

Guns Before Butter — A New Reality?

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Abstract

Warfighting in Ukraine in 2022-2023 has become the first large-scale armed conflict in Europe in the 21st century that directly involves Russia and NATO. The scale of events, the geography of operations, the number of weapons used and the personnel engaged require a reassessment of military development and defense spending priorities in many countries around the world. This article analyzes certain features of the current armed conflict and the decisions already made by individual countries. The authors come to the conclusion that given the scale of military buildup in Europe and elsewhere it is advisable to think about new measures to reduce risks now and establish effective arms control in the future.

Keywords: defense industry, conventional weapons, regional conflicts, military development.

Events in 2022-2023 in Ukraine (and partly Russia) have become the biggest armed conflict in Europe since the end of World War II. Troops and almost all possible types of weapons have been engaged in unprecedented numbers. Ammunition is used in amounts not seen for many decades. The kind of warfighting characteristic of the last decades of the 20th century and the first decades of the 21st century, when technologically more advanced countries fought against a much weaker enemy, is, in fact, gone. It is true though that such superiority did not always guarantee success, as borne out by the Soviet and American military campaigns in Afghanistan, but the practice of military operations was clearly asymmetric.

After the end of the “previous” Cold War, the armed forces in different countries considered scenarios of large ground operations during armed conflicts with an equal or superior enemy, but such plans largely remained a theory. Hostilities in Ukraine have put these theories to the ruthless test. Russian forces are opposed by an enemy armed with similar “post-Soviet” weapons and military systems, and constantly provided with modern Western armaments in increasing amounts. The impact of the current conflict on approaches to the combat use of certain types of weapons and military equipment, on strategy,

operational art, and tactics can be fully assessed only after its end. However, one can already notice some political and economic realities that will determine the development of military-industrial complexes in different countries, the structure of their defense spending, the direction of further developments, the realignment of priorities, and so on. The following observations can be made:

- A compact army manned solely with contract soldiers has serious limitations. A lack of trained infantry limits the capabilities of even a relatively modern and well-equipped army. In the long term, this can lead to an increase in the number of military personnel around the world, partial restoration or expansion of conscription, and the emergence of intermediate forms of recruitment into the armed forces such as volunteer communities or various movements supported by the state, as well as private and semi-private military companies.
- The current production of conventional weapons and military equipment, particularly munitions, does not meet the needs of the ongoing conflict. Western countries are running out of reserves due to arms supplies to Ukraine. With the current rate of production, it would take a very long time to replenish the stocks, which is why steps are being taken to expand defense industry capacities and increase arms production. Given dense and diverse air defenses and traditional sensitivity to aircraft losses (due to the cost of aircraft and the complexity, duration and high cost of pilot training), the importance of such traditional conventional weapons as barrel and rocket artillery, tanks and other armored fighting vehicles is growing again. In the future, industry will have to resume their mass production, which may require the unification of production specifications to reduce their cost. Finding a balance between mass production and technological excellence is once again becoming an extremely urgent task.
- Current defense spending is insufficient to prepare or deter conflicts like the one in Ukraine. Expenditures will have to be increased. Structurally, this will require investment in the

modernization of the defense industry, larger volumes of production, and the maintenance and training of a larger army.

- High technology will remain important at all levels from reliable communications and intelligence to air supremacy to deprive the enemy of the possibility to control the air.
- The high cost of adapting the defense industry to new challenges will require increasingly broad international cooperation to reduce expenses. This mechanism functions quite well in the West and will continue to work within NATO and through relations between the United States and European countries, on the one hand, and their formal and informal allies in Asia, on the other. Russia may step up cooperation with China, Iran, North Korea, and other countries that are not members of Western alliances. However, the current level of cooperation is still incomparable.

The listed trends require deep and comprehensive research. This article offers a number of basic conclusions as well as some possible ways to solve the exposed problems.

EXPOSED PROBLEMS

Personnel

One of the key problems exposed by Russia's special military operation (SMO) in Ukraine is the need for a significant number of trained personnel, primarily infantry.

In the late 20th century and the early 21st century, most developed countries abandoned compulsory conscription or made it auxiliary. Coupled with declining birth rates (fewer volunteers, higher sensitivity to losses), this led to a significant decrease in the size of the armed forces and their reorientation to the so-called professional armies, in most cases very compact.

However, in an armed conflict of a significant scale, especially on land, an army, which is superior to the enemy qualitatively but inferior quantitatively, experiences serious problems trying to control the territory. In the first year of its military operation, after the rapid seizure

of significant territories at the initial stage, Russia faced a physical shortage of manpower not only for continuing its offensive, but also for organizing a solid defense with a sufficient density of personnel, which forced the authorities to withdraw the troops from some areas and announce partial mobilization.

One of the aspects of human resources is their quality, which in military terms means the ability of both a soldier and a general to carry out the assigned combat mission. It is fair to say that nothing like the SMO, both in scale and intensity, has happened, at least in Europe, for a very long time; so there certainly will be setbacks (Kashin, 2022). However, studying the SMO experience for the training of personnel, including officers, is clearly imperative.

Reviewing the SMO both in general and in terms of individual tactical elements is seen as the most important task not only in Russia, but also abroad. Particular attention is drawn to the “newly discovered” capabilities of artillery in conjunction with modern reconnaissance and target designation technologies (Judson, 2023). For example, according to the U.S. military, new difficulties arise when organizing troop command and control in a situation where the creation of large command posts is extremely dangerous (Freedberg, 2023). One of the options they propose is to set up command posts in the most hidden (including in the electromagnetic spectrum and cyberspace) compact nodes connected with each other by fiber-optic communication lines and alternately changing their location. This will require a real change of mindset by officers accustomed to working in large centralized headquarters during asymmetric conflicts.

Missiles and Munitions

The SMO has also exposed arms shortages, especially precision weapons of various types, in most countries.

Stockpiles of precision weapons, even in the richest countries and military blocs, are far from inexhaustible, with air-launched guided munitions holding a significant share of armaments only due to the advent of such cheap models as guidance kits that convert unguided bombs into all-weather precision-guided JDAMs (Joint Direct Attack

Munition). This became particularly evident among U.S. allies during the campaign in Libya, when it turned out that many European countries lacked air-launched guided weapons even for a short low-intensity air war. After those conflicts and thanks to the development of mass types of air-launched guided weapons the United States more or less solved the problem of their shortage, but other types of weapons, particularly infantry ones, were overlooked. At the same time, according to the latest estimates made by American experts (Jones, 2023), in the event of large-scale hostilities with a strong enemy, JASSM-family cruise missiles (including extended-range JASSM-ER and anti-ship LRASM missiles) may run out in about a week, and the stockpiles of almost all major weapons and military equipment are generally assessed as low or medium.

Against the background of the current conflict and political situation, these estimates may not be quite accurate, but they are certainly not unfounded. This concerns the United States which manufactures armaments, at least air-launched weapons, in large volumes. In the UK, the Royal Air Force will not be able to replenish the stocks of Storm Shadow cruise missiles (handed over to Ukraine, apparently in small numbers) in the near future because their production has been stopped and it will take up to two years to resume it once the political decision is made and investment begins, but there have been no reports to this effect so far. Things are slightly better with the French “twin missile” SCALP-EG, the production of which has not stopped due to active export contracts (however, it is probably made in small numbers). Prospects for the Swedish-German cruise missile TAURUS KEPD 350 do not look quite promising either. At the same time, Europe is analyzing the situation and looking for ways to increase the production of precision weapons (Hoffman, 2023).

One way to build up arms stockpiles in the United States is to switch to the practice of long-term package contracts for the purchase of air-launched weapons (particularly cruise missiles) and other munitions. This would allow contractors to invest more in manufacturing and plan component purchases in advance (Roque, 2023a; LaGrone, 2023). It is believed that these measures (together with a major expansion

of production, of course) will allow the U.S. to double the annual production of JASSM/LRASM air-launched cruise missiles from slightly over 500 to more than 1,000 in a few years (Lariosa, 2023).

The conflict in Ukraine has shown that Western countries have rapidly run out of even less sophisticated mass-produced guided weapons. The United States quickly used up a “comfortable” quota (up to a half or more for some weapons) for supplies to Ukraine, for example, infantry man-portable anti-armor/assault systems and shoulder-fired air-defense weapons. Stock replenishment has been declared a strategic task in a number of Western countries, primarily the United States (Gould and Harris, 2022). The West has announced a transition from just-in-time stockpiles of weapons and munitions to just-in-case stockpiles (Kenney, 2023).

The conflict in Ukraine has become a cash cow for a number of arms manufacturers in Eastern Europe, which have sharply increased the production of weapons compatible with Soviet standards for historical reasons (Kahn et al., 2023). At the same time, the consumption of artillery shells remains “unbearable” for the Western military-industrial complex as the Ukrainian army spends as many rounds each day as the United States made per month before the conflict (Erlanger and Jakes, 2022). In total, Ukraine received more than two million NATO-type 155-mm artillery rounds, and their stockpiles were so depleted that the United States had to start supplying cluster munitions due to the shortage of other types, which tarnished its image (Marrow, 2023).

According to estimates, at the end of July 2023, during their so-called counteroffensive, Ukrainian troops used up to 8,000 shells per day (or sometimes even more in 2022, when there was a large supply of Soviet-made artillery systems and shells), while the production of the most common 155-mm ammunition in the United States was raised to 24,000 per month (Schwartz and Miller, 2023) from 14,000 before the conflict. The U.S. is planning to increase it to 90,000 per month in 2025, but it is unclear whether it will stick to these plans after the end of the conflict due to budget spending limits and other priorities focused primarily on confrontation with China in the Pacific. In fact, U.S. Navy top commanders have already openly voiced dissatisfaction

with, or at least concern about, the wrong vector of the military policy (Toropin and Kheel, 2023).

The EU, which in some cases has handed over its “emergency reserve” to Ukraine (Mehta, 2022), has also set the political goal of bringing combined arms production to the same level in the near future. But it has used a more ambitious formula of “a million per year” and put emphasis on supplies to Ukraine. Although some defense industry giants have reaffirmed this plan as quite realistic, it is still not fully clear whether it will succeed, given the proverbial efficiency of the European bureaucracy, especially in relation to defense projects (Kington and Gosselin-Malo, 2023). According to a report submitted to the German parliament, the Bundeswehr’s arms stockpiles decreased by the beginning of the summer of 2023 to about 20,000 artillery shells, which will only last a few days of fighting (Gebauer and Traufetter, 2023). Approximately 30,000 shells have already been shipped to Ukraine. Although the NATO allies have adopted an ambitious plan, according to which each member country should have a supply of ammunition sufficient for a month of fighting (for the Bundeswehr, it is about 230,000), they are planning to achieve this target no earlier than the beginning of the 2030s.

The American corporation Lockheed Martin has announced that it is planning to increase the production of GMLRS munitions used in the HIMARS and MLRS systems from 10,000 to 14,000 per year in 2024, but further increase will take much longer because of more serious constraints (the need to increase the supply of components from subcontractors, hire new employees, purchase machines and tools) (Skove, 2023). It is noteworthy that this is not so much about replenishing the American arms stockpiles as about boosting the corporation’s exports, while domestic purchases remain at the same level. The consumption of this type of ammunition in the conflict has been more or less bearable, which is not surprising given the small number of launchers supplied for them. However, taking into account the main customers, work is underway to expand and saturate the NATO arsenal.

Moreover, the increasingly intensive combat use of weapons, primarily missiles and artillery, above the standards and practices of

armed conflicts involving irregular forces, cannot but lead to a revision of specifications for certain products (Lillis and Liebermann, 2023). For example, it may be considered appropriate to improve reliability at the expense of outstanding range characteristics, or make other compromises.

Limited Response Capability

After the end of the Cold War between the Soviet Union and the United States, the defense industries of almost all leading players refocused on rather limited commercial, often export, contracts. It was simply impossible to have “extra” capacities standing idle most of the time as both the U.S. and Russia were “optimizing” their defense industries in the 1990s, which, however, looked more like demolition. It is a delusion to think that things were better in the United States as the Cold War winner; in fact, they were worse in a number of sectors.

A vivid example is Stinger MANPADS. After supplying about half of their stockpiles to Ukraine (which lasted just the first few months of the conflict), it turned out that their mass production could simply not be resumed, because some of the components were no longer available and the contractors had withdrawn from business. As a result, it was decided to develop new man-portable air-defense systems. These plans were included in the draft budget for FY2024 (with production to begin in 2027). Until then, the U.S. will try to somehow restore and extend the life of the remaining reserves (Roque, 2023b). A number of manufacturers of other weapons (for example, man-portable antitank systems and guided MLRS) have announced plans to increase production, but the first results can be expected no earlier than in a year or two.

Moreover, if the current crisis is followed by a period of calm for at least some of its participants, it will be unprofitable and nearly impossible to keep excess capacities in the defense industry. Constant production of weapons in huge volumes for future use or for regular disposal in local wars (including proxy ones), as was done during the Cold War, is economically challenging but quite possible if the international military-political situation keeps deteriorating further on a long-term basis.

To conclude, the worst option for the defense capability of any state is a simultaneous shortage of people and a lack of advanced weapons, military equipment and modern reconnaissance and combat management systems. In other words, states that have neither a significant number of combatants, nor stockpiles of modern weapons and military equipment, nor the ability to produce them may find themselves in the most vulnerable position. Therefore, most countries will seek to solve these problems in accordance with their own capabilities and the architecture of their military-political relations.

POSSIBLE SOLUTIONS

Revising Approaches

Active work is already underway to explore possible ways to change approaches towards defense capability development. First of all, many countries have realized that it is not enough to just purchase advanced weapons, because they would need to build really large reserves of them. In fact, if even American arsenals of certain types of weapons go up in smoke in a modern war, if not in weeks, then in a matter of several months, then what can we say about European armies?

Growing ammunition purchases will apparently become a general trend but not as noticeable for the public and experts as the purchases of military equipment. The question is: Will the governments advertise such purchases in order to show taxpayers where their money goes or, on the contrary, prefer not to annoy the people amid economic problems? The U.S. authorities have lately been making loud statements about resuming the production of weapons that have been shipped to Ukraine in significant amounts. At the same time, critical voices are growing stronger amid public spending restrictions. According to a sociological survey conducted in July 2023, more than half of the American respondents for the first time spoke out against further military assistance to Ukraine probably due to the lack of progress in the Ukrainian counteroffensive, but primarily because of domestic economic problems (Agiesta, 2023).

Europe has been most active in this respect, but it has not gone any further than announcing plans to increase defense spending without overhauling its concepts. Leading military powers in Europe made such plans public last spring and stick to them, although their implementation is not going smoothly everywhere and so far they have rarely resulted in large arms purchase contracts. However, this can be attributed to the budget process inertia.

Germany leads the way in ramping up defense spending. On February 27, 2022, Chancellor Olaf Scholz announced that a special fund of about €100 billion would be created in the coming years “for defense needs” (which approximately equals two German regular annual defense budgets). In June, the plan was approved by the Bundestag, because such significant unscheduled spending required amendments to the Constitution. Scholz also announced plans to create the “largest army in Europe” in the future. However, no real steps to radically increase the size of the Bundeswehr have been taken yet, and it will probably be much more difficult to find human resources for it than money. At the same time, Germany has already begun defense purchases with an eye to the promised additional funding. For example, it has signed a contract for the purchase of American F-35A stealth multirole fighters, which has long been expected since they are almost the only available replacement for physically and morally obsolete Tornado bombers capable of carrying nuclear bombs during NATO’s joint nuclear missions involving Germany. According to preliminary plans, almost half of the additional funding (about €41 billion) will be used to buy aircraft, and only one-fifth for purchasing equipment for the ground forces (about €18.5 billion)—this is not the result of the conflict in Ukraine, but of the local German specifics: the Bundeswehr has more or less good armored vehicles but has long-standing problems with helicopters, UAVs, and some other materiel.

Almost immediately after the start of the military conflict in Ukraine, such NATO countries as Belgium, Denmark, Spain, Italy, the Netherlands, Norway, Romania, and France followed Germany in announcing a significant increase in defense spending. It should be noted that not all of these countries have so far worked out and

approved detailed roadmaps for boosting defense spending. A year on, of all major NATO players only Poland has increased its defense budget quite significantly, while many other countries have not done anything at all (The Economist, 2023).

Experts have made rather cautious assessments, for example, in the UK, indicating that the current shortage of ammunition can only be overcome by 2025-2026, if there is the political will to do so, which will be a key factor (Cranny-Evans, 2022). At the same time, replenishing the stockpiles has been named in the new Defense Command Paper as the most important military procurement task (Defense Command Paper, 2023), for which purpose an additional £2.5 billion are expected to be allocated (Chuter, 2023; Martin, 2023b).

Poland's defense spending, including appropriations from the special National Defense Fund, will amount to about \$27-29 billion in 2023 from \$12.5 billion in 2022, virtually more than doubling to a huge 4.5% of GDP. Unlike Germany, Poland, apparently drawing on the experience of the conflict, has focused on purchasing equipment mainly for the ground forces: tanks, barrel and rocket artillery systems, and helicopter gunships. This has been justified by the transfer of part of the arms reserves (for example, T-72 tanks) to Ukraine.

Poland has dramatically stepped up military-technical cooperation with South Korea by purchasing a wide range of military equipment. In particular, Warsaw will buy 180 K2 Black Panther main battle tanks for \$3.4 billion, 212 K9PL Thunder self-propelled howitzers for \$2.4 billion, up to 288 K239 Chunmoo multiple rocket launchers for \$6 billion under a framework agreement, and 48 FA-50 light combat aircraft for \$3 billion. These are probably the EU's largest defense deals this year. In addition to Korean weapons, Poland continues to buy American weapons quite actively, particularly M1A2 Abrams main battle tanks. Earlier it signed contracts for the purchase of F-35A Lightning II fighters and MIM-104 Patriot air defense/missile defense systems in a promising PAC-3+ configuration.

At the same time, military-technical cooperation with Asia irritates EU countries. In fact, instead of encouraging the development of the European defense industry, this opens the gates to a new player in the

European defense market. On the other hand, this is a natural result of the current situation: as demand for weapons grows but traditional suppliers are unable to satisfy it (for example, Poland would like to buy American HIMARS launchers, but it cannot get them in large numbers quickly because all shipments have already been scheduled), new ambitious players get unique opportunities to fill the gap: not only the Republic of Korea, but also Turkey, Iran, Israel (Israel cannot be called a novice in military-technical cooperation, of course, but it is significantly expanding its competences), and Japan.

Germany's unexpected choice of the Israeli Arrow 3 advanced missile defense system can serve as an example of how new players are gaining a foothold in the European market. In 2023, Finland became the first importer of the David's Sling long-range air/missile defense system developed jointly by the U.S. and Israel (Frantzman, 2023). There are also comical situations: to ensure timely deliveries, Germany is planning to purchase its own Boxer armored personnel carriers from a manufacturer in Australia simply because the latter will have no other orders to fill in the coming years, unlike Germany's own plants (Martin, 2023a).

It is possible that Japan's increased interest in building its own strike potential based on precision long-range weapons was also prompted to some extent by the Ukrainian (more precisely, Russian) combat experience. The new doctrinal security documents adopted by the Japanese government in December officially state the need to acquire weapons for counterattacks at bases and command posts, that is, American Tomahawk cruise missiles at first and eventually its own systems, including hypersonic ones (Kayal, 2023; Reuters, 2023). If Japan manages to increase its defense spending by half or double it, the country will join the world's top five nations in absolute terms (Liang and Tian, 2023).

Special attention will be paid to air/missile defense systems and their combination and integration. The SMO has once again (but now particularly vividly) shown both the need for multi-layered defenses against the entire range of aerospace attacks, and the impossibility of creating impenetrable umbrellas. There is no guarantee that

bombers "will always get through" (not least because their loss will be a politically sensitive issue), but missiles and other strike weapons can overload any defensive systems.

The SMO has proved a showcase for loitering munitions and suicide drones of various types and basing modes. They have become one of the main actors in the conflict from a media point of view, which prompts bigger fund allocation for such programs sometimes even more than their practical value (which they also have, of course) does. Additional efforts may be made to equip armies with other uncrewed platforms as well.

GOING THE "RIGHT" WAY

As the SMO experience is analyzed, concrete decisions are already being made to strengthen defense capabilities not only in the countries involved in the conflict (albeit indirectly). It is no exaggeration to say that the conflict is being watched most closely around the world. As soon as such decisions are formalized, we will see a sharp increase in the workload for the defense industry and logistics infrastructure, as well as attempts to make military service more attractive. This will fuel competition in various areas: from consumers fighting for certain products, increased production of which will take time, to various branches of the military and the armed forces as a whole competing with commercial structures, including transnational corporations, for high-quality personnel.

On the other hand, based on the SMO experience, the partnership between the military and the private sector is strengthening, as borne out by interaction with commercial digital services, and the use of civilian satellite communication constellations and remote sensing satellites; likewise, the defense procurement process will accelerate, and bureaucratic requirements for innovation or large ammunition purchases will be eased (which, of course, generate buyer-seller mergers, not always legal, but often convenient for the parties involved).

Until recently, the prevalent narrative was about the benefits of reducing defense spending, the so-called peace dividend, etc., especially in European countries. Now that defense spending is growing again,

more and more creative thinking will be needed to justify bigger expenses by citing threats from rogue states and generally the confrontation between the great powers. For example, Japan explains its increased defense spending by the SMO, on the one hand, and by a missile threat from the DPRK, on the other hand, but most importantly by the growing global ambitions of China and its confrontation with the United States and its allies (even Russia worries Tokyo primarily as China's ally). The Republic of Korea uses similar rhetoric, seasoning it with ill-concealed criticism of Japan. Poland and the Baltic countries have made the utmost of their usual song about the notorious Russian threat. Western European countries are dillydallying in terms of rhetoric.

The United States has generally come to a consensus that the armed forces need urgent modernization to contain China. This stirs debate about whether the U.S. should commit so much effort and so many resources to containing Russia and supporting Ukraine. The view that this only distracts the country from the confrontation with China is gaining momentum, especially amid government spending cuts in general and defense spending in particular. On the other hand, the funds formally allocated as aid to Ukraine have been actively used to buy weapons for the American army (under the guise of compensation for the arms supplied, of course; needless to say, the U.S. is handing over weapons and equipment that were slated for disposal in near future anyway, for example, M113 armored personnel carriers), and to modernize industry, but particularly to reduce its dependence on resources and components from China and Russia (Harris, 2023).

The extent of Washington's involvement in European security matters in the medium term will depend on the twists and turns of the American domestic political struggle, which will have (indirectly and without much reflection) a strong influence on the global situation and the policy of its European allies. It cannot be ruled out that after some time needed to "observe the proprieties," the United States will sharply reduce its military presence in Europe. The respected RAND Corporation, which has never been known for its commitment to pacifism, has recommended waiting for at least three to five years (Radin and Gentile, 2023).

WHAT SHOULD RUSSIA DO?

Let us give several recommendations regarding the possible adjustment of domestic approaches.

- a) Time has come to revise key indicators for military spending cost effectiveness. Until recently, cost minimization was apparently one of the key performance criteria, which was somewhat justified before the SMO and during economic crises. At the same time, we can clearly see negative consequences of this approach in terms of Russia's actual qualitative and quantitative military capabilities. Therefore, some changes can be expected.
- b) The current situation requires that emphasis be put on the "here and now" systems. It seems that the key task now is to rapidly increase the production and procurement of the most needed types of existing weapons, military equipment and other materiel. This will probably be done at the expense of developing and testing new systems. At the same time, it is impossible to reverse the rapid scientific and technological progress in the military domain. Therefore, finding a balance between priorities during the SMO and the deteriorating international situation as a whole becomes almost a key task.
- c) Optimizing state defense order procedures is also a pressing issue. Following the best foreign examples, it would be appropriate to create conditions for more active engagement with private contractors for the implementation of relevant tasks. To remove obstacles to these processes, it may be necessary, among other things, to slightly reduce excessive requirements applied to military products. All this should ultimately create a system free from outdated hopes that the defense industry will lead the way in innovative development. In fact, the opposite processes are unfolding in the world, with cutting-edge developments coming into the defense industry from the civilian sector.
- d) Making the defense industry more open may at first seem contrary to the general trend towards militarization and

great-power rivalry. However, establishing two-way feedback between the developers and users of weapons and military equipment, as well as their interaction with the scientific and expert community are of particular importance for solving the above problems. Naturally, the protection of state secrets remains critical for maintaining national defense capability, but “mutual pollination” with ideas and assessments, and a detached view can and should play a positive role, including in balancing immediate results and long-term priorities.

- e) Faced with unprecedented sanctions and the most stringent export control practices, Russia should look for new formats of interaction with allies and partners, as well as for new sources of technology. Nowadays, autarky is impossible (and it could hardly have been successful in other times), although in general Russia shows a higher level of self-sufficiency in the military sphere than most other countries. And yet, as the West continues to dominate technologically, it is imperative to create economically and technologically efficient industries, including microelectronics. It seems reasonable to forge cooperation with countries that are equally interested in making their armed forces less dependent on “politically charged” components, which will make it possible to build markets for new industries and create channels (including gray ones) for access to advanced technologies from unfriendly countries. North Korea and Iran could become key partners in this area, and cooperation with China and India could maintain a conspicuously “non-lethal” nature, at least in terms of supplies to Russia. Interaction with the CSTO countries, which currently shows multidirectional trends, will also be of particular importance in the years to come.

CONCLUSION: A BRUTAL NEW WORLD

Discussions about the rapid degradation of the system of international military-political relations, both regional and global, have become commonplace. The fighting in Ukraine has forced most countries to

think again about their own capabilities should they get involved in a high-intensity interstate armed conflict alone or in a coalition. One can hardly say that the events of February 24, 2022 came as a surprise (even though the warfighting was hardly expected to assume the form and scale we have been observing for more than a year) or hope for an unexpected change in the global situation.

At the same time, in the medium term, if the military-industrial complex goes into overdrive, primarily in Europe, we will slide into a very explosive situation with adversaries armed to the teeth facing each other on a long line of contact. Massive deployment of precision long-range weapons of all basing modes can be particularly threatening as they will be able to strike deep into each other's territory with minimal warning time. Moreover, due to the well-known geographical limits of the Baltic and Black Seas, serious threats await the Russian fleet, both military and civilian. At the same time, Russia will build up its capabilities, too, and in the end we will come to a balanced, but very unstable situation.

Therefore, it is advisable to start thinking about new measures to reduce risks already now, with a view to establishing effective arms control in the future. It would be hard to image now Russia and the United States resuming the Open Skies Treaty (or creating its analogue, for example, using a common stock of satellite images that could be obtained through centralized purchasing from commercial services) or "CFE 2.0". At the same time, legally binding arms control agreements have always been the most reliable instrument.

At this point, special attention should be paid to weapons and military equipment that can trigger escalation, which should include "weapons that maintain by default a high degree of combat readiness in peacetime, are capable of inflicting damage at operational and strategic depth, and can also be used for signal and reconnaissance actions, including formally during combat training activities (so-called "simulated electronic launches") in the immediate vicinity of the contact lines of potential opponents" (Bogdanov and Stefanovich, 2022).

Nevertheless, Europe, including Russia, is well aware of what happens when countries cannot agree on a sustainable architecture of

European security. We believe that mutually acceptable solutions will be found when the emotional intensity around the Ukraine conflict subsides. After that, another question will become as real as ever: What is to be done with the accumulated military power? Europe may find the strengthening of its position in Africa quite promising, while its American allies will surely seek to attract European contingents into the Pacific to contain China. As far as one can judge, they may succeed, and then Russia will offer China support in deploying, for example, naval or air contingents in Europe.

Today's world is becoming fully multipolar, but by no means safer. The "security dilemma" has once again defeated the documented principle of indivisible security.

The warfighting in Ukraine in 2022-2023 caused tectonic shifts in the defense industry and military development. Radical changes are taking place in the field of military-technical cooperation, both in terms of joint projects and defense imports and exports. Priority has once again been given to the effective capabilities of general-purpose forces. The key tasks facing the military-industrial complex around the world include building stockpiles and ramping up the production of weapons and ammunition of all types (smart, precision, and traditional), and revising the authorized strength and organizational structure of combat units. Practical experience is also being studied. Perhaps the only key trend of recent decades that remains unchanged is the digitalization of all aspects of military activity.

Creating unified systems for collecting and analyzing intelligence (including the use of space-based assets), relaying analytical information to the persons who plan combat operations and make appropriate decisions, and directly to the combatants, targeting, and assessing on-target effects—all this, coupled with the most advanced computer (including AI elements) and communication technologies, as well as various sensors and radars, becomes the most important factor ensuring success or failure on the battlefield. At the same time, despite its significance, this factor can only be fully functional if there is a sufficient number of appropriate weapons and trained personnel.

In connection with the current events, the question of changes in the following areas remains relevant:

- architecture of military-political alliances and other formats of interstate interaction;
- military supplies without direct involvement in a conflict;
- reaction of the socio-economic environment in countries to changes in the defense industry.

Russia's special military operation is not a truly revolutionary event, but the above-listed changes in approaches to building and modernizing military organization will have a long-term impact on the development of the countries that consider the current events a key factor of their national security today and in the future.

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