



Centre for
Defence
Strategies



Sanctions Policy Against Russian Defence Industry Enterprises

March 2021





This publication was prepared to provide analytical support to the Crimea Platform, the initiative of the Ukrainian Government on the de-occupation and reintegration of Crimea.

This publication was funded by UK aid from the UK government as part of the project "Solidifying the Crimean Platform to Enhance Ukraine's and International Policy Framework for the De-Occupation of Crimea" implemented by the Centre for Defence Strategies (CDS). The views expressed in this publication are those of the author(s) and may not coincide with the official position of the UK Government.

The experts of the Security and Defence Reform Advisory Group of the Reforms Support Team in Ukraine contributed to the publication.

For more information please see:

Maritime Security – www.defence.org.ua/topics/maritime

Strategic studies series – www.defence.org.ua/strategic

This publication is available in two languages: Ukrainian and English. Both are available on the CDS website.

The Ukrainian version can be found here: www.defence.org.ua

Authors: **Oleksandr Khara**, Fellow, Centre of Defence Strategies; expert, Security and Defence Reform Advisory Group; Deputy Chairman, Institute for Black Sea Strategic Studies
Andrii Klymenko, Editor-in-Chief, BlackSeaNews; Chairman of the Board, Maidan of Foreign Affairs

Peer-reviewers: **Tetyana Guchakova**, general manager of the BlackSeaNews online publication, www.blackseanews.net; Chairwoman of the Black Sea Institute of Strategic Studies
Alina Frolova, Deputy Chairwoman of the Board, Centre for Defence Strategies

Project lead: Alina Frolova, Deputy Chairwoman of the Board, Centre for Defence Strategies

Project expert group: Svitlana Andrushchenko, Mariia Balabina, Kateryna Busol, Andrew Fink, Sviatoslav Kobzenko, Silvestr Nosenko, Yaroslava Shvechykova-Plavska, Andriy Zagorodnyuk

Photo credits: S. Mamontov (cover), A_SEVER (p. 5), Associated Press (p. 15)

Published by the Centre for Defence Strategies, Kyiv, Ukraine

© 2021 Centre for Defence Strategies

Limited Print and Electronic Distribution Rights

This publication is protected by law. The CDS retains all intellectual property rights over it. The re-publication or any other unauthorised use of this publication, in full or in part, in any format, including graphical and electronic, without the proper crediting of the original is prohibited. For more information about the permitted use of this publication and other CDS materials, please visit: www.defence.org.ua/permissions

The Centre for Defence Strategies is a think tank that conducts strategic research on a wide spectrum of defence issues. The CDS aims to enhance Ukraine's security and defence framework by developing respective policies, strategies and capacity building with the involvement of leading independent experts.

The views expressed in CDS publications are those of their author(s) and may not coincide with the position of the CDS Board, sponsors or any other third parties.

www.defence.org.ua



CONTENTS

Contents	3
Summary	4
Sanctions and Their Impact on Russia	6
Historical parallels	6
The implementation of sanctions policy as an instrument of influence	8
The impact of sanctions on Russia	9
"Crimean" Sanctions: A Tool for Countering Russia's Actions	12
Conclusions and Recommendations	16
Annex I. The list of illegally seized enterprises of the Ukrainian defence industry in the Crimea, which were part of the Ukrainian state concern Ukroboronprom	20
Annex II. List of Russian enterprises illegally owning, overseeing, or cooperating with seized Ukrainian defence enterprises in Crimea	21
References	27

SUMMARY

Russia is waging an outright war in Syria, a covert war in Ukraine, and a so-called hybrid war (by non-military means) against the West as a whole. Moreover, the Putin regime is gearing up for a global conflict. The reason for this is a distorted Russian perception of the security environment. In Russia, it is believed that US global leadership is primarily threatening Russia. After the collapse of the Soviet Union (which Putin described as 'the greatest geopolitical catastrophe'), further European and Euro-Atlantic integration on the continent is perceived as a continuation of redrawing frontiers and pulling Moscow's former sphere of influence into Washington's orbit. Any action of the United States in support of its allies and partners is seen as the realisation of aggressive intentions. In addition, an authoritarian and repressive Russia, while economically and technologically backward as well as weak in military terms (compared to the United States, considered by the Russian elite to be the only real rival), in the view of the Russian political as well as the Russian politico-military establishment, should exploit a short window of opportunity to regain super-power status. The Kremlin considers a fragmented Europe and the declining role

of the United States on the continent as the necessary conditions to compensate for the power asymmetry and to enable Russia's return to the geopolitical arena in a restored capacity. The Russian ruling class imagines that the possession of nuclear weapons rules out the possibility of Yugoslav or Iraqi scenario, that "strategic corruption" and support for secessionist and destructive elements within Western societies shatter European and transatlantic unity, and that Moscow is entangling fragments of the former empire into its orbit. Under these circumstances, the Putin regime is challenging the West and is preparing for an escalation to make the United States reckon with Russia's "right" to have spheres of influence and force America to recognise Russia's role as a great power which is not only crucial to resolving global issues but also has veto power over decisions that run contrary to its whims.

The illegal annexation of Crimea and the covert war in Eastern Ukraine serve these purposes. From the political point of view, the Putin regime – authoritarian and possibly already totalitarian – is far less sensitive to internal factors under the conditions of the intensive suppression of freedoms

and economic stagnation, which are caused primarily by a hidebound political construction and an exhausted economic model. Western sanctions and restrictive measures catalyse and intensify existing problems. Though it is difficult to measure precisely their full effect, the sanctions have a tremendous impact on Russia, setting it back by decades and significantly slowing down its development.

The Russian military-industrial complex (MIC) serves as the enabler for Russia's aggressive policy as well as one of the essential components of its economy. That is why it is necessary to see sanctions against the Russian MIC as a tool of constraining the Kremlin's aggressive policies.

This study gives a general outline of the impact of sanctions on Russia whilst also aiming to justify the need to step up sanctions against Russia's military-industrial complex and other strategic industries involved in Russia's aggressive policy, which poses challenges and threats to the European continent, to North America, and to the Asia-Pacific region. This study also highlights the correlation between Crimea related issues to the range of problems caused by the actions of a much more powerful player, the Peoples Republic of China. This rising power has embarked on a more aggressive and sometimes antagonistic course in the Eastern Hemisphere that is almost synchronised with Russia's actions in the West.



SANCTIONS AND THEIR IMPACT ON RUSSIA

Russia is not just in a state of war. It is preparing for a global conflict because, in the minds of Russia's military and political elite, Russia can force the West to give in and reckon with its "legitimate" interests that go far beyond its borders and are contrary to the liberal world order only through terrifying other countries.

Historical parallels

Desiring the West to heed the phobias of the Russian elite (based on the alleged continuity of aggressive Western intentions, from the Teutonic campaigns to Napoleon to Hitler and right up to the present), the Kremlin instigated a conflict with Georgia and occupied part of its territory. Moscow was convinced that they had put an end to the tiny state's escape from its sphere of exclusive influence. Although alone, outnumbered, and outgunned with no chance of withstanding the confrontation with its mighty neighbour, Georgia nevertheless proved that a well-armed country that is reformed to Euro-Atlantic standards could cause considerable damage even to the largest nuclear-weapon state in the world. Moscow learnt the "Georgian lesson" and began reforming its armed forces and modernising its weapons and equipment. The United States, Germany, and France assisted Russia without realising it. The American "reset" of relations contributed to Russia's greater integration into the world economy and

allowed it to engage in equal partnership on global issues. Europeans launched the Partnership for Modernisation, opening up to Russia great opportunities and access to markets, finance, and technology. The Europeans relied on their own experience of post-war reconciliation (between Germany and France, once arch enemies) and the postmodernist view that greater mutual integration was the key to peace and prosperity. At the same time, "Putinverstehers"ⁱ preferred not to pay attention to important historical parallels, particularly that the United States helped industrialise Soviet Russia in the 1920s and that the Weimar Republic, with a view to circumventing the Versailles Peace Treaty, helped form a military-industrial complex and strengthen the USSR Workers' and Peasants' Red Army in the 1930s. After the Nazis came to power, this cooperation ceased for several years but was resumed with renewed vigour after the signing on August 23, 1939, of what was, in essence, an alliance treaty between Hitler and Stalin.

i. Putinverstehers (Putin and verstehen – "to understand") – a German neologism and buzzword meaning "Putin understanders".

Finance, technology, specialists, weapons, and equipment from some Western nations, albeit unintentionally, contributed to a tyranny unprecedented in European history that for decades enslaved Central and Eastern European countries and nations within the Evil Empire. The industrial potential accumulated in the USSR with a large bias towards the military-industrial complex served as a foundation for an aggressive policy towards the Free World and for expanding its presence in the strategically important Middle East, and also in close proximity to the United States, namely in Latin America and the Caribbean, as well as in Africa and the Asia-Pacific. Counteracting and containing the Evil Empire and the communist regimes it created and maintained (equivalent to today's so-called Donetsk/Luhansk People's Republics but in different parts of the world) was accomplished at enormous material and human costs borne by the Free World, especially by the United States. Several times the world was on the brink of a thermonuclear conflict (Operation Anadyr in October 1962, Able Archer in September 1983, and the 1983 Soviet nuclear false alarm incident). Burdened with a vast military-industrial complex, locked in a gruelling arms race, at war in Afghanistan, and yoked to an unviable ideological construct and a backward and inefficient economy, the Soviet Union finally collapsed.

The new historical iteration is not an exact reproduction of this whole set of factors. The West was confused, and for some time since, there seemed to be no ideological confrontation. Russia is not building communism and has the formal features of democracy (e.g., the separation of powers, a fairly liberal constitution [before the amendments of 2020 were approved], a multi-party system, a considerable num-

ber of non-state media outlets, and democratic legal mechanisms of expression). Russia is moving towards a market economy (albeit with a large share of formal state participation) and has a high degree of integration into the world economy (with the export of raw materials, primarily to the EU, as well as the preservation of profits in Western financial institutions, the extensive exercise of Western jurisdictions to preserve property and resolve disputes in an unbiased manner). Moreover, the Russian economy was and is still heavily dependent on Western foreign investment, loans, financial services, and imported technology and high-tech goods. That said, the West has recently realised that it is dealing with another form of ideological antagonism, namely anti-liberalism. The Putin regime suppresses the rights and freedoms of its subjects, forcibly imposes its arbitrariness in adjacent territories (e.g., Georgia and Ukraine) and uses a wide arsenal of aggressive means and methods against Western democracies that are below the threshold of military conflict. It does all this whilst also using the Russian armed forces to deliberately escalate the situation in order to reap certain dividends in the process of "de-escalation".

The Kremlin hopes that such a strategy (both in terms of scale and continuity) is promising. After all, the United States is more focused on a long-term confrontation with another anti-liberal and truly global power – China. The hawkish policy of the White House is not well-received by leading European states, which not only feel vulnerable but also stand to lose much more from the deterioration of relations with Russia than does their overseas ally. The key players (Germany and France) have their own interests which differ from those of most other EU members, and

which do not share a common perception of the threats to European unification. The further away a country is from the Russian border and the experience of Soviet occupation, the less understanding it has of the seriousness of Moscow's threats. The sometimes undiplomatic remarks and actions of former US president Donald Trump were a far greater impetus for some European countries to fulfil their NATO commitments on contributions and improving combat capability than were the Russian aggression in Ukraine, the growth

in the number of Russian strategic aircraft in the airspace along the Alliance's borders, or the nuclear submarines and ships of the Russian Navy in their coastal waters armed with intercontinental ballistic missiles and cruise missiles with nuclear warheads.

Thus, in addition to strengthening defence capabilities, diplomatic manoeuvres, enforcing political isolation, and implementing sanctions were and remain the most acceptable forms containing Russia (based on the 3Dⁱⁱ approach).

The implementation of sanctions policy as an instrument of influence

The first sanctions against Russia were linked to the growing authoritarian nature of the Putin regime, its violations of rights and freedoms and problems with the rule of law. Hence, 2012 saw the adoption of the Magnitsky Act. However, a barrage of sanctions hit the Putin regime in response to its aggressive seizure of Crimea and the beginning of a covert war in Donbas, accompanied by war crimes, including the downing of MH17 by the Armed Forces of the Russian Federation in July 2014.¹ These sanctions were also in response to actions not connected with Ukraine, in particular, the attempted assassination of a former Russian intelligence officer with the chemical weapon in the United Kingdom, interference in the US election, large-scale espionage operations, massive cyber-attacks on US public and private institutions, etc.

Since its inception, **sanctions have been gradually increased** for several reasons. The first reason was to give the Kremlin an opportunity to consider the repercussions and to change its course of action, realising that the already-imposed sanctions were not the final ones. Such considerations were in no small part based on the understanding that the threat of force has a greater impact than the use of force itself. Giving global economic interdependence, the sanctions were not meant to cause much damage to the strategic interests of the countries that introduced them, which meant, ironically, avoiding any damage that would result in the collapse of the Russian economy. That was why the United States avoided recourse to the financial "nuclear option", i.e., disconnecting Russia from the International Interbank Payment System (SWIFT) and

ii. Deterrence, Defence and Dialogue.

imposing restrictions on new Russian sovereign debt. An important consideration was that only the regime and those involved in malign activity should be punished without harming regular Russian citizens. **The sanctions were intended to influence the Kremlin's course rather than resort to punishment as such for crimes and illegal and aggressive actions.**

At present, sanctions and restrictive measures can be divided into those related

to the domestic policy of Putin's regime, those related to the aggression against Ukraine, and those related to malign Russian activities against Western countries, primarily the United States. In turn, the Ukrainian part of the sanctions can be divided into those arising from the attempted annexation of Crimea and those that are the consequences of Russia's military aggression in Donbas. For more than six years, a fairly powerful and complex sanctions system has been developed.

The impact of sanctions on Russia

Although a number of factors make it quite difficult to accurately assess Russia's damage from sanctions and restrictive measures, it can nevertheless be argued that they affect Russia tremendously, setting it back by decades and significantly slowing down its progress, in addition to purely domestic factors. After all, even if Russia had not resorted to aggression against Ukraine and had not intensified malicious acts against Western countries, which caused the sanctions response, the economy would be in dire straits, since Putinomics has run its course and the favourable external environment (high prices for energy and raw materials) is over.²

For a quarter of a century, Russia's national currency has been weakening due to high inflation, Russia's extremely heavy dependence on imports (the strengthening of the dollar against the euro automatically devalues the rouble), Russia's vulnerability to crises, and Russia's significant dependence on exports of oil and other raw material commodities (falling commodity prices immediately cause devaluation).³

The "lost decade" saw a fall in the real income of the population by more than 10% between 2014–2020; and a volume of industrial growth at the level of 1–2 % (estimates vary due to different calculation methodologies), which is an indicator similar to that seen in the early 1990s. With the depreciation of fixed assets in the manufacturing industry at 55.9%, import dependence, especially on metal-cutting machines, stood at 90% in 2016, and the production of such machines over the decade has increased from only 230–240 units per month up to 380–385 units. China, Taiwan, and Germany are the key countries covering Russia's huge needs for industrial equipment.⁴ Despite the declared policy of import substitution, Russia's profound dependence on imports of equipment, tools, and especially complex materials and technologies remains extremely high. For instance, in the machine tool manufacturing industry, this dependency reaches 70%, in oil and gas engineering it reaches 50%, in Arctic technologies connected to the oil and gas industry it amounts to 80%; in civil radio electronics it stands at the same figure. In heavy engineering, it reaches 30%.⁵

In addition to the loss of a third of its accumulated foreign direct investments (FDI), the outflow of Russian funds into the Western financial system and the impeded access to foreign lending, Russia now ranks 50–60th globally in terms of domestic credit availability and liquidity.⁶

The crisis caused by the pandemic made Russia's GDP shrink by 3.1%. According to the baseline scenario of the Centre of Development Institute of the Higher School of Economics, over the next four years the 4% decline in Russia's real GDP in 2020 will be followed by subsequent 3.1%, 2.2% 1.7% and 1.8% growth over the next four years, respectively. Under the pessimistic scenario, the real GDP growth will range from -6.1% to 1.8%.⁷ The level of business confidence is much lower than in 2006–2008. The COVID-19 crisis will cost the Russian industry a year and nine months. Bad loans promise to cause a financial crisis and troubles in the banking sector.⁸

Let us now turn to the Russian defence industry as the subject of this study. The Russian defence industry is estimated to consist of more than 1,300 companies employing about two million people, which is in turn an important state beneficiary group and a mainstay of the Putin regime. With Putin coming to power, his immediate entourage started consolidating control over the industry into their hands. Just like the Russian economy as a whole, the defence industry suffers from inefficiency, corruption, and overregulation. In 2012, arms exports rose to \$15 billion and had fluctuated at around this level for seven years. During this time, the state defence orders fluctuated between \$23.9 and \$40.2 billion. However, the industry remains unprofitable even notwithstanding the repayment of loans to commercial banks

from the national budget (in 2016, the repayment amounted to ₺800 billion; in 2017, it stood at ₺200 billion; in 2020, toxic loans were repaid in the amount of ₺350 billion and restructured in the amount of ₺260 billion).^{9,10} The total debt of defence companies has increased by a factor of 30% from 2019 to 2020 to reach ₺3 trillion.^{11,12} However, the government once again plans to follow the same path, attracting new bank loans (worth ₺360 billion over three years) and postponing the repayment of loans with government guarantees until 2036.¹³

In 2015, out of the 826 kinds of weapons and military equipment produced in Russia, 186 included components of Ukrainian manufacture and 640 included elements produced in EU and NATO member states. The Russian government plans scheduled full import substitution by 2025. However, despite the fact that about \$25 billion were spent on import substitution in 2015–2018, it is unlikely that such an ambitious goal will be achieved.¹⁴ Ukrainian sanctions have hit the Russian defence industry hard, causing delays in the commissioning of weapons and equipment, the need to invest in R&D, the need to create production facilities, the purchase of equipment and machinery, staff training, preparation for serial production, etc.

A number of the latest models of weaponry and equipment cannot enter serial production due to a lack of necessary components, precision machines, and other equipment, while their replacement with Chinese models fails to achieve the required level of quality.¹⁵ Western sanctions and restrictions have hampered the full implementation of the satellite navigation system (GLONASS) project, where dependence on imported components

remains at 70 % despite having spent \$5 billion with another \$6.6 billion planned.^{16,17} The lack of electronic components, namely microchips, for space and defence industries is especially acute. The products of Zelenograd enterprises do not meet design parameters, both in terms of technical characteristics and weight. This caused the cancellation of the project of the next-generation Sfera-B military satellite. Instead, the Defence Ministry was forced to return to the decommissioned Soviet satellite "Meridian".¹⁸

The cessation of composite materials supplies by American Hexcel and Japanese Toray Industries puts at risk the implementation of a project worth ₺438 billion to produce the MS-21-300 passenger aircraft. Four prototypes have been built from the available imported components, and the remaining materials are enough for six more aircraft. Import substitution requires investments with a volume "several times greater than the previously announced ₺50–55 billion".¹⁹ Sanctions have forced the State Research and Production Enterprise "Region" to resort to import substitution, whose quality has prevented the timely delivery of an anti-torpedo combat module (Paket-E/NK).²⁰

Russia's Arctic ambitions are also jeopardised by sanctions. In addition to the economic component (the delivery of raw materials from new deposits and the sea shelf), the strengthening of the Russian presence in the Arctic and the Northern Sea Route is of both geostrategic and image-making importance for the Kremlin. This is a kind of a replica of China's geopolitical project known as the Belt and Road Initiative, and it is aimed at giving Russia control over an alternative trade route between Asia and Europe. The viability

and potential profitability of this northern route are increasing as a result of climate change. In addition to the economic benefits of energy resource transportation via the northern route, the Arctic is being used as a major project involving Rosatom, as well as investment in several economic sectors, including shipbuilding and the defence industry – since the Kremlin's encroachment in the Arctic requires a military component.

At the time being, the United Shipbuilding Corporation is forced to implement a project to build three nuclear icebreakers worth ₺121 billion without all-in-one risk insurance.²¹ The domestic construction of icebreakers²² and other vessels is taking place with problems and with the postponement of commissioning, with both the quality suffering and the price rising.^{23,24} The share of civilian products in the total revenue of the United Shipbuilding Corporation is only 21%; and, to make things worse, the company expected to see negative profitability in 2020. This is despite the fact that the corporation is loaded with defence orders worth ₺3 trillion by 2027.²⁵ Financial problems have delayed the renewal of production assets (in 2016, the share of equipment over ten years old amounted to two thirds).²⁶ Sovfracht, the company that supplies half of all Russian cargo in the Arctic, is also on the sanctions list.²⁷

Thus, stirring statements about import substitution notwithstanding, both the defence industry and other strategic fields involved in ambitious projects and capacity building remain vulnerable to sanctions.

"CRIMEAN" SANCTIONS: A TOOL FOR COUNTERING RUSSIA'S ACTIONS

The international community did not recognise the illegal annexation of Crimea and made this non-recognition part of their policy towards Russia until the restoration of Ukrainian sovereignty over the Autonomous Republic of Crimea and the city of Sevastopol. Essential factors (concerning international legitimacy) in this regard are the UN General Assembly resolution 68/286 of March 27, 2014 on affirming the territorial integrity of Ukraine, several other UN resolutions, particularly on the problem of the militarisation of Crimea and parts of the Black Sea and the Sea of Azov (73/194 of December 17, 2018, 74/17 of December 9, 2019 and 75/29 of December 7, 2021), a number of documents emanating from PACE, the European Parliament, as well as the decisions of international arbitrary tribunals and courts.

The United States, Canada, Japan and the EU have imposed sanctions and restrictive measures against Russia stemming from the annexation. A firm and sustained consensus can be observed here, in contrast to sanctions and restrictive measures in connection with Russia's covert aggression in eastern Ukraine. Despite the fact that EU member states have so far taken unanimous decisions to continue the previously-imposed restrictive measures, proposals to step up pressure do not command the necessary support. Moreover, representatives of some European countries whose interests have been affected by sanctions or which sympathise with Moscow or have fallen victim to its strategic corruption, are calling for at least a certain easing of restrictive measures as an "encouragement" to Russia. It is also sometimes argued that sanctions do not work and are not effective, which makes lifting them a sound idea.

The more serious problem is that some EU countries are indeed missing out on revenues from trade and economic cooperation with Russia, which is a large market for high-tech products and financial and other services. There is also an asymmetry between the losses or foregoing of profits by Europeans and Americans due to the fact that Russia's economic interaction with European countries, on the one hand, and North American countries, on the other hand, is incomparable. Some European countries are also dissatisfied with the so-called secondary sanctions, whereas the United States either threaten to use or uses punitive measures against European companies violating US-imposed sanctions.

It was a great mistake for Ukraine to support linking the lifting of the EU's restrictive measures with progress in implementing the so-called Minsk Accords. Put in another

manner, Russia is to be rewarded not for a return to the *status quo ante bellum* but for vague progress in implementing the Minsk Accords – "agreements" to which Russia insists it is not even an official party – "agreements" that will worsen Ukraine's position without resolving the issues of restoring control over the Crimean Peninsula and preventing other forms of Russian aggression in the future. It is the sanctions factor that has enshrined in Ukrainian politics the idea that there is "no alternative" to the Minsk Accords. This mantra has become an integral part of the diplomatic reality for even our closest partners, who often refer to these political Minsk Accords as sound, despite the fact that they are null and void, in terms of both the Ukrainian Constitution, as well as in international law.

There are quite legitimate grounds to expand the Crimean sanctions lists based on Russian illegal actions. This is the reason for the proposal to pay special attention to Russia's defence enterprises that produce military and dual-use products that increase Russia's aggressive potential and those that are exported, in particular, to countries that have poor or even adversarial relations with the EU and its transatlantic allies. The likelihood of reaching a consensus on such sanctions is also increasing because, in addition to our supporters from the Black Sea and Baltic regions, the United States, the United Kingdom, the Nordic countries, and Japan may see this as an opportunity for the **soft containment of Russia. Russia poses challenges and threats to their security, particularly in the northern seas, the Arctic, and the Far East. At the present stage, maintaining the technological advantage, curbing the pace of Russian militarisation, and reducing the resource base for Russia's current and likely future aggressive actions is more**

affordable than the escalating confrontation that has the potential to degenerate into an armed conflict with unpredictable consequences in the future.

Maintaining unity regarding the non-recognition of the annexation of Crimea, the other actions of responsible members of the international community aimed at returning to the *status quo ante bellum*, and limiting the potential growth of aggression are all important signals to other actors who would cast doubt on or even undermine the world order based on international law, rules, and regulations, not coercion. A far more powerful China, which has been pursuing more vigorous and increasingly aggressive policies over the past few years, is studying anti-Western strategies and the latest methods of warfare while also taking advantage of the situation created by Russia to achieve its goals. China's clamping down on the rights and freedoms in Hong Kong, totalitarian initiatives with the Uighurs, its militarisation of the South China Sea, its encroachment on maritime spaces on an unprecedented scale in terms of international maritime law, its growing pressure on neighbours, and its threat of the use of force against Taiwan, intensive militarisation, and moulding of the international system in its own interests are kinds of reflections of Russia's goals and actions in the West.

The lack of success in resolving the Crimean issue will reinforce China's confidence that Crimea's "reunification" with Russia has set a precedent and that it is a signal for similar developments in the Eastern Hemisphere. The example of Ukraine abandoning its second world's largest nuclear stockpile in exchange for "security assurances" and the inability of responsible members of the international communi-

ty to take consolidated action to restore Ukraine's sovereignty and territorial integrity will reduce the appeal of non-proliferation initiatives and encourage other countries to build-up their military power. Countries that take lessons from Ukraine's recent history may use power as a substitute for the mechanisms of international law, which will further increase the chaos in international relations. Therefore, **the importance of resolving the Crimean issue is not limited to European security. Sanctions are the most optimal instrument to resolve this issue, although enhancing their effect requires supplementing them with other measures** that go beyond the objectives of this research.

The "Crimean sanctions" have hitherto been seen as part of a policy of the non-recognition of the annexation of Crimea as well as a signal to the Kremlin to cease its aggression and abide by international law and political arrangements with Ukraine and Western partners. At present, it is expedient to expand the goals of such a sanctions policy. This expansion should **not only include the adoption of a policy of non-recognition regarding the annexation and punishment for violating sanctions, but also serve as a tool of containing Russia, of slowing down its development, and, hence, its militarisation, inhibiting its dangerous plans in other spheres (e.g., nuclear blackmail) and in various geographical areas (i.e., in the Black and Baltic Seas, the Arctic, and the Far East).**

While concurring with the idea that the collapse of the Russian economy should not be the goal of the sanctions, as the negative consequences both direct (economic) and indirect (the possible provocation of the regime into a significant escalation) would affect both neighbouring countries

and the global economy, we still deem it advisable not to limit sanctions to measures not affecting ordinary Russians. First, the Kremlin-controlled domestic information environment has already formed an extremely negative image of the West. Thus, there is no need to worry about being accused of causing trouble. This is already taking place. According to a March survey by the Levada Centre, 42% of Russians had a negative attitude towards the United States, whereas 40% viewed the latter positively.²⁸ Second, the lion's share of the Russian labour force is either directly (as officials, members of the security forces, or as state employees in general) or indirectly (via state corporations) dependent on the regime and supports it in general. 66% of Russians named the armed forces as their most trusted institution, 58% gave the first spot to President Putin, and 53% chose the FSB and other intelligence services.²⁹ 86% of Russians have not made any change in their opinion regarding Crimea over the last five years and continue to support the illegal annexation of Crimea.³⁰ As little as 24% of respondents say they are ready to take to the streets to protest against lower living standards and to protect their rights, while 72% are not ready to follow suit.³¹

A number of enterprises of the Russian defence industry and other strategic fields are already on the sanctions list. However, it is advisable to augment them with sanctions on other mainland corporations and companies, particularly those which are managing illegally seized Ukrainian defence companies on the Crimean Peninsula, or have incorporated them into their structure and included them in their supply chains. **Companies and organisations in the defence industry, in shipbuilding and aircraft construction, in the aerospace industry, and in the electronics industry must be subject to**



sanctions in order to damage, prevent, or slow down the development and production of military or dual-use equipment as well as Arctic exploration and militarisation projects. Access to finance and financial services, insurance, high technology, new materials, high-precision machines, equipment, and facilities for both the defence industry and Russian industry as a whole must be significantly impeded.

Russia has currently expropriated 13 Ukrainian enterprises that were part of the state concern Ukroboronprom and also a number of private companies. The monitoring group of the Institute of Black Sea Strategic Studies and BlackSeaNews identified at least 59 Russian companies (see Annexes I and II) as well as a number of research institutions working with seized Ukroboronprom enterprises. The total

number of Russian enterprises working with Crimean plants in military production is 149.³² Last year, Crimean companies fulfilled defence orders of the Russian Federation worth ₺24 billion.³³

Proceeding from the information already collected, it is necessary to conduct research and understand the chain of production links of the above enterprises and determine the range of products that are dependent on foreign technologies and components. Given the physical wear and tear of machines, equipment, and facilities in the Russian industry, it is advisable to deny critical items not only to the Russian defence industry but also to the Russian industry as a whole. The idea of reproducing the CoComⁱⁱⁱ and understanding how it functioned is more relevant than ever before.

iii. The Coordinating Committee for Multilateral Export Controls (CoCom) was an informal coordination mechanism between the United States and its Western European allies, aimed at limiting the access of the USSR and its satellites to strategic materials, equipment, and technologies that could reinforce their military capabilities or bridge a technological gap in industry. Initially, three lists for restrictions were formed: 1) the International Munitions List; 2) the International Atomic Energy List; 3) the Industrial List. In turn, the third list consisted of the following subcategories: metalworking machinery; chemical and petroleum equipment; electronic and precision instruments; metals, minerals and their manufacture; chemicals and metalloids; petroleum products; and rubber and rubber products.

CONCLUSIONS AND RECOMMENDATIONS

Russia will continue to be a source of threats and challenges to neighbouring countries, primarily Ukraine and Georgia, and also to the West as a whole. That is why the sanctions policy should be aimed at slowing down the build-up of its power projection capacity, exploiting Russia's vulnerabilities derived from its relative economic and technological backwardness. Ukraine needs to use the consensus on the non-recognition of the annexation of Crimea and the sanctions related to this to give this policy a new dimension. This strategy will serve not only the interests of Ukraine but also other partners who feel threatened by Russia.

Having formulated international legal, political, and diplomatic arguments, Ukraine should promote the idea of imposing sanctions and restrictive measures against Russia on the aforementioned principles, both as part of the Crimean Platform, and at the bilateral as well as the multilateral levels (EU, NATO, a possible coalition of states sympathising with Ukraine: the Baltic republics, Poland,

Romania, the United Kingdom, Finland, Sweden, Norway, Denmark, Japan, South Korea). This strategy would correspond to three areas of the work of the Crimean Platform, namely the policy of the non-recognition of Russia's annexation of Crimea; the expansion and strengthening of international sanctions against Russia; and its work concerning international security.

As noted above, the probability of consensus on this strategy is increasing because the Nordic countries, as well as Japan, may see in this **a soft deterrent to Russia. Russia poses challenges and threats to their security, particularly in the north seas and the Arctic, as well as in the Far East. Maintaining the technological advantage, curbing militarisation, and reducing the resource base for Russia's current and probable further aggressive actions** at this stage is more affordable than an escalating confrontation that has the potential for further escalation into armed conflict, with unpredictable consequences in the future.

(1) For the practical implementation of this plan, it is necessary to obtain, analyse, and systematise information on the links between the illegally seized enterprises of the Ukrainian defence industry in Crimea and Russian enterprises and government agencies on the Russian mainland, and the participation of these enterprises in the Russian State Defence Procurement Program, and in the export of products and components abroad, as well as their role in the import of necessary raw materials, components, and equipment from abroad. It is also necessary to create a database of managers and owners of the illegally seized enterprises of the Ukrainian defence industry, as well as the managers and owners of Russian enterprises on the mainland that are affiliated with them.

It is advisable to organise such activity in a working group under the auspices of the National Security and Defence Council, which would include stakeholders from the government, law enforcement agencies, and intelligence services, as well as with non-governmental organisations, experts, and journalists specialising in investigations. Mostly, open-source intelligence (OSINT) will be used, although information obtained by the intelligence community is also likely to be needed.

(2) The Government of Ukraine should establish a mechanism to bring lawsuits in international courts and arbitration tribunals against Russia, its legal entities, and natural persons in connection with the illegal seizure of Ukrainian defence enterprises in Crimea, as well as for the infringement of intellectual property and other rights. The law enforcement agencies of Ukraine should prosecute those natural persons who are the "owners" and managers of illegally seized Ukrainian defence enterprises in Crimea, as well as those who manage and control these enterprises in the relevant state bodies, defence enterprises, and other strategic industries on the mainland. The Government of Ukraine should work towards ensuring that the abovementioned persons are included in the existing sanctions lists of the EU and other partners of Ukraine.

Based on the above, the practical recommendations are as follows:

- I** The President of Ukraine should give instructions to establish a working group at the National Security and Defence Council of Ukraine to collect and analyse the information as well as develop the necessary proposals for the introduction of Ukrainian sanctions, sanctions and restrictive measures from our partners, and their usage in lawsuits against Russia, its natural persons and legal entities.
-
- II** The working group should create and maintain a database on the information required for the implementation of sanctions and other measures as well as data on the enterprises of the Russian defence industry and other relevant strategic industries that should be subject to sanctions according to certain criteria. A separate element of such a database should be devoted to information on the range of products and critical components that are supplied from abroad or that use foreign technologies or those whose production requires equipment and machinery manufactured in Western countries, especially from members of the EU.
-
- III** The Ministry of Foreign Affairs of Ukraine should take a set of measures to promote the idea of stepping up the sanctions of European partners against the Russian defence industry and Russian agencies related to the implementation of Arctic projects, possibly by creating a coalition of supporters of Ukraine (Baltic states, Poland, Romania, the United Kingdom, Finland, Sweden, Norway, Denmark, Japan, South Korea). A separate priority should be working with the executive and legislative bodies of the United States (the Senate Committee on Foreign Relations, Select Committee on Intelligence, and Armed Services Committee, the Department of State, and the Department of Justice's Office of Foreign Assets Control).
-
- IV** The Government of Ukraine should establish a mechanism to bring lawsuits in international courts and arbitrary tribunals against Russia, its legal entities, and natural persons in connection with the illegal seizure of Ukrainian defence enterprises in Crimea as well as the infringement of intellectual property and other rights.

- V** The Office of the Prosecutor-General of Ukraine, the Security Service of Ukraine, and Ministry of Internal Affairs of Ukraine should, within the scope of their competence, take measures to prosecute natural persons and legal entities that are owners or managers of illegally seized enterprises of the Ukrainian defence industry in Crimea as well as representatives of state authorities, and/or the owners or managers of Russian companies, who "own" or "manage" plants of the Ukrainian defence industry that were illegally seized in the Crimea.
-
- VI** The Ministry of Foreign Affairs of Ukraine should address the question of imposing sanctions of partners and restrictive measures of the EU against the legal entities referred to in paragraph II and natural persons indicated in paragraph V.

Thus, sanctions and restrictive measures, in addition to achieving the goal of punishing Russia for the attempted illegal annexation of Crimea and forcing it to return the temporarily occupied territories to Ukraine, will also contribute to reducing the resource base of the aggressor, slowing down Russia's militarisation as well as containing its aggressive actions in the Arctic and the Far East. Further limitation of Russia's access to financial resources, key competencies, know-how and services, high-tech equipment and precise machinery, components and parts not produced in Russia will play a role similar to the practices the West enacted during the Cold War arms race. Today this will happen against the background of the enormous resources spent on the modernisation of strategic forces (nuclear triad and hypersonic weapons), on naval capabilities to project power globally, as well as on aggressive plans to strengthen control of the Arctic, including the strategically important northern sea route. Being less powerful in all dimensions than was the Soviet Union, Russia is already on the verge of "strategic overstrain." This should be leveraged by responsible members of the international community with a view to preserving peace and the liberal world order as well as strengthening international security.

Annex I. The list of illegally seized enterprises of the Ukrainian defence industry in the Crimea, which were part of the Ukrainian state concern Ukroboronprom

(compiled by the Monitoring Group of the editorial office of BlackSeaNews and the Black Sea Institute of Strategic Studies)^{iv}

1. More Shipyard, Feodosiia;
2. State Enterprise Feodosiya Optical Factory;
3. Public joint-stock company Fiolent Plant;
4. State Enterprise Sudokompozit Design and the Technological Bureau, Feodosiia;
5. State Enterprise Scientific Research Institute of Aero Resilient Systems, Feodosiia;
6. State Enterprise Yevpatoria Aircraft Repair Plant;
7. State Enterprise Sevastopol Aircraft Plant;
8. State Enterprise Skloplastik, Feodosiia;
9. State Enterprise Feodosiia Shipyard of the Ministry of Defence of Ukraine;
10. State Enterprise Central Construction Bureau Chornomorets, Sevastopol;
11. State Enterprise Special Production and Technical Base Polumia;
12. State Enterprise Scientific Research Centre Vertolit;
13. State Enterprise Radiocommunications Design Bureau.

From the above list, ten enterprises remain in operation as separate legal entities.

The Radiocommunications Design Bureau was unofficially liquidated shortly after "nationalisation" by resolution N°118-pp of the occupation government of Sevastopol dated February 28, 2015.

Feodosiia Skloplastik has become part of the More Shipyard.

The Sevastopol Central Construction Bureau Chornomorets ceased to exist after joining the State Enterprise Sevastopol Marine Plant, becoming a design centre within the latter's structure.

ii. "The 'Trophy Economy.' Militarization as a Factor of Industrial Growth" BlackSeaNews, October 24, <https://www.blackseanews.net/read/169457>

Annex II. List of Russian enterprises illegally owning, overseeing, or cooperating with seized Ukrainian defence enterprises in Crimea

(compiled by the Monitoring Group of the editorial office of BlackSeaNews and the Black Sea Institute of Strategic Studies)^v

N°	Name of the Russian enterprise	Name of the captured Ukrainian enterprise and form of cooperation
1	JSC 123 Aircraft Repair Plant (Novgorod Oblast, Staraya Russa). Administered by PJSC Ilyushin Aviation Complex, part of PJSC United Aircraft Corporation	Cooperation with JSC 123 ARP (supply of pumps and spare parts for the repair of aircraft within the framework of the Russian state defence order)
2	JSC 218 Aircraft Repair Plant (Leningrad Oblast, Gatchina). Administered by JSC Aviaremont, which is part of JSC Garrison (the former OJSC Oboronservis)	JSC 570 Aircraft Repair Plant, reorganised on January 9, 2019 and integrated into JSC 218 ARP, cooperated as an affiliate with Sevastopol Aggregate Plant (repaired fuel supply units for aviation)
3	JSC 33 Ship Repair Plant (Kaliningrad Oblast, Baltiysk), which is part of JSC United Shipbuilding Corporation	Together with the Sevastopol-based branch of JSC Ship Repairing Centre Zvyozdochka , this enterprise serviced and repaired boats of the Training Centre for Military Rescuers and Diving Specialists of the Russian Navy, stationed in Sevastopol, on the territory of the Sevastopol Marine Plant as part of the Russian state defence order. The company cooperated, under the state defence order, with Sorius LLC and Nautilus-Sev LLC
4	JSC 514 Aircraft Repair Plant (Tver Oblast, Rzhev), belonging to PJSC United Aircraft Corporation. Parent company: Sukhoi Aviation Holding Company (PJSC)	Cooperation with Sevastopol Aggregate Plant (supply of equipment for the repair of aircraft under the state defence order)
5	JSC 82 Ship Repair Plant (Murmansk), part of Rosneft Oil Company	Cooperation with Zavod Molot-Mekhanika LLC
6	JSC Arktika Northern Production Association (Severodvinsk), which is part of the JSC United Shipbuilding Corporation	In 2015, by order of the Ministry of Industry and Trade of Russia, this enterprise was appointed "supervisor" of Ship Electric Instrument Plant Maiak LLC. It cooperated with Sevastopol Enterprise Era LLC (for the supply of electric equipment)
7	JSC 121 Aircraft Repair Plant, belonging to PJSC United Aircraft Corporation	A separate subdivision Saki Service Centre of 123 ARP was established at the section of the Yevpatoriia Aircraft Repair Plant in the village of Novofedorovka.
8	JSC Admiralty Shipyards (St. Petersburg)	In the fall of 2015, it took part in repairing the <i>Norossiysk</i> submarine at the Sevastopol Marine Plant. A special engineering bureau of the Black Sea Fleet Admiralty Shipyards was created at the plant for further maintenance of submarines. This enterprise cooperates with JSC Fiolent
9	JSC Akhtubinskiy Shipbuilding and Ship Repair Plant (Astrakhan Oblast, Akhtubinsk), part of United Shipyards Vega LLC	In 2018, the company produced a caisson for the Sevastopol Marine Plant

v. "The 'Trophy Economy.' Militarization as a Factor of Industrial Growth" BlackSeaNews, October 24, <https://www.blackseanews.net/read/169457>

Nº	Name of the Russian enterprise	Name of the captured Ukrainian enterprise and form of cooperation
10	JSC Russian Helicopters (Moscow; sanctioned by Ukraine and the US), which is part of Rostec State Corporation	By order of the Ministry of Industry and Trade of Russia, the company was officially "assigned" to the Sevastopol Aircraft Plant. The Federal State Unitary Enterprise Sevastopol Aircraft Plant is de-facto integrated into Russian Helicopters
11	JSC Vodtranspribor (St. Petersburg), belonging to JSC Concern Oceanpribor	Cooperation with JSC Fiolent Plant
12	JSC All-Russian Scientific Research Institute Signal (Vladimir Oblast, Kovrov), which is part of the High-Precision Systems holding of Rostec State Corporation	One of the developers of the Udar (Vikhr) unmanned combat ground vehicle (UCGV), co-created with JSC Science and Technology Centre Impulse-2
13	JSC Kulakov Plant , (St. Petersburg), part of the JSC Concern Granit-Electron	Cooperation with JSC Fiolent Plant
14	JSC Zelenodolsk Plant named after A.M. Gorky (Russia, Republic of Tatarstan, Zelenodolsk), part of the OJSC Ak Bars Holding Company.	The illegally seized property of the Zaliv Shipbuilding yard in the town of Kerch in August 2014. The plant cooperated with the Feodosia-based Skloplastik State Enterprise
15	Kampo JSC (Moscow Oblast, Orekhovo-Zuyevo)	This company built three project 23370 modular boats for the Russian Black Sea Fleet. One of them was launched in June '14 in the waters of the Ship Repair Yard Yuzhny (Sevastopol), where modular elements were assembled. The latter were manufactured by Kampo JSC and delivered to Sevastopol. The other two boats were built in 2015 at Fregat Shipyard under the control of Kampo
16	JSC Katav-Ivanovsk Instrument Making Plant , Chelyabinsk Oblast	By order of the Russian security forces, the enterprise for the first time built a high-speed multifunctional boat to be used in the Sea of Azov. The plant cooperated with the Central Construction Bureau Chornomorets (elaboration of the design and construction documentation for the JSC Katav-Ivanovsk Instrument Making Plant)
17	JSC Kuntsevo Design Bureau (Moscow), part of JSC Defence Systems, controlled by OPK Oboronprom	One of the developers of the Udar (Vikhr) unmanned ground vehicle, co-created with JSC Science and the Technology Centre Impulse-2
18	Concern Avrora Scientific & Production Association JSC (St. Petersburg)	Cooperation with the JSC Fiolent Plant
19	JSC Concern Oceanpribor (St. Petersburg)	In 2017, the More Shipyard began the construction of an experimental multi-purpose high-speed vessel of the 03550 Sleming-2 project, which is being built under a state contract for the development of the OCP, concluded between the Ministry of Industrial and Economic Development of the Russian Federation and the JSC Concern Oceanpribor
20	JSC Kronstadt Marine Plant (St. Petersburg), part of the JSC United Shipbuilding Corporation	This company commissioned services under a contract with the Sevastopol Marine Plant, a branch of the JSC Ship Repairing Centre Zvyozdochka , to service the <i>Perekop</i> training ship of the Russian Baltic Fleet

Nº	Name of the Russian enterprise	Name of the captured Ukrainian enterprise and form of cooperation
21	JSC Research and Production Association Volgo (Moscow)	This company has a branch in Sevastopol and participated in the repairs of the Russian Black Sea Fleet tanker <i>Iman</i> (IMO 6617427) at the Sevastopol Marine Plant
22	JSC Scientific and Technology Centre Elins (Moscow)	This company is one of the developers of the MB2-03 combat module that is a part of the UCGV Vikhr, created in collaboration with the JSC Science and Technology Centre Impulse-2
23	JSC Novorossiysk Ship Repair Yard (Novorossiysk)	This company collaborated with Zavod Molot-Mekhanika LLC (for the supply of pumping equipment)
24	JSC United Shipbuilding Corporation (St. Petersburg; sanctioned by Ukraine and the US.)	This company is "assigned" to supervise the Ship Repair Yard Yuzhny LLC, the Sevastopol Enterprise Era LLC, the Ship Electric Instrument Plant Mayak LLC, the Zavod Molot-Mekhanika LLC, Skloplastik State Unitary Enterprise, and the Sudokompozit Design and Technological Bureau
25	JSC Obukhovskoye (St. Petersburg)	Cooperation with the JSC Fiolent Plant
26	JSC Southern Scientific and Production Association for Marine Geological Exploration (JSC Yuzhmorgeologiya; Krasnodar Krai, Gelendzhik), part of JSC Rosgeo	Successor of the FSUE Southern Scientific and Production Association for Marine Geological Exploration that commissioned the services of the Fregat Shipyard . This enterprise was reorganised through corporatisation. In 2016, Yuzhmorgeologiya commissioned the Fregat Shipyard to produce and supply equipment for the deployment of a mobile system for military testing equipment
27	JSC Yantar Shipyard (Kaliningrad), part of JSC United Shipbuilding Corporation.	Cooperation with the Sevastopol-based Ship Electric Instrument Plant Mayak (supply of ship lamps to the JSC Yantar Shipyard as part of the state defence order)
28	JSC Russian Aircraft Corporation MiG (Moscow; sanctioned by Ukraine), which is part of PJSC United Aircraft Corporation	Cooperation with the Sevastopol Aggregate Plant (for the supply of spare parts)
29	JSC Severny Press (St. Petersburg), part of JSC Concern Granit-Electron	Cooperation with the JSC Fiolent Plant
30	JSC Sredne-Nevisky Shipyard (St. Petersburg), part of the JSC United Shipbuilding Corporation	This company cooperates with the Sudokompozit Design and Technological Bureau (for middle-layer panels for the construction of a ship built at the JSC Sredne-Nevisky Shipyard)
31	JSC Vympel Shipyard (Yaroslavl Oblast, Rybinsk), belonging to JSC Kalashnikov Concern of Rostec State Corporation	This company cooperated with Empirei and Co LLC (for the repair of naval warships), Zavod Molot-Mekhanika LLC (for the supply of an electric pump unit to the Vympel Shipyard), and the Shipyard Persei (for the completion of the sea-going passenger hydrofoil Cometa 120M). The Vympel Shipyard obtained a 49-year lease for the entire territory previously used by the Ship Repair Yard Yuzhny
32	JSC Technodinamika (Moscow; an entity sanctioned by Ukraine and the US), part of Rostec State Corporation	This company was officially assigned to SRI of Aero Resilient Systems . Upon the completion of corporatisation, the State Unitary Enterprise of the Republic of Crimea the Scientific Research Institute of Aero Resilient Systems will "become part" of the JSC Technodinamika

Nº	Name of the Russian enterprise	Name of the captured Ukrainian enterprise and form of cooperation
33	JSC Dalzavod Ship Repair Centre (Vladivostok). A subsidiary of JSC Far Eastern Shipbuilding and Ship Repair Centre	This company cooperated with Zavod Molot-Mekhanika LLC (for the supply of electric pumps), and Sevmormash-2M LLC (for the supply of equipment)
34	JSC Ship Repairing Centre Zvyozdochka (Severodvinsk; sanctioned by Ukraine and the US), part of the JSC United Shipbuilding Corporation	This company created its own branch on the basis of the expropriated property of the Sevastopol Marine Plant ; which services and repairs ships of the Russian Black Sea Fleet. In 2017, the plant built a floating complex for the transportation of the arched segments of the Kerch Strait Bridge
35	JSC Shipbuilding & Ship Repair Technology Centre (St. Petersburg)	Cooperation with JSC Fiolent Plant through Armas Design Bureau, belonging to the Shipbuilding & Ship Repair Technology Centre
36	JSC Central Design Bureau for Marine Engineering Rubin (St. Petersburg), part of the JSC United Shipbuilding Corporation	Cooperation with the JSC Fiolent Plant
37	JSC Almaz Central Marine Design Bureau (St. Petersburg), part of JSC United Shipbuilding Corporation	This company is the developer of the project 22800 Karakurt small rocket ships that are being built at the More Shipyard
38	JSC Central Scientific Research Institute Kurs (Moscow), part of JSC Concern Morinformsystema-Agat	Cooperation with More Shipyard (development of lifeboat prototypes)
39	JSC Science and Technology Centre ROCAD (St. Petersburg)	One of the developers of the Udar (Vikhr) unmanned combat ground vehicle (UCGV), co-created with JSC Science and Technology Centre Impulse-2
40	OJSC 322 Aircraft Repair Plant (Primorsky Krai, Ussuriysk), part of the PJSC United Aircraft Corporation. Parent company: Sukhoi Aviation Holding Company (PJSC)	Cooperation with the Sevastopol Aggregate Plant (for the supply of spare parts to fulfil a state contract)
41	OJSC 766 UPTK (Moscow Oblast, Krasnogorsk)	This company collaborated with the Science and Technology Centre Impulse-2 in fulfilling state orders for the development and production of unmanned systems, particularly the Uran-9 multipurpose unmanned ground combat vehicle (codename – Dolomit-1).
42	OJSC Nizhegorodsky Teplokhod Shipyard	Cooperation with More Shipyard (completion of the naval emergency rescue boat of the project 23040 for the Russian Navy, which was begun at the OJSC Nizhegorodsky Teplokhod Shipyard)
43	CJSC Scientific and Production Centre Akvamarin (St. Petersburg)	Cooperation with the JSC Fiolent Plant

Nº	Name of the Russian enterprise	Name of the captured Ukrainian enterprise and form of cooperation
44	OJSC Leningrad Shipyard Pella (Russia, Leningrad oblast, Kirov District, Otradnoye)	"Supervised" and later "leased" More Shipyard . In order to evade sanctions, 12 month before the "lease" was due to expire, the Pella Shipyard ceased the construction of three missile corvettes, launched the uncompleted hulls of varying readiness, and towed them to the Pella Shipyard. Specifically, for the operation of More Shipyard, the company created a branch office, Kaffa-Port LLC
45	PJSC Amur Shipyard (Komsomolsk-on-Amur), part of JSC United Shipbuilding Corporation	The company cooperated with the Sevastopol Enterprise Era (for the supply of electric equipment), Ship Electric Instrument Plant Mayak LLC (for the supply of ship signal exploitation equipment in pursuance of a contract with the Ministry of Defence of Russia), and the Zavod Molot-Mekhanika LLC (for the supply of spare parts for electric pumps)
46	PJSC Zvezda (St. Petersburg)	Cooperation with the More Shipyard (for the supply of diesel engines for power plants of the small project 22800 Karakurt missile ships)
47	PJSC United Aircraft Corporation (Moscow), sanctioned by Ukraine and the EU	By orders of the Ministry of Industry and Trade of Russia, the UAC was officially "assigned" to supervise the State Unitary Enterprise Yevpatoriia Aircraft Repair Plant . Upon completion of corporatisation, the latter is planned to be integrated into the UAC
48	PJSC Proletarsky zavod (St. Petersburg), part of JSC United Shipbuilding Corporation	Cooperation with the JSC Fiolent Plant
49	PJSC Beriev Aircraft Company (Taganrog), part of the JSC United Aircraft Corporation	Cooperation with the Yevpatoriia Aircraft Repair Plant (for the repair of Be-12 aircraft produced by the Beriev Aircraft Company, which is supervising the quality of work)
50	PJSC Yaroslavl Shipbuilding Plant (Yaroslavl), sanctioned by Ukraine and the US	Cooperation with the More Shipyard and Shipyard Persei (for the completion of the A160-YaR project <i>Vodolaz Kuzminykh</i> diving ship, completion of the project 10410 <i>Balaklava</i> border guard ship [codename <i>Svetlyachok</i>] and the marine tug <i>Sergey Balk</i> [project 23470])
51	JSC Severnaya Verf (St. Petersburg), belonging to JSC United Shipbuilding Corporation	Cooperation with the JSC Fiolent Plant

Nº	Name of the Russian enterprise	Name of the captured Ukrainian enterprise and form of cooperation
52	Balakovo Shipbuilding Ship Repairing Factory LLC (Saratov Oblast, Balakovo), part of United Shipyards Vega LLC	In 2018, together with the Akhtubinsky Shipbuilding Ship Repairing Factory, this company took part in manufacturing a caisson for the Sevastopol Marine Plant
53	DM Technology LLC (Moscow)	This company cooperates with More Shipyard (in the development of a water-jet drive for the experimental vessel of the 03550 Sleming-2 project)
54	Energoremont LLC (Moscow)	This company was officially assigned to the Feodosia Ship and Mechanical Plant in order to provide the latter with orders
55	Network-Centric Platforms Research and Production Company LLC (Samara), part of Knowledge Genesis Group	One of the developers of software for the distance control system of the UCGV Vikhr, created in collaboration with the JSC Science and Technology Centre Impulse-2
56	SPB Marine LLC (St. Petersburg), the official distributor of the Bukh marine diesel engine company (Denmark) and a service dealer of TwinDisc, Inc (USA). The company is also a major supplier of propulsion complexes based on the Scania marine engines (from Sweden) in Russia	This company cooperated with More Shipyard (supplied a set of equipment for the A160-YaR project diving ship and completed its commissioning and testing)
57	TsAPK LLC (Moscow), established in 2015 and operating under the Tsuru Robotics brand	One of the developers of the Udar (Vikhr) UCGV, co-created with the JSC Science and Technology Centre Impulse-2
58	JSC Central Research Institute Burevestnik (Nizhny Novgorod), part of the UralVagonZavod Research and Production Corporation	In 2015, the company was officially assigned as the "supervisor" of the Science and Technology Centre Impulse-2 to supply the latter with orders. It was also a developer of the MB2-03 combat module for the UCGV Vikhr, created in collaboration with the Science and Technology Centre Impulse-2 .
59	The Federal State Budgetary Institution of Higher Education Ufa State Aviation Technical University (Republic of Bashkortostan, Ufa)	In cooperation with Teplo'obmen LLC (for the supply of heat exchangers enabling the latter to create a prototype of an engine water supply system)
60	The Federal State Budgetary Enterprise Main Research and Testing Centre of Robotics of the RF Ministry of Defence (Moscow)	One of the developers of the Udar (Vikhr) UCGV, co-created with the JSC Science and Technology Centre Impulse-2
61	Federal State Unitary Enterprise 13 Shipyard of the Black Sea Fleet of the RF Ministry of Defence (Sevastopol; sanctioned by Ukraine)	Cooperation with the Fregat Shipyard (for repair of ships and vessels of the Russian Black Sea Fleet) and with Sevmormash-2M (for the supply of spare parts and equipment)
62	Federal State Unitary Enterprise Krylov State Research Centre (St. Petersburg)	Cooperation with the Persei Shipyard (for the development of the project 23470 marine tugs; and the completion of the tender for supplying an electric power system to the project 23470 tug <i>Sergey Balk</i>)
63	Federal State Unitary Enterprise Radio Research and Development Institute (Moscow)	In June 2014, the NIIR absorbed the Omega Testing Centre , turning it into a new branch

REFERENCES

- The criminal investigation by the Joint Investigation Team, 24.05.2018, <https://www.prosecutionservice.nl/topics/mh17-plane-crash/criminal-investigation-jit-mh17>
- Oleksandr Khara, "Sanktsiinyi zashmorh dlia Kremliya," [Sanction blindfold for the Kremlin], Mirror Weekly, December 14, 2014, <https://zn.ua/ukr/international/sankciyniy-zashmorg-dlya-kremliya-.html>
- Yakov Mirkin, "Poka net osnovaniy schitat, chto trend na oslableniye rublya peremenisty," [So far there is no reason to believe that the trend towards the weakening of the ruble will change], Nizhehorodskaya pravda, March 12, 2021, https://pravda-nn.ru/interview/yakov-mirkin-poka-net-nikakih-osnovaniy-schitat-cto-trend-na-oslablenie-rublya-peremenitsya/?fbclid=IwAROCXwshXQjwVJIDQhSo35PJnepHyOtugevGfejsRKj3tGfN_OsZ1y-OIO
- Yakov Mirkin, "Arifmetika poteryannogo desyatiletia," [Lost Decade Arithmetic], Vedomosti, January 25, 2021, <https://www.vedomosti.ru/opinion/articles/2021/01/25/855412-arifmetika-desyatiletia>
- Yakov Mirkin, "Chto zhe delat? Kak Rossiyu dushat sanktsiyami," [What to do? How Russia is being strangled by sanctions], Gazeta RU, June 30, 2019, https://m.gazeta.ru/amp/comments/2019/06/30_a_12436411.shtml
- Ibid.
- "Nash Ekonomicheskii Prognoz (NEP)," [Our Economic Outlook], Centre of Development Institute, Higher School of Economics, February 2021, <https://dcenter.hse.ru/>
- "Mezhdru retsessiyey i stagnatsiyey: chto zhdet promyshlennost Rossii," [Between recession and stagnation: what awaits Russian industry], Gazeta RU, March 12, 2021, <https://www.gazeta.ru/business/2021/03/12/13509356.shtml>
- Aleksandr Golts, "Piramida Putina. Kak OPK, buduchi bankrotom, sobirayetsya v 2021 godu proizvodit novyye vidy oruzhiya," [Putin's Pyramid. How the defence industry, being bankrupt, is going to produce new types of weapons in 2021], The Insider, December 22, 2020, <https://theins.ru/opinions/golts/237921>
- "Borisov – RBK: Ya ne diplomat, ya dolzhen gotovitsya k khudshemu," [I am not a diplomat, I must prepare for the worst], December 21, 2020, <https://www.rbc.ru/interview/society/21/12/2020/5fdd8e669a7947043ec1fe49>
- Ibid.
- Pavel Luzin, "Armiya i VPK: perspektivy," [Army and military-industrial complex: the prospects], Riddle, January 6, 2021, <https://www.ridl.io/ru/armiya-i-vpk-perspektivy/>
- Aleksandr Golts, "Piramida Putina. Kak OPK, buduchi bankrotom, sobirayetsya v 2021 godu proizvodit novyye vidy oruzhiya," [Putin's Pyramid. How the defence industry, being bankrupt, is going to produce new types of weapons in 2021], The Insider, December 22, 2020, <https://theins.ru/opinions/golts/237921>
- "Na importozameshcheniye v Rossii potratili 'ogromnyuyu summu,'" [A "huge amount" was spent on import substitution in Russia], ROSBALT, December 10, 2019, <https://www.rosbalt.ru/business/2019/12/10/1817635.html>
- Gustav Gressel, "The sanctions straitjacket on Russia's defence sector," ECFR, February 13, 2020, https://ecfr.eu/article/commentary_the_sanctions_straitjacket_on_russias_defence_sector/
- Pavel Luzin, "Multiple Challenges Hinder Russian Efforts to Modernize Its Satellite Navigation System," Jamestown Foundation, April 27, 2020, <https://jamestown.org/program/multiple-challenges-hinder-russian-efforts-to-modernize-its-satellite-navigation-system/>
- Pavel Luzin, "Armiya i VPK: perspektivy," [Army and military-industrial complex: the prospects], Riddle, January 6, 2021, <https://www.ridl.io/ru/armiya-i-vpk-perspektivy/>
- "Rodina nachinayetsya s upakovki," Profil, [Homeland begins with packaging], November 7, 2016, <https://profile.ru/economy/rodina-nachinaetsya-s-upakovki-8860/>
- "Sanktsii makhnuli 'chernym krylom,'" [Sanctions waved "a black wing"], Kommersant, January 10, 2019, <https://www.kommersant.ru/doc/3850113>
- "Sanktsii popali v antitorpedu," [Sanctions hit anti-torpedo], Kommersant, September 10, 2020, <https://www.kommersant.ru/doc/4484525?query=%D1%81%D0%B0%D0%BD%D0%BA%D1%86%D0%B8%D0%B8%20%D1%82%D0%B5%D1%85%D0%BD%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D0%B8>
- "Nevyvezdnyye riski," [Non-travel risks], Kommersant, March 9, 2016, <https://www.kommersant.ru/doc/2931738>
- "Kirovskiy zavod otguzil turbinu, iz-za kotoroy zatyannulas postroyka ledokola 'Arktika,'" [Kirov Plant shipped the turbine, which had delayed the construction of the icebreaker "Arctic"], TASS, September 25, 2017, <https://tass.ru/ekonomika/4589572>
- "SZRK – o novom traulere 'Barentsevo more' i o problemakh rossiyskogo sudostroyeniya," [About the new trawler "Barents Sea" and about the problems of Russian shipbuilding], KORABEL RU, January 22, 2021, https://www.korabel.ru/news/comments/szrk_-_o_novom_traulere_barentsevo_more_i_o_problemah_rossiyskogo_sudostroeniya.html
- "Glava OSK: sudostroyeniye – ne supermarket, kuda mozhesh priyti i kupit to, chto vchera i ne planiroval," [Head of USC: shipbuilding is not a supermarket where you can come and buy something that you didn't plan yesterday], OSK, February 4, 2021, <https://www.aosk.ru/press-center/media-corporation/glava-osk-sudostroenie-ne-supermarket-kuda-mozhesh-priyti-i-kupit-to-cto-vchera-i-ne-planiroval>
- "OSK ne isklyuchayet ubytku po itogam 2020 goda," [USC does not rule out a loss at the end of 2020], Port News, February 5, 2021, <https://portnews.ru/news/308477/>
- "Strategiya zavisimosti: chto ne tak s sudostroitelnymi planami Minpromtorga," [Dependency strategy: what is wrong with the shipbuilding plans of the Ministry of Industry and Trade], Voenyuy osvedomitel, July 25, 2018, <https://vk.com/@milinfolive-strategiya-zavisimosti-cto-ne-tak-s-sudostroitelnymi-planam>
- "Glava 'Sovfrakhta' raskritikoval ideyu ob alternative Suetskoyu kanalu," [The head of Sovfrakht criticized the idea of an alternative to the Suez Canal], Kommersant, February 8, 2021, <https://www.rbc.ru/business/08/02/2021/602156109a7947176d32a1ab>
- "Otnosheniye k SShA i slova Baidena o Putine," [Attitude towards the United States and Biden's words about Putin], Levada-Centre, April 7, 2021, <https://www.levada.ru/2021/04/07/otnoshenie-k-ssha-i-slova-baidena-o-putine/>
- "Doveriye institutam," [Trust in institutions], Levada-Centre, September 21, 2020, <https://www.levada.ru/2020/09/21/doverie-institutam/>
- "Prisoedineniye Kryma," [The annexation of Crimea], Levada-Centre, April 1, 2019, <https://www.levada.ru/2019/04/01/prisoedinenie-kryma/>
- "Protestnyy potentsial," [Protest potential], Levada-Centre, March 12, 2020, <https://www.levada.ru/2020/03/12/protestnyj-potentsial-11/>
- "The 'Trophy Economy': Militarization as a Factor of Industrial Growth," BlackSeaNews, October 24, <https://www.blackseanews.net/read/169457>
- "Okkupanty uveryayut, chto krymskiye predpriyatiya OPK zagruzili zakazami na 24 mlrd rubley," [Invaders claim that the Crimean defence industry enterprises were loaded with orders for 24 billion rubles], BlackSeaNews, February 10, 2020, <https://www.blackseanews.net/read/160598>



Oleksandr Khara

Oleksandr Khara has been a Fellow of the Centre of Defence Strategies since January 2021. He also is a Deputy Chair of the Black Sea Institute of Strategic Studies since 2017.

He was an Advisor to the Minister of Defence of Ukraine (2020); a Director for Multilateral Diplomacy at the Maidan of Foreign Affairs think tank (2014-19); an executive assistant to an M.P. (2011-14).

During his tenure as a diplomat and a civil servant, he was a Deputy Director-General for Foreign Affairs at the Office of the National Security and Defence Council of Ukraine (2008-11); a State expert at the Office of the NSDC of Ukraine (2006-08). Mr Khara held several positions within the Foreign Ministry of Ukraine, including Department of the Americas (2000-2002, 2005-2006) and at the Embassy of Ukraine in Canada (2002-2005).

Mr Khara is an alumnus of the Royal College of Defence Studies (London, the U.K.), and holds graduate of the Diplomatic Academy of Ukraine (M.A.) and the Donetsk State Academy of Management (B.A.).



Andrii Klymenko

Andrii Klymenko is a Crimean expert and journalist, the co-founder and editor-in-chief of the BlackSeaNews online publication, www.blackseanews.net

The author holds a degree in automatic systems engineering.

Before the occupation of Crimea, he lived and worked in Yalta. A. Klymenko is the author of many development strategies for the Crimean cities, economy sectors, and the peninsula as a whole. Economist Emeritus of the Autonomous Republic of Crimea.

Mr Klymenko is currently being persecuted by the FSB for resisting the occupation of Crimea and is on the Russian Federation's official list of terrorists and extremists.

Since 2014, together with the rest of the BlackSeaNews editorial staff, he has been working in Kyiv. In 2014, the author joined the Maidan of Foreign Affairs as Chairman of the Supervisory Board and Head of the Crimean Department. Since 2017, A. Klymenko has been the Head of the Monitoring Group of the Black Sea Institute of Strategic Studies that focuses on the issues of compliance with international sanctions against the RF imposed for the occupation and illegal annexation of Crimea.

defence.org.ua

office@defence.org.ua

