's government resolution No. 103 on February 25, 2017. In addition to addressing uranium tailings, the agreement established a legal framework for new research reactors, waste management, uranium extraction, and nuclear energy education.

Tajikistan receives international assistance through the IAEA for various projects, including the proper disposal of uranium waste and efforts to ensure material safety. *Rosatom* has [reported](#) the decontamination of four sites containing millions of tons of radioactive material in Istiklol, Adrasmon, and the Bobojon Gafurov District of Sughd Province.

At the end of June 2024, Russian Prime Minister Mikhail Mishustin signed an order allocating [1.56 billion rubles](#) (approximately \$11.3 billion) between 2025 and 2028 for *Rosatom* to clean up uranium-contaminated land in Tajikistan.

Although *Rosatom* has declared its [willingness](#) to discuss building a nuclear power plant (NPP) in Tajikistan, the cautious tone from the Russian side reflects an understanding that such a project is currently not viable. While these statements remain declarative for now, they suggest that, should preparatory work in other Central Asian republics succeed and political will in Tajikistan be secured through diplomatic leverage, such declarations could eventually become reality. At this stage, *Rosatom* finds it more advantageous to negotiate the supply of mini-hydropower plants to Central Asian countries, including Tajikistan. Notably, mini-hydropower projects are among the non-nuclear activities pursued by *Rosatom* as part of its business diversification strategy.

In line with its policy of «permanent neutrality,» **Turkmenistan** focuses its diplomatic activities more on disarmament and non-proliferation of nuclear weapons than on developing civilian nuclear energy. Electricity production in Turkmenistan relies entirely on natural gas. According to the «Presidential Program for the Socio-Economic Development of Turkmenistan for 2022–2028,» the country plans to increase total electricity production to [37.5 billion kWh](#) by 2028, representing a 22.5% increase compared to 2022. Furthermore, Turkmenistan has declared at the state level its serious intentions to transition to “clean” energy as a key goal of its economic strategy.

Turkmenistan has no nuclear power plants or research reactors. It joined the IAEA only in 2016 but is a party to numerous foundational international agreements in the nuclear sector, including the Treaty on the Non-Proliferation of Nuclear Weapons (1994), the Comprehensive Nuclear-Test-Ban Treaty (1996), the Convention on the Physical Protection of Nuclear Material (2005), the International Convention for the Suppression of Acts of Nuclear Terrorism (2008), and the Treaty on a Nuclear-Weapon-Free Zone in Central Asia (2006) [3]. Since 2020, the country has cooperated with the IAEA on developing capacity in nuclear law and



safety. In 2023, Turkmenistan joined the IAEA's Early Notification and Assistance Conventions for nuclear emergencies. These actions likely align with preparations for the construction of nuclear power plants in neighboring countries.

Meanwhile, *Rosatom* has shown growing interest in Turkmenistan, which possesses significant natural gas reserves but has declared efforts to diversify its energy sources. Thus, *Rosatom*'s interests align with Turkmenistan's exploration of nuclear energy as a clean and efficient alternative. In theory, *Rosatom*'s involvement could facilitate the transfer of advanced nuclear technologies, potentially extending to areas such as medical isotopes and nuclear medicine research.

For *Rosatom*, participation in energy projects in Turkmenistan represents an opportunity to expand its market presence. Considering Turkmenistan's economic plans and relatively undeveloped nuclear sector, *Rosatom* has a chance to establish itself as a key player in the country's energy landscape by providing technological solutions to support Turkmenistan's industrial growth. This could bolster sectors such as chemical manufacturing, metallurgy, and other areas of the economy.

It appears that in Turkmenistan, *Rosatom* is currently focusing on non-nuclear-related initiatives. For instance, *Rusatom Infrastructure Solutions*, a subsidiary of the corporation, is ready to offer the country advancements in [SMART CITY](#) technologies—digital systems for highly efficient territorial management. According to company officials, their portfolio includes «solutions for urban management, utility infrastructure, resource supply, urban economy, tourism and hospitality development, public engagement, entrepreneurial activity development, intelligent transportation systems, and more.» In this way, *Rosatom* secures its presence in the municipal and logistics sectors of Turkmenistan by offering digitalization solutions.

Among the potential areas of collaboration is the traditional focus of Russian nuclear diplomacy—personnel training and educational programs, which *Rosatom* routinely supports in other countries. Although Turkmenistan does not currently consider constructing any nuclear facilities on its

territory, such projects could emerge in the future. Turkmenistan's involvement in regional nuclear energy projects remains minimal. Establishing a nuclear sector in Turkmenistan would require the development of a modern national regulatory framework.

Russia positions itself as a solution to the acute energy deficit in Central Asia, with *Rosatom* being a vital part of these efforts. Russia is involved in implementing power projects and modernizing existing energy facilities in Central Asian countries, influencing electricity supplies to regional markets.

It is essential to recognize that the global nuclear market offers limited supply. Only a short list of companies worldwide can provide specific services in the nuclear field. Thus, the global nuclear generation market is built on strategic partnerships. *Rosatom*'s investments in Central Asia are driven by long-term considerations, particularly in the context of Russia's foreign policy objectives. Central Asia has long been perceived by global players as a sphere of Russian influence, and *Rosatom*'s presence in the region helps reinforce and strengthen Moscow's existing alliances. By deepening economic and energy ties with Central Asian countries, Russia counters the influence of other regional players, such as China and the United States.

Given the above, some potentially challenging issues for *Rosatom* in deepening relations in the nuclear sector with Central Asian countries include fluctuations in global uranium prices, potential legislative changes within Central Asian states, shifts in public opinion on nuclear generation and partnerships with a sanctioned country, and the broader geopolitical environment. Nevertheless, it seems likely that Russia will attempt to expand cooperation into new areas, such as renewable energy, nuclear safety, and environmental sustainability. The global focus on clean energy creates additional commercially appealing arguments for deepening collaboration with *Rosatom* in low-carbon technologies and sustainable development.

The expansion of *Rosatom*'s presence in Central Asia carries significant implications for regional dynamics. On the one hand, the corporation's investments contribute to the development of nuclear

energy infrastructure in the region, which could help meet growing energy demands, reduce reliance on fossil fuels, and mitigate environmental challenges. This argument for strengthening energy security is appealing and well-grounded for the societies and governments of Central Asian countries.

However, the increasing influence of *Rosatom* in Central Asia raises concerns among other regional players, particularly those wary of Russia's intentions. The corporation's dominance in the nuclear-industrial sector could potentially lead to a concentration of influence, creating dependencies that might negatively impact the sovereignty of Central Asian nations. Furthermore, *Rosatom's* involvement in critical nuclear projects could provoke geopolitical tensions between rival powers, further complicating the regional security landscape.

Thus, the Kremlin's key interest, executed through *Rosatom*, lies in securing long-term political influence in Central Asia by deepening economic ties, particularly in the strategic sector of nuclear energy. For Central Asian governments, the strategic challenge lies in balancing Russia's energy influence by diversifying nuclear technology suppliers. This approach could also serve as a safeguard against unforeseen circumstances, such as heightened sanctions on Russia's nuclear-industrial complex by Western nations in response to its ongoing war against Ukraine.

Discussions about mechanisms and tools to limit the Russian government's ability to generate revenue from *Rosatom's* activities—through sanctions and export controls on the company—while avoiding destabilization of segments of the global nuclear energy market, continue to circulate in U.S. legislative circles. For example, the draft *Rosatom Sanctions Enforcement Act* ([H.R. 8046](#)) proposes the development of a strategy to replace *Rosatom* and other Russian nuclear suppliers with alternatives from the United States and its allies and partners. It also aims to transition away from *Rosatom* as a primary provider of safety and operational services for existing and newly built nuclear reactor fleets.

Currently, the main hesitation among international partners regarding direct sanctions on *Rosatom*

stems from the substantial dependence of entire segments of the global nuclear energy industry on Russian nuclear technologies. As noted in a [press release](#) by Ukraine's Ministry of Energy, in May 2024, the U.S. House Foreign Affairs Committee supported bills imposing sanctions on Russian *Rosatom* and individuals threatening the safety of the Zaporizhzhia Nuclear Power Plant. This move sends an important signal but requires further practical steps to deprive Russia of one of its most sanction-resistant pillars.

While sanctions against Russia in other industries are beginning to show some success, the global shift toward alternative options in the nuclear energy sector will require additional time. Russia's reputation in nuclear energy has suffered significantly due to its nuclear blackmail involving threats of weapons of mass destruction and its "nuclear piracy" involving the seizure of Ukraine's nuclear energy facility. Reducing *Rosatom's* share in the global nuclear energy market is a long-term goal that can be achieved by encouraging Central Asian countries to collaborate with alternative nuclear technology suppliers. This will require the establishment of conducive political, economic, financial, and educational conditions.

Despite its strategic interests and investments in Central Asia, *Rosatom* faces several challenges that could affect its long-term prospects in the region. These include competition from other global nuclear suppliers, regulatory uncertainties, technological barriers, and geopolitical risks. Central Asian countries must carefully balance their cooperation with *Rosatom* to maximize benefits while safeguarding their own interests and sovereignty. The future of *Rosatom* in Central Asia will depend not only on shifting market conditions but also on the determination of other global players to capitalize on the geopolitical situation created by Russia's aggression in Europe.

Given the unfavorable political and reputational conditions facing Russia's nuclear-industrial complex, China could emerge as an alternative nuclear technology supplier to balance sovereignty risks for Central Asian countries. In particular, China's capabilities in the small modular reactor (SMR) sector position it as a viable competitor. Russia's declining reputation as a reliable partner,

including in nuclear energy, creates clear advantages for the China National Nuclear Corporation (CNNC). It is likely that Chinese leadership will leverage these advantages in the future.

An analysis of *Rosatom's* activities in Central Asia reveals a multidimensional approach, encompassing investments in nuclear power plants, partnerships with local governments, and efforts to foster cooperation in the region's nuclear energy sector. Flagship projects, such as the construction of nuclear power plants in Kazakhstan and Uzbekistan, highlight *Rosatom's* ambition to establish a solid foundation for a long-term presence in Central Asia's energy sector. Furthermore, the corporation's collaboration with Central Asian states in the transfer of nuclear technologies and workforce training demonstrates a long-term vision for the commercial potential of nuclear energy in the region.

Thus, *Rosatom's* interests in Central Asia are driven by a combination of geopolitical, economic, and security considerations. Investments in the region's nuclear sector aim to secure stable and affordable uranium supplies for its expanding nuclear energy portfolio. Through partnerships and joint ventures with Central Asian countries, *Rosatom* also seeks access to new markets for its nuclear technologies and services, enabling the company to pivot away from the European nuclear energy market and ensure its long-term economic stability.

The expansion of *Rosatom's* presence in Central Asia raises concerns about regional stability, nuclear proliferation, and environmental risks. Given the behavior of Russia's leadership on the international stage, *Rosatom's* activities in Central Asia are unlikely to align with global non-proliferation goals and sustainable development principles.

It is evident that *Rosatom* will continue to expand its footprint in the region. The corporation's investments have the potential to reshape the regional energy landscape, enhance cooperation, and strengthen Russia's influence. However, these developments also raise critical questions regarding the safety and long-term viability of nuclear energy projects in Central Asia.

As noted in the study by the German Council on Foreign Relations, «*Rosatom: A Difficult Target. Russia's Global Energy Role*» (2023), despite

some canceled contracts in Europe following Russia's invasion of Ukraine, *Rosatom's* portfolio of foreign orders remains relatively stable, valued at approximately \$200 billion according to various estimates [10]. While Russia's dominance in energy exports to the EU has diminished, its nuclear energy sector continues to exert significant influence in Europe. Additionally, concerns about *Rosatom's* role in aiding other sectors of the Russian economy to evade or mitigate the impact of sanctions, such as through the supply of microchips and electronics, are well-founded. Against this backdrop, persuading countries in other regions to abandon cooperation with *Rosatom* remains challenging.

Paradoxically, over two years into the war, *Rosatom* and most of its subsidiaries have avoided being included on the sanctions lists of Ukraine's partner countries, despite substantial evidence of their direct involvement in planning and supporting operations under occupation in Ukraine's nuclear-industrial facilities, as well as the militarization of nuclear power plants—actions strictly prohibited under international law. Consequently, by the decree of the President of Ukraine No. 57/2023, *Rosatom* and several entities within its ecosystem were added to the list of legal entities subject to special economic and other restrictive measures (sanctions) for a period of 50 years. Ukraine continues to push for the de-occupation of the Zaporizhzhia Nuclear Power Plant (ZNPP), engaging in systematic diplomatic efforts, including through the International Atomic Energy Agency (IAEA).

The occupation of the Chornobyl zone in the initial months of the war, along with the ongoing occupation and militarization of the ZNPP, vividly illustrates that while Russia is unlikely to conduct direct missile or ballistic strikes on nuclear facilities, its leadership is fully prepared to undermine international nuclear safety norms and engage in provocations. Under such circumstances, Russia cannot be considered a reliable provider of nuclear technology, and *Rosatom* cannot be viewed purely as a commercial player in the global nuclear market. Amid the ongoing war, the risks to state sovereignty and governance will remain pressing concerns for any potential international partner of *Rosatom*, regardless of their geographic location, and these risks are expected to grow over the long term.

### Список використаних джерел:

1. Aris, Ben. 2023. "Rosatom's nuclear exports surge in 2022." Intellinews.com / URL: <https://www.intellinews.com/rosatom-s-nuclear-exports-surge-in-2022-270128>
2. Bloomberg. "Russia Uranium Deal Caused Manager Exodus at Kazakh Mining Giant" *Bloomberg.com*, May 16, 2023 / URL: <https://www.bloomberg.com/news/articles/2023-05-16/russia-uranium-deal-caused-manager-exodus-at-kazakh-mining-giant>
3. Country Profile: Turkmenistan / URL: <http://cns.miis.edu/nam/index.php/site/showProfile/109>
4. Fact Sheet: Tajikistan Overview. 2018. The Nuclear Threat Initiative / URL: <https://www.nti.org/analysis/articles/tajikistan-overview/>
5. IAEA. World Distribution of Uranium and Thorium Deposits: Uzbekistan / URL: <https://infcis.iaea.org/UDEPO/Report/CountryReports>
6. Jozwiak, Rikard, and Chris Rickleton. 2024. "Kyrgyzstan Seeks a Restart of Uranium Mining, and a Russian-Built Nuclear Plant." RFE/RL / URL: <https://www.rferl.org/a/kyrgyzstan-uranium-mining-rosatom-russia-nuclear-plant/32845058.html>
7. KEGOC. 2024. «KEGOC прозвітував про роботу у 2023 році на колегії Міністерства енергетики РК» (рос.) / URL: <https://www.kegoc.kz/ru/press-center/press-releases/163167/>
8. Nuclear and Radiation Safety Agency (State Regulatory Authority), Republic of Tajikistan. National Report of Tajikistan for the 6th Review Meeting. October 2017 / URL: [https://www.iaea.org/sites/default/files/national\\_report\\_of\\_tajikistan\\_for\\_the\\_6th\\_review\\_meeting\\_-\\_english.pdf](https://www.iaea.org/sites/default/files/national_report_of_tajikistan_for_the_6th_review_meeting_-_english.pdf)
9. Nuclear Energy Agency and International Atomic Energy Agency. Uranium 2020: Resources, Production and Demand. OECD, 2020. / URL: [https://nucleus.iaea.org/sites/connect/UPCpublic/Documents/7555\\_uranium\\_-\\_resources\\_production\\_and\\_demand\\_2020\\_web.pdf](https://nucleus.iaea.org/sites/connect/UPCpublic/Documents/7555_uranium_-_resources_production_and_demand_2020_web.pdf)
10. Prokopenko, Alexandra. 2023. "Rosatom: A Difficult Target. Russia's Global Energy Role." German Council on Foreign Relations / URL: <https://dgap.org/en/research/publications/rosatom-difficult-target>
11. Rosatom in Central Asia. 20 March 2024 / URL: <https://atommedia.online/en/reference/rosatom-v-centralnoj-azii/>
12. Szulecki, Kacper, and Indra Overland. 2023. "Russian nuclear energy diplomacy and its implications for energy security in the context of the war in Ukraine." *Nature Energy*, Volume 8 (February), 413-421. <https://doi.org/10.1038/s41560-023-01228-5>
13. World Nuclear Association. Uranium in Tajikistan. 2022 / URL: <https://world-nuclear.org/information-library/country-profiles/countries-t-z/tajikistan>
14. World Nuclear Association. Uranium in Uzbekistan. Updated April 2, 2024 / URL: <https://world-nuclear.org/information-library/country-profiles/countries-t-z/uzbekistan#electricity-sector>
15. АТ «НАК «КАЗАТОМПРОМ». 2023. "Інтегрований річний звіт АТ «НАК «КАЗАТОМПРОМ» за 2023 рік" (рос.). Kazatomprom / URL: [https://www.kazatomprom.kz/storage/06/kazatomprom\\_iar\\_2023\\_rus.pdf](https://www.kazatomprom.kz/storage/06/kazatomprom_iar_2023_rus.pdf)
16. Міністерство енергетики Республіки Узбекистан. Показники вироблення електроенергії в країні за 2016–2023 рр. (рос.). 24 січня 2024 року / URL: <https://minenergy.uz/ru/news/view/3617>
17. Національний статистичний комітет Киргизької Республіки. Виробництво та розподілення електроенергії у 2022 році (рос.). 07 вересня 2023 року / URL: <https://stat.gov.kg/ru/news/proizvodstvo-i-raspredelenie-elektroenergii-v-2022-godu/>
18. Міністерство енергетики та водних ресурсів Республіки Таджикистан. Гідроенергетичні ресурси Таджикистану / URL: [https://www.mewr.tj/?page\\_id=614](https://www.mewr.tj/?page_id=614)
19. Президент Республіки Узбекистан: Атомна енергетика розвиватиметься у мирних цілях (рос.). 10 липня 2018 року. Офіційний вебсайт Президента Узбекистану / URL: <https://president.uz/ru/lists/view/1894>



**Sergii Mokreniuk,**  
*serviceman of the Armed Forces of Ukraine*

## Policy of countering Russian war crimes in Ukraine

*International humanitarian law no longer exists. As a system of principles and values created and accepted by civilized countries of the world through mutual agreements, international humanitarian law was crushed by the occupation and subsequent annexation by the Russian Federation (hereinafter referred to as the RF) of the Crimean peninsula in 2014. Since February 2022, the murders, rapes and other crimes committed by Russian soldiers in Ukraine against the civilian population and prisoners of war have proven that the Russian Federation uses war crimes as a method of waging war, as a tool for subjugating Ukrainians. Moreover, the extermination of Ukrainians is included in the circle of not only possible expected, but also desired results of Russian expansion. International humanitarian law as a social code of a civilized society has been crossed out by the state policy of the authoritarian aggressor state.*

Limiting the suffering of the victims of war, reducing its terrible consequences for those who do not take part in it, by means of international law has proven to be an unattainable goal. Despite the obvious illegality of its actions, the Russian Federation does not care about the opinions of other countries regarding its territorial claims. At the same time, the indecision and desire of individual countries to receive personal economic benefits by ignoring the terrible crimes of Russian soldiers in Ukraine during the ten years of the Russian-Ukrainian war have led to a situation where the murders of tens of thousands of civilians in the center of Europe are perceived as commonplace, turning into normality. Russia, in turn, perceives this exchange of economic resources for time and the weakness of the international community as its opportunity. So far, the reaction of the civilized world during these ten black years of war (2014-2024) has not changed either the intentions of the Russian Federation or the results of its policy - the Russian Federation is completely unpunished in seizing Ukrainian territories and killing Ukrainians every day.

Diplomatic and economic pressure measures have not achieved the declared goal. International humanitarian organizations have been unable to even get to places where prisoners are being held in the Russian Federation. Moreover, international organizations have been powerless to stop the torture of prisoners and civilian hostages, to stop

extrajudicial executions, etc.

Has the arsenal of possible actions of civilized countries of the world been exhausted? In this article, I propose to draw attention to the tools for countering Russian aggression that comply with the legal principles of civilized societies and which, unfortunately, have not yet been fully used by the states of the world.

War crimes are serious violations of IHL that encroach on important values and moral and ethical principles of society, have grave consequences for the victim or damage to protected objects. These crimes always encroach not only on individuals, but also on the international legal order. They affect the lives of people, countries, and societies in the long term. Therefore, these crimes are not subject to statutes of limitations, and the persons who committed them are not subject to amnesty.

According to the Office of the Prosecutor General of Ukraine, from 2022 to the present, the number of war crimes committed by the Russian Federation in Ukraine has exceeded 147 thousand registered episodes [1].

Already in early 2023, the Independent International Commission of Inquiry into Violations in Ukraine noted [2] that the evidence it collected indicates that numerous violations of international human

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rights law and international humanitarian law have been committed by the Russian authorities in many regions of Ukraine and in the Russian Federation. Many of these violations amount to war crimes and include intentional killings, attacks on civilians, unlawful deprivation of liberty, torture, rape, forcible displacement and deportation of children. The Commission concluded that the killings of civilians in areas of Kyiv, Chernihiv and Sumy regions under the military control of the Armed Forces of the Russian Federation were not random but reflected a broader phenomenon. In areas under the control of the Russian authorities in Ukraine, the Commission documented a systematic pattern of war crimes. Violations were also committed against persons deported from Ukraine to the Russian Federation.

Analysis of public data on the situation in the Kharkiv, Luhansk, Donetsk, Zaporizhia, Mykolaiv, Kherson regions of Ukraine confirms the conclusions of the Independent Commission on Kyiv, Chernihiv and Sumy regions regarding the systematic nature and scale of the Russian Federation's crimes in Ukraine.



*Photo: Civilians Andrii and his wife Valeria, who were shot by Russian soldiers. Photo taken by a Ukrainian quadcopter. Source: [https://www.npu.gov.ua/news/vyzhyly-zavdiaky-kyadrokopteru-zsu-slidchi-politsii-kharkivshchyny-oholosyly-pro-pidozru-rosiiskomu-viiskovomu-u-rozstrilipodruzzhia?fbclid=IwAR0EPm0e9yBpN7UyC\\_Qu7uLy3yQl9rBHxmgThpkdp15M0Zl2smR-CqCIPZE](https://www.npu.gov.ua/news/vyzhyly-zavdiaky-kyadrokopteru-zsu-slidchi-politsii-kharkivshchyny-oholosyly-pro-pidozru-rosiiskomu-viiskovomu-u-rozstrilipodruzzhia?fbclid=IwAR0EPm0e9yBpN7UyC_Qu7uLy3yQl9rBHxmgThpkdp15M0Zl2smR-CqCIPZE)*

The geographical scale, number and severity of the Russian Federation's war crimes in Ukraine undoubtedly constitute, in aggregate, signs of a certain state policy of the Russian Federation, which is anti-human in nature. The desire to commit war crimes is currently inherent in Russian society. Calls for their commission are heard from all Russian mass media, speeches by both national and local

politicians, Russian Telegram channels of so-called experts, military intelligence officers, etc.

It is easy to argue that murders, kidnappings, rapes, torture, gender-based violence, etc. are committed by Putin. However, this is a convenient and irresponsible simplification. After all, each individual war crime is a manifestation of the will of a specific serviceman of the Russian Armed Forces. 147,000 (one hundred forty-seven thousand) war crimes is not just a figure that I mentioned at the beginning of the article, and I draw the reader's attention again. This is a guideline for the minimum number of specific soldiers and officers of the Russian Army who killed, kidnapped, raped, tortured, etc. One hundred forty-seven thousand citizens of the Russian Federation who have a surname, first name, military rank and position, who, after the end of the war, will carry their «experience» into the peaceful life of their country and the region as a whole.

On June 23, 2022, at about 12:00, civilians Andriy and his wife Valeria drove a Mazda car from the village of Velyka Komyshevukha towards the city of Bakhmut. At the intersection of the villages of Velyka Komyshevukha - Grushuvukha - Barvinkove, Russian servicemen shot the car with small arms. However, the woman and man survived. They got out of the car, and the Russians shot the couple a second time with small arms and a large-caliber machine gun from an infantry fighting vehicle. Ukrainian servicemen attached a piece of paper with the inscription «Follow me» to a quadcopter and, thanks to the quadcopter, took Valeria out of the area of the shelling and through a minefield. Literally immediately, Russian servicemen approached the shot car. They believed that they had killed the man, so they threw his body into a pit. Andriy lay unconscious in the pit for more than a day. He regained consciousness due to the rain, spent the night in the trunk of his car, and, as investigators say, later slowly made his way to Ukrainian positions.

Later, Ukrainian investigators established the location of the armored infantry vehicle, and during the inspection, they seized 10 cartridges from a large-caliber machine gun (30 mm). Thus, the investigators had a limited amount of evidence: the testimonies of two victims, seized cartridges, and

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a video recording of the shooting recorded by a quadcopter camera.

Later, investigators received data from the Defense Forces about the unit that probably occupied positions in the area of the crime scene and whose servicemen could have been involved in its commission. The painstaking work of the cyberpolice units together with the Defense Forces allowed them to identify the company commander of the motorized rifle battalion of the Russian army, who in a telephone conversation with his relatives carefully described how the company under his command shot a civilian car with a woman and a man.

In his conversation, Senior Lieutenant Kerzhaliev Klim Dmitrievich, a 26-year-old citizen of the Russian Federation from Moscow, described in detail how a woman escaped from a shot car, and later a man, whom they believed to be killed. The investigators established all the data necessary to present Senior Lieutenant Kerzhaliev K.D. with reasonable suspicion of committing a war crime [3].

The crime was solved thanks to close cooperation between investigators and representatives of the Defense Forces of Ukraine, who had key information

necessary to establish all the circumstances of the crime. This is a description of one of the few examples of successful interaction between the Armed Forces of Ukraine and the police: the identity of the criminal was established, his guilt was proven. Despite the fact that Senior Lieutenant Kerzhaliev Klim Dmitrievich (and his subordinates) have not yet been detained and are not yet serving their sentence, sooner or later this will happen. In a sense, we can already talk about the restoration of justice - we could not prevent the commission of a crime, but at least we were able to properly investigate it.

“The High Contracting Parties undertake to respect and ensure respect for this Convention in all circumstances,” declares the first article of all four Geneva Conventions of 1949. The first article of all four Conventions obliges states that are not parties to the conflict to act, but does not describe the framework for such behavior, does not provide specific instructions.

The above example of a successful investigation into the shooting of a car with a couple in it by Russian soldiers in the Kharkiv region is a guide to the direction of possible efforts by partner countries,



*Photo: In the course of the operational-search activities with the participation of the Kharkiv region cyber police, it was established that the crime was committed by a 26-year-old resident of Moscow, Kerzhaev Klym Dmitrievich, senior lieutenant, commander of the 1st motorized rifle company of the 1st motorized rifle battalion of the 15th motorized rifle regiment of the 2nd motorized rifle division of the 1st tank army of the Western Military District, commander of a motorized rifle company of the Russian Armed Forces. Source: [https://www.npu.gov.ua/news/vyzhyla-zavdiaky-kvadrokopteru-zsu-slidchi-politsii-kharkivshchyny-oholosyly-pro-pidozru-rosiiskomu-viiskovomu-u-rozstrili-podruzzhzia?fbclid=IwAR0EPm0e9yBpN7UyC\\_Qu7uLy3yQl9rBHxmgThpkdp15M0Zl2smR-CqCIPZE](https://www.npu.gov.ua/news/vyzhyla-zavdiaky-kvadrokopteru-zsu-slidchi-politsii-kharkivshchyny-oholosyly-pro-pidozru-rosiiskomu-viiskovomu-u-rozstrili-podruzzhzia?fbclid=IwAR0EPm0e9yBpN7UyC_Qu7uLy3yQl9rBHxmgThpkdp15M0Zl2smR-CqCIPZE)*



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for which an attempt to destroy the rules of warfare by the Russian Federation is unacceptable.

Counteraction at the international level to the dangerous criminal policy of the Russian Federation should be manifested in active joint actions of national intelligence, law enforcement, and judicial institutions:

- 1) exchange of information about the course of the war and events that have signs of war crimes;
- 2) formation of a joint data bank on such crimes and the persons who committed them;
- 3) search and criminal prosecution of persons who committed war crimes in the territory of their country;
- 4) assistance in searching for persons who committed war crimes in the territory of partner countries;
- 5) investigation of war crimes of the Russian Federation in Ukraine by national judicial institutions of other countries on the basis of the principle of universal jurisdiction, in cases where the victims of crimes or persons who committed war crimes ended up on the territory of such a partner state, and in other cases.

Each successful investigation of a war crime is another message to Russian soldiers and officers, to the entire Russian society, about the condemnation of the Russian Federation's policy and about the personal responsibility of every member of Russian society for illegal activities. This is a signal to commanders and civilian superiors that the attention

of the world community is focused on their personal activity, which will certainly receive an assessment not only by Ukrainian justice, but also by the justice of other civilized countries of the world, and international judicial institutions.

Every citizen of the Russian Federation, every soldier and officer of the Russian army should receive so many messages from states, politicians, international and foreign national institutions that, despite Putin's propaganda, this soldier has the conviction that decades after the war, until the end of his life, and even after it, he will be sought out by the efforts of all countries of the world and held accountable for the war crimes committed in Ukraine. Every Russian soldier should know that right now his actions are being carefully studied by experts from many countries of the world.

There is no other way to prevent the tragic events of the Russian-Ukrainian war in other parts of the world, except for a proper joint investigation. Because unpunished evil always leads to greater evil. Unpunished evil provokes new and new crimes. Unpunished evil ultimately destroys the moral and ethical guidelines of neighboring societies, increases both real and potential threats to the region.

So, if the world community is currently unable to stop President Putin in his predatory intentions, then restraining at least one Russian soldier from committing a crime will save the lives or at least reduce the suffering of Ukrainians. All countries and

their societies should do this, if only so as not to lose their moral and ethical guidelines and remain an integral part of the civilized world in world history.

### Список використаних джерел:

1. <https://gp.gov.ua/ua/posts/pro-zareyestrovani-kriminalni-pravoporushennya-ta-rezultati-yih-dosudovogo-rozsliduvannya-2>
2. [https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/coiukraine/A\\_HRC\\_52\\_62\\_AUV\\_EN.pdf](https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/coiukraine/A_HRC_52_62_AUV_EN.pdf)
3. [https://www.npu.gov.ua/news/vyzhyla-zavdiaky-kvadrokopteru-zsu-slidchi-politsii-kharkivshchyny-oholosyly-pro-pidozru-rosiiskomu-viiskovomu-u-rozstrili-podruzzhzia?fbclid=IwAR0EPm0e9yBpN7UyC\\_Qu7uLy3yQl9rBHxmgThpkdp15M0Zl2smR-CqCIPZE](https://www.npu.gov.ua/news/vyzhyla-zavdiaky-kvadrokopteru-zsu-slidchi-politsii-kharkivshchyny-oholosyly-pro-pidozru-rosiiskomu-viiskovomu-u-rozstrili-podruzzhzia?fbclid=IwAR0EPm0e9yBpN7UyC_Qu7uLy3yQl9rBHxmgThpkdp15M0Zl2smR-CqCIPZE)





**Chudnovets Oleksandr, Senko Petro, Bondaruk Anatolii**

**CHRONICLE OF THE WAR IN THE AZOV AND BLACK SEA OPERATIONAL ZONES 2023. - K.: «Publishing House «ADEF-UKRAINE», 2024 - 452 p. with ill.**

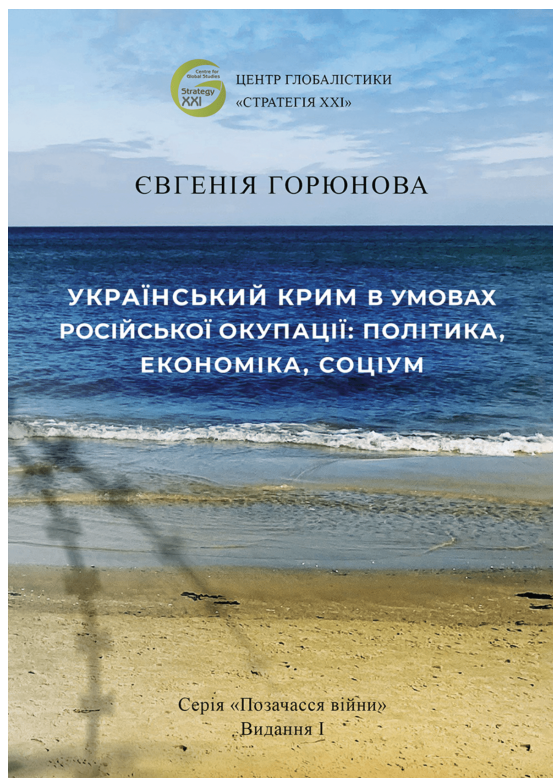
Since February 24, 2022, Russia has been carrying out a full-scale aggression against Ukraine. The Russian army, having failed to achieve the goals declared by the Kremlin at the beginning of the invasion, is waging hostilities in Donbas and the South of Ukraine, and is also shelling the civilian population daily. Our resistance forces are giving a worthy rebuff to the Russian aggressor. This is evidenced by significant victories on land, at sea and in the air. However, victories do not come easily to us, many of our defenders have given the most valuable thing - their lives. We will not forget! We remember! "The territory of Ukraine is indivisible and inviolable" - these are the words written in the Act of Proclamation of Independence of Ukraine on August 24, 1991. Since then, Ukraine has been free and independent.

And it is the people who stand guard over this independence. Ukraine on the battlefield defends not only its own freedom, but also the universal values of the world order, so the whole world must realize the nature, origins and true consequences of the aggressive war that Moscow unleashed against Ukraine.

This, the second, edition covers the course of events of the Russian-Ukrainian war for 2023. The information material is presented in the form of a brief daily chronology of events related to the sea and coastal theaters (in the Azov and Black Sea operational zones) in combination with land areas where combat operations are taking place. General information is also provided on the response of the international community to the war in Ukraine, data on the coalition of allies and the states of the «axis of evil». As in the first edition, Russian media resources are analyzed, and the most interesting from our point of view are presented in the original. This publication is based only on open sources, because at a time when there is a war in Ukraine, we all need to be careful and responsible, not spread fakes and trust only verified information. The full-scale war with Moscow continues, but Ukraine will definitely win. This will definitely happen. We will heal wounds, celebrate, preserve the memory of the fallen and rebuild our state strong, beautiful, free, known to the whole world for its victory. We made the world believe in us and see us. And as our Ukrainian beregyna, poetess Lina Kostenko said: "Ukraine is great. Ukraine is exclusive. It has passed all the roller coasters of history. It has worked out all kinds of tests. It is tempered with the highest hardness. In the conditions of the modern world, it has no price..."

Let's hold the line, until the Victory of Ukraine! Glory to the Security and Defense Forces! And eternal memory to all those who fell for our Freedom and Independence! Glory to Ukraine! Glory to the heroes!

*The book is dedicated to the memory of Rear Admiral Mykola Kostrov - one of the founders of the Naval Forces of the Armed Forces of Ukraine, a skillful organizer, wise and humane leader who sincerely loved Ukraine, the sea and the fleet.*



**Yevgeniya Goryunova. Ukrainian Crimea under Russian occupation: politics, economy, society. Series “After the war”. Edition 1. Monograph. K.: “Center for Global Studies “Strategy XXI”, 2024 – 251 p.**

The monograph of the Ukrainian historian and political scientist Yevgenia Goryunova “Ukrainian Crimea under Russian occupation: politics, economy, society” is a comprehensive study that highlights the causes and consequences of the Russian attempt to annex Crimea. To analyze the events of 2014, the author uses a number of scientific approaches that allow us to understand, first of all, the slow international reaction to the occupation of part of the territory of a sovereign state.

The work analyzes in detail the key socio-political prerequisites that allowed the Russians to quickly occupy the peninsula and subsequently incorporate it into their own political system. As a result, Crimeans, from citizens who influenced political processes in Ukraine, turned into extras in a Russian play called “elections,” which replaces real political struggle with a ritual to cement the ruling

regime. To increase the level of loyalty of the Crimeans, Russia is pursuing a policy of resettling Russians to Crimea, which is changing the national composition of the population of the peninsula.

Analysis of the economic policy of the Russians allows us to draw conclusions about Russia’s support exclusively for those industries that are necessary for the implementation of the Kremlin’s expansionist plans, as well as the creation of conditions for the use of the resources of the occupied peninsula for Putin’s elite. The problem of increasing the material well-being of the Crimeans has not yet been resolved, since it is not a priority for the Kremlin.

An important component of the work is the analysis of the role of the peninsula as a Russian military bridgehead in the context of the implementation of Moscow’s expansionist plans. The coverage of the evolution of international rhetoric regarding the de-occupation of Crimea allows us to predict the growth of world support for Ukraine in the process of liberating the peninsula.



*Delegation of the Center for Global Studies «Strategy XXI» at the XXXIII International Economic Forum, Karpacz (Poland), September 3-5, 2024.*



*President of the Center for Global Studies «Strategy XXI» Mykhailo Gonchar at a meeting of non-governmental experts with the President of Ukraine V. Zelensky, October 23, 2024.*



Photo: Office of the President of Ukraine





Ukrainian "Ivan Mazepa" corvette on sea trials in the Mediterranean Sea



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