

# Chapter 9: Ukraine's Defense against Russia's War of Aggression in 2022

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## Abstract

The Russian invasion of Ukraine since February 24, 2022, has resulted in a colossal number of civilian and military casualties for Ukraine on a daily basis. Nevertheless, the country has demonstrated remarkable developments both on the operational-tactical and diplomatic levels – especially with regard to its resistance to the Russian aggressor. This chapter outlines three main keys to Ukraine's successful defense until now: the country's experience in the war with Russia since 2014, Western military support, and the morale of the Ukrainian people.

## Keywords

Donbas conflict, Ukrboronprom, Security Sector Reform (SSR), Ukrainian Armed Forces, NATO standards, Western weapons systems

### *1 The Ukrainian Defense Army until 2022: Experience is Gained*

The fact that the Kremlin was able to successfully carry out operations to immediately annex the Crimean Peninsula and establish separatist units in eastern Ukraine in 2014 was caused less by the high combat potential of the Russian army than by Ukraine's inability to resist. Primarily, this was due to the state of the Ukrainian army. According to a report by the then-newly appointed Defense Minister Ihor Tenyukh at the special meeting of Ukraine's National Security and Defense Council on February 28, 2014, Ukraine managed to "gather from all over the country a military force of about five thousand troops capable of conducting combat operations",

which was a recognition of the fact that Ukraine had practically no means to defend the country.<sup>1</sup>

It is argued that the greatest damage to Ukraine's defense capability occurred during the presidency of Viktor Yanukovych (2010–2013), when only pro-Russian individuals were appointed to senior positions in the security sector, some of whom even held Russian citizenship. It is likely that since 2010 there had been a Kremlin-directed process of undermining the combat capability of the armed forces as a key component of Ukraine's military security and defense, including actions to relocate military units and military command and control centers, which resulted in undermining the already limited capabilities of the defense posture toward Russia.

However, it should be noted that the actions of Yanukovych's team were not the only reason. After the collapse of the Soviet Union in 1991, Ukraine inherited part of the second echelon of the Soviet military grouping in the western direction, which was stationed on its territory. In addition to the military infrastructure, armaments, munitions, and enterprises of the Soviet military-industrial complex, Ukraine had about one million military personnel (armed forces, internal, border, and railroad troops, civil defense forces). As is often the case, this legacy was both an asset and a heavy burden for a young independent state, as opportunities for savings in defense spending have not compensated for the cost of measures to maintain and reduce Ukraine's excessive military potential. In 1992–2014, the number of soldiers decreased from 720,000 to 120,900.

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<sup>1</sup> Українська правда: "Стенограма РНБО: Україна могла зібрати для захисту лише 5 тисяч солдатів" [Transcript of NSDC: Ukraine was able to collect only 5 thousand soldiers for defense], 22 February 2016.

Table 1: Number of personnel in the Armed Forces of Ukraine and number of major types of weapons (as of the beginning of the respective year)

	1992	2000	2005	2010	2014
<i>Military personnel</i>	720,000	310,000	180,000	150,000	120,900
<i>Civilian personnel</i>	180,000	90,000	65,000	50,000	44,600
<i>Main battle tanks</i>	6,500	4,000	771	776	723
<i>Armored combat vehicles</i>	7,000	5,000	1,884	2,332	2,164
<i>Artillery with a caliber of more than 100 mm</i>	7,200	4,000	1,364	946	633
<i>Combat Aircraft</i>	1,500	680	204	208	160

Source: Ministry of Defense of Ukraine: Стратегічний оборонний бюлєтень України до 2015 року (Біла книга України) [Strategic Defense Bulletin of Ukraine until 2015 (White Book of Ukraine)], Kyiv 2004, p.22; Ministry of Defense of Ukraine: Біла книга 2005. Оборонна політика України [White Book 2005. Defense Policy of Ukraine], Kyiv 2006, p.13; Ministry of Defense of Ukraine: White Book 2010, Kyiv 2011; Ministry of Defense of Ukraine: White Book 2011, Kyiv 2012; Ministry of Defense of Ukraine: White Book 2013, Kyiv 2014.

The defense reforms that preceded the Russian invasion in 2014 were mainly declarative in nature, primarily due to resource constraints and underestimation of the likelihood of a large-scale armed attack. Ukraine's last prewar strategic defense bulletin stated that "armed aggression that could lead to local or regional war against Ukraine is unlikely in the medium term".<sup>2</sup>

In fact, the nature of Russian military aggression in the period from February 2014 to February 2022 was more in the format of a "special military operation" than a large-scale invasion, as the Kremlin tried every possible way to conceal the involvement of its regular troops in the conflict and refrained from extensive use of air power.

The year 2014 can be considered a turning point in the development of the national security and defense system. The experience gained by Ukraine created the basis for further steps at the political and practical levels in

<sup>2</sup> Verkhovna Rada of Ukraine: Указ Президента України № 240/2016. Про рішення Ради національної безпеки і оборони України від 29 грудня 2012 року "Про стратегічну оборону України" [Decree of the President of Ukraine No. 240/2016. On the Decision of the National Security and Defense Council of Ukraine of December 29, 2012, "On the Strategic Defense of Ukraine"], 6 June 2016.

preparation for defense against total Russian aggression, which began in February 2022. According to the 2015 Military Doctrine of Ukraine, “large-scale armed aggression by the Russian Federation against Ukraine with operations on land, in the air, in space and at sea [...]” is defined as a priority military threat scenario.<sup>3</sup>

Thus, the initial phase of the armed conflict between Russia and Ukraine (2014–2015) objectively led to a clear definition of the source and nature of the military threat and the most likely scenario of its implementation, which was reflected in strategic documents and allowed for a clear formulation of reform priorities. The problem of limited material and human resources of the state was largely compensated by international assistance and active participation of civil society representatives. The list of priorities established by the Ministry of Defense can be roughly divided into three core areas:<sup>4</sup>

- *personnel* (improving the quality of education and training, developing the non-commissioned officer corps, increasing the attractiveness of the service, increasing the percentage of female soldiers, creating a highly qualified mobilization reserve);
- *equipment and weapons* (repair, modernization, development and purchase of new models of domestic and foreign production, international support);
- *comprehensive support* (centralized logistics system, separate medical support structure).

Since 2014, the Ukrainian authorities have conducted six mobilization phases and worked out mechanisms for building up and maintaining the required number of servicemen and servicewomen and procuring civilian material for defense needs. At the beginning of 2022, there were about 200,000 people with combat experience in the operational reserve of the armed forces, and a total of nearly 1.5 million people were listed in the mil-

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3 President of Ukraine: Указ Президента України № 555/2015. Про рішення Ради національної безпеки і оборони України від 2 вересня 2015 року “Про нову редакцію Війської доктрини України” [Decree of the President of Ukraine No. 555/2015. On the decision of the National Security and Defense Council of Ukraine of September 2, 2015, “On the new version of the Military Doctrine of Ukraine”], 24 September 2015.

4 Verkhovna Rada of Ukraine: Постанова Кабінету Міністрів України № 671. Про затвердження Положення про Міністерство оборони України [Resolution of the Cabinet of Ministers of Ukraine No. 671. On Approval of the Regulation on the Ministry of Defense of Ukraine], 26 November 2014.

itary registry. Volunteer battalions and territorial defense units established at the regional level in 2014 were gradually integrated into the armed forces and the National Guard or formed the basis for the creation of brigades (in each region and in the capital city), which were combined into a single territorial defense system and placed under the command of the armed forces.

Other important changes include the separation of the spheres of power of the Minister of Defense, the Commander-in-Chief, and the General of Staff of the Ukrainian Armed Forces, which conforms to NATO standards and accordingly symbolizes a departure from Soviet rudiments of military administration. The conversion of headquarters to the *J-structure* (also according to NATO standards) has greatly simplified interaction and, accordingly, increased interoperability with partners.

At the end of 2021, the process of drafting a set of strategic documents and a regulatory framework for each element of the security sector was completed, providing the necessary basis for the transition to the next phase of reform.<sup>5</sup> Among the most important documents is the Law "On the Fundamentals of National Resistance", which gives defense a comprehensive character, including changing the status of the Territorial Defense Forces (TDF) as part of the Armed Forces of Ukraine. As early as January 2022, measures were taken to restructure the Territorial Defense Forces, whose personnel strength was to be increased to 10,000 regulars, with the possibility of a rapid increase to 130,000 men at the expense of the trained reserve.

## 2 Reaction to the Russian Invasion in 2022

Putin's "special military operation" was supposed to be a *blitzkrieg*, with minimal military, reputational, and economic losses. The potential military and international political risks were obviously infinitesimal compared to the expected gains. However, even in the early stages of the invasion, Ukraine was able to demonstrate a resilience and capability whose magni-

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<sup>5</sup> President of Ukraine: Указ Президента України № 392/2020. Про рішення Ради національної безпеки і оборони України "Про Стратегію національної безпеки України" [Decree of the President of Ukraine No. 392/2020. On the Decision of the National Security and Defense Council of Ukraine "On the National Security Strategy of Ukraine"], 14 September 2020.

tude, while not yet a cause for great optimism, already called into question earlier pessimistic forecasts, at least in terms of the time frame of the Kremlin's plans. The further course of hostilities gradually but consistently changed assessments of possible scenarios for the end of the conflict. At the time of writing<sup>6</sup> there is still a considerable degree of uncertainty, but more and more observers are inclined to believe that Ukraine has strategic advantages.

At present, it is difficult to give a clear answer to the question of what factors caused such changes in the course of the conflict. For example, the strategic misjudgments most often cited in connection with the Kremlin were probably also made by the Ukrainian military and political leadership. Both sides made significant efforts – within their means – to build military capabilities, which in the real situation confirms the thesis that quantity cannot necessarily be transformed into quality.

The Ukrainian army could count on preserving its dignity not only according to Kremlin strategists, but also according to the overwhelming majority of military experts – a valiant but short-lived resistance to an incomparably stronger enemy in the face of inevitable defeat. Such obvious predictions about the possibilities of ending the war were based primarily on a comparison of the military capabilities of the parties. The Russian army had a numerical superiority of more than four times its troop strength and three to ten times that in certain types of major weapons.<sup>7</sup>

The first hours and days after the Russian invasion left external observers – even major Ukrainian sympathizers – in no doubt about the accuracy of earlier predictions.<sup>8</sup> Official Russian reports of the complete destruction of Ukraine's air defense system, air forces, and key military command and control centers were virtually unchallenged, given the pace of the columns' advance and the extensive dominance of Russian military aircraft in the airspace. Cautious optimism about the tactical successes of the Ukrainian side emerged as the first 72 hours – allotted for the capture of Kyiv –

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<sup>6</sup> The original chapter in German was completed in November 2022 and translated into English in June 2023.

<sup>7</sup> Peter, Laurence: "Putin warning: What does Russian military call-up mean for Ukraine?", BBC News, 21 September 2022.

<sup>8</sup> Kagan, Frederick W./Barros, George/Stepanenko, Kateryna: "Russian Offensive Campaign Assessment", Institute for the Study of War, 1 March 2022.

elapsed and reports of a slowdown in the Russian offensive accumulated, with pictures of destroyed Russian equipment.<sup>9</sup>

The first withdrawal of Russian troops from northern and eastern Ukraine at the end of March was not a “goodwill gesture” but an admission of failure of previous miscalculations by the Russian leadership in planning the operation. Experts have noted not only unrealistic military planning but also catastrophic problems in Russian logistics, ranging from planning to makeshift training of specialists and unfit transportation.<sup>10</sup>

Russian weapons, which, according to Vladimir Putin, “have no equivalent in the world”,<sup>11</sup> with all their undoubtedly destructive capabilities have not brought the expected scale of destruction to Ukraine’s defense capabilities. This applies to both kinetic weapons and the use of cyberattacks. Despite an advantage in air and missile strike capabilities, Russia has failed to achieve strategic impact or maintain air superiority through massive strikes. The Russian integrated battlefield management system (command, control, communications, computer, intelligence, surveillance, and reconnaissance – C4ISR), developed over the years as well as reportedly tested in Syria and during the 2014–2021 fighting in the Donbas, proved ineffective under conditions of large-scale intensive combat operations in 2022.

Significantly, in 2014–2021, thanks to cooperation with NATO, the Ukrainian army adopted some key NATO standards that made an immense difference in the 2022 war. Compared to the Russian Army, Ukrainian units were able to move away from an archaic, lethargic Soviet decision-making process on the front lines. Ukrainian forces learned to take the initiative at the lowest level of the military hierarchy and make urgent tactical decisions – sometimes even without coordinating them with the high command.<sup>12</sup> In 2020, Ukrainian soldiers could still be punished for returning fire without clearance from headquarters when attacked by DNR and LNR.<sup>13</sup> It was not until 2022 that the new practice from the Western school of leaving the

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9 Mitzer, Stijn/Janovsky, Jakub/Oliemans, Joost/Dan, Kemal: *Attack On Europe: “Documenting Russian Equipment Losses During The 2022 Russian Invasion Of Ukraine”*, Oryx, March 2022.

10 Jones, Seth G.: *Russia's Ill-Fated Invasion of Ukraine: Lessons in Modern Warfare*, Center for Strategic and International Studies, 1 June 2022.

11 Izvestiya: “Путин заявил о не имеющем аналогов в мире новом российском оружии” [Putin announced new Russian weapons that have no analogues in the world], 23 February 2022.

12 Information from a soldier in the Ukrainian army (from a private source of the author, who wishes to remain anonymous), a conversation from 31.07.2022.

13 Ibid.

decision to the task forces was widely adopted – and it immediately favored the Ukrainian side.

### 3 The Military Support from the West

In the first phase of the war (from February 24 until April 1, 2022), Ukrainian defenders fought mainly with obsolete Soviet-made weapons and a small proportion of modernized or latest models. The Western weapons received shortly before the invasion were designed for close combat, since the most likely scenario of the Russo-Ukrainian conflict at that time was a quick occupation and a long guerrilla war. The first convincing tactical victories prompted the partners to radically revise the classification and scope of military support. Thus, in April 2022, the Contact Group for the Defense of Ukraine (informal coalitions supporting Ukraine in the *Ramstein* and *Copenhagen* formats) was established, providing the basis for systematic and long-term support to Ukrainian defense capabilities in the conflict, which subsequently evolved into a war of attrition.<sup>14</sup>

For the period from February to November 2022 alone, military assistance to Ukraine totaled 41.3 billion euros, with Poland and the Baltic states (e.g. Lithuania and Estonia, which provided 41 percent and 37 percent of their defense budgets, respectively) leading the way.<sup>15</sup> Germany, despite its initial reluctance to providing weapons for Ukraine, gradually evolved into one of the biggest financial donors. Indeed, the West rose to the challenge as a consolidated flank, even if there were disagreements in between over the nature, quantity, and timing of certain arms deliveries. During the first six weeks of the war, when Russian missile attacks on civilians were at their heaviest, the viral call *#NATOclosethesky* turned out to be not only part of the social media world. The leaders of Poland and the Baltic states

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14 Razumkov Centre: Роль і місце України в перспективних європейській та євроатлантичній системах безпеки [The Role and Place of Ukraine in the Future European and Euro-Atlantic Security Systems], Kyiv, 2022, pp. 21–22; Ukrinform: “Зустріч у Копенгагені стане розширенням формату ‘Рамштайн’ – Міноборони Німеччини” [Meeting in Copenhagen will be an extension of the ‘Ramstein’ format – German Ministry of Defense], 8 August 2022.

15 Ukrinform: “Союзники цьогоріч надали Україні зброї на суму, що становить 86% військового бюджету РФ – Кислиця” [Allies supplied Ukraine with weapons worth 86% of the Russian military budget this year – Kyslytsia], 1 November 2022.

were the first Western politicians to travel to war-torn Kyiv,<sup>16</sup> yet their visit was not just a sign of extraordinary compassion and support. The Eastern European leaders considered providing vital support to Ukraine to improve its greatest weakness – the lack of air superiority. The countries briefly contemplated the option of forming a peacekeeping mission within NATO to intervene militarily in the war and close the airspace.<sup>17</sup> Even with the benefit of hindsight, it is difficult to weigh the possible pros and cons of such an operation in reality, although it would definitely affect the image of the the Western unity that Putin so vigorously tries to destroy.

Since February 24, 2022, the primary role in supporting Ukraine has remained on the U.S. side. At an initial turning point in the war, the battle for Kyiv and the towns of Moshchun and Irpin, the effective use of U.S. *Javelin* light anti-tank weapons and *Stinger* man-portable anti-aircraft missile systems provided the first signal of the need to urgently upgrade Ukraine.<sup>18</sup> Washington's initial deliveries of 155-mm howitzers enabled Ukraine to wage protracted battles in Severodonetsk that ultimately cost Russia a great deal of time and manpower to hold the city. This crucial operation reassured Western allies that Ukraine had a good chance of withstanding the onslaught and even launching a counteroffensive once a more dynamic arms delivery was enforced. Despite expected Russian failures in logistics, war management, and communications (due to deep-rooted corruption), as well as the collapse of army morale (due to delusional military goals and poor conditions for servicemen), Russian forces during the first six months at least felt confident about the amount of weapons and ammunition they had against Ukraine: in June 2022, the ratio between the artillery units of the Ukrainian and Russian armies was 1:15 respectively.<sup>19</sup>

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16 Podolsky, Yevhen: “Візит солідарності до Києва: Президенти Польщі та Прибалтики зустрілися із Зеленським” [Solidarity Visit to Kyiv: Meeting of Presidents of Poland and Baltic States with Zelenskyy], DIP, 13 April 2022.

17 Wądołowska, Agnieszka: “Poland to call for peacekeeping mission in Ukraine at NATO summit”, Notes from Poland, 18 March 2022.

18 Ukrinform: “Інтерв'ю з Деном Райсом, спеціальним радником Валерія Залужного” [Interview with Dan Rice, Special Advisor to Valeriy Zaluzhnyi], 19 May 2022.

19 Epstein, Jake/Haltiwanger, John: “Ukraine says Russia has 10 to 15 times more artillery than its military, warning that its survival hinges on the West sending more weapons”, Business Insider, 10 June 2022.

Another triumph on the Ukrainian battlefield was the UAV systems supplied mainly by the U.S. (*Switchblade*, *Phoenix Ghost*, *RQ-20 Puma*)<sup>20</sup> and Turkey (*Bayraktar TB2*). Due to the simplicity of production and efficiency of use, Ukraine has launched its own production line of strike, corrective, and reconnaissance UAVs, the test phase of which ended in October 2022.<sup>21</sup> The delivery of a powerful artillery system, the multiple rocket launcher *HIMARS*, enabled Ukraine to undertake an impressive offensive in Kharkiv and Kherson in September 2022, even hitting military targets on Russian territory. The French *CAESAR* self-propelled howitzers complemented and partially replaced the Soviet *2S7 Pion* 203-mm guns or *2S3 Akatsiya* 152.4-mm guns in Ukrainian artillery brigades. Despite some skeptics in the West who feared that Ukrainian soldiers were not sufficiently trained on the Western systems, the brigades that used *Pion* or *Akatsiya* successfully adapted *CAESAR* and the German *Panzerhaubitze 2000* in a very short time.

An essential “tool” for a more successful fall offensive of Ukraine would certainly be the supply of battle tanks. Initially, the West had decided to provide Ukrainian forces with Soviet tanks from its depots – in April 2022, the Czech Republic and Poland initiated the delivery of hundreds of *T-72* and *BMP-1* tanks.<sup>22</sup> NATO allies kept their distance from the decision to supply newer vehicles, although this would clearly accelerate the recapture of Ukrainian territories. Ukraine states that the largest “sponsor” of tanks for the Ukrainian army currently remains to be Russian BTGs, as they often leave tanks behind as they withdraw. However, despite this “lend-lease” from the Russian army of nearly 400 main battle tanks and 170 artillery systems (as for October 2022),<sup>23</sup> the lengthy front line requires even more

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20 Mirer, Polina: “Яку зброю та на яку суму Україна отримала від США з початку війни” [What weapons and for how much money has Ukraine received from the U.S. since the beginning of the war], *Suspilne Media*, 12 May 2022.

21 Bunetsky, Dmytro: “Перетворити війну артилерії на війну дронів: у чому суть і як працюватиме програма розвитку безпілотників в Україні” [The transformation of artillery warfare into drone warfare: what is the essence and how will the drone development program work in Ukraine?], *Dev.ua*, 15 October 2022.

22 The Page: “Від партизанських Javelin до ракет та ЗРК: яку зброю Захід дав Україні за три місяці” [From guerrilla Javelin to missiles and SAMs: What weapons the West gave Ukraine in three months], 26 May 2022.

23 Dazenko, Volodymyr: ““Ленд-ліз” по-російськи. Як Росія стала найбільшим постачальником важкого озброєння України у 2022 році” [“Lend-lease” in Russian. How Russia Became the Biggest Supplier of Heavy Weapons to Ukraine in 2022], *Forbes*, 28 September 2022.

heavy weapons to stand up to the Russian troops. While Germany is still avoiding taking a leadership role in supplying the latest battle tanks, sooner or later this will be a logical step for all allies.<sup>24</sup>

One of the West's greatest successes in the Ukraine war is indeed the triumph of its intelligence services. The British and U.S. agencies, in particular, provided accurate prediction of Putin's military plans before February 24 and continue to provide Ukraine with accurate, vital information about its enemy in real time to this day. The West's "strategic warning"<sup>25</sup> combined with an extensive system of agents of Ukraine's Defense Ministry Main Intelligence Directorate, located on Russian territories, enabled Ukraine to slow the Russian advance within the first two months by destroying logistics and supply centers even on the Russian mainland<sup>26</sup> – indeed an unprecedented turn of events for the Kremlin.

Moreover, a new type of foreign support for the Ukrainian defense sector has emerged – non-governmental support by private individuals or companies. The personal decision of the CEO of *SpaceX* to deliver the Starlink satellite dishes in the shortest possible time or the commitment of the director of *Baykar Technology* to accelerate the production and delivery of *UAVs* represented a rapid and effective change on the battlefield in favor of Ukraine.

#### 4 National Weapons Development and Production in Ukraine

Despite its critical dependence on Western aid, Ukraine itself has made remarkable progress in developing and producing some complex weapons. As mentioned earlier, Ukraine inherited much of the Soviet military-industrial complex. However, it was not a self-sufficient production cycle, and due to

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24 As expected, after a prolonged debate in the European capitals, the "tank taboo" was indeed lifted, and by February 2023, Berlin announced the first delivery of Leopard II. In the circumstances of the Russo-Ukrainian war, such a deceleration turned out to be devastating for the *momentum* of the Ukrainian defense, drastically affecting the progress of not only the fall counteroffensive 2022 but also the spring counteroffensive 2023.

25 Abdalla, Neveen Shaaban/Davies, Philip H. J./Gustafson, Kristian/Lomas, Dan/Wagner, Steven: "Intelligence and the War in Ukraine: Part 1", War on the Rocks, 11 May 2022.

26 ZN,UA: "Атака та знищення об'єктів у Бєлгороді може ускладнити для РФ атаки на Харків — розвідка Британії" [Attack and destruction of facilities in Belgorod could complicate Russian attacks on Kharkiv — British intelligence], 2 April 2022.

the economic crisis in the 1990s, demilitarization, and heavy dependence on the Russian military-industrial complex, the industry faced a number of challenges, especially after the outbreak of war in 2014.<sup>27</sup> Subsequently, the Ukrainian government approved a *roadmap* for the period 2016–2022,<sup>28</sup> that allowed for the development of original weapons, which also play a significant role currently.

The sinking of the flagship of the Russian Black Sea Fleet in April 2022, the missile cruiser *Moskva*, will certainly go down in the history books. This military success is attributed to the *Neptune* anti-ship system with a range of 280 kilometers developed by the *Luch* Design Bureau in Kyiv.<sup>29</sup> The *Pivdenne* Design Bureau in the city of Dnipro developed the *Typhoon-1* missile for the *Grad* MLRS, which has a double range of up to 40 kilometers, as well as a high-precision version, the *Typhoon-1M*. Another project to develop 122-mm systems such as *Verba* and *Berest*, as well as the 220-mm *Burevij* MLRS, significantly improved the effectiveness of Ukrainian artillery.<sup>30</sup> If Ukraine had been able to implement its military-industrial projects on schedule by 2022, a later Russian attack would have met a much more serious response.

The proven success of Ukrainian-made weapons on the battlefield also opens a new phase for Western cooperation with Ukraine in the military-industrial sphere. Closer cooperation in this area would benefit both sides.

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27 Militarnyi: “Як Україні виготовляти сучасну зброю?” [How can Ukraine produce modern weapons?], 14 February 2022.

28 Dubensky, Vitaliy: “Порошенко ввів у дію заходи з розвитку українського ОПК” [Poroshenko takes measures to develop Ukraine's defense industry], Deutsche Welle, 3 August 2016.

29 Badrak, Dmytro: “Новітня українська зброя. Топ-10 останніх досягнень державних підприємств” [The Latest Ukrainian Weapons. Top-10 latest achievements of state-owned enterprises], Glavcom, 3 September 2020.

30 Defense Express: “Найцікавіші розробки оборонно-промислового комплексу України, які можуть вийти на полігони у 2021 році” [The most interesting developments of Ukraine's military-industrial complex that could be on the training ground in 2021], 3 January 2021.

## 5 The Non-Material Component of Ukrainian Defense: A Factor of Morale

“Ukraine depends on morale and Russia depends on mercenaries”,<sup>31</sup> stated *The Guardian*, emphasizing once again, and echoing Sun Tzu and Clausewitz, how essential this principle is to victory. In contrast to the Russian challenges in the fall of 2022 to mobilize 300,000 soldiers, the queues outside military recruitment offices in Ukraine during the first months of 2022 clearly showed that motivation was high. Both Ukrainian military personnel and civilians demonstrate impressive morale in the face of outside observers. Whether these observers are from Europe or Russia, their astonishment probably stems from a lack of knowledge of the country’s history. Just as the Ukrainian military-industrial sector and command have had eight years to adapt, fill in gaps, and study Russian tactics, the Ukrainian people have had hundreds of years to learn Russian methods of repression and thus develop immunity – something that people in Europe are only now beginning to learn in the face of the Russian disinformation campaign.

The essential core for Ukraine’s morale rests on two key concepts that are easy for the majority of the population to understand. Firstly, Putin is violating international law and human rights – the attacks in both 2014 and 2022 are undoubtedly unlawful and as such widely perceived as unjust. Secondly, as one knows from “family history”,<sup>32</sup> average Ukrainians lose more when they refuse to fight the Russian invader regime, whether it is a Tsarist, Soviet, or Putinist one. Once the invader gets the upper hand, a person of Ukrainian origin can be deported, ostracized, sexually assaulted, castrated, punished, or killed.

The liberated towns of Bucha, Irpin, and Izyum offer a tragic picture of Russian methods in war zones, which have been used repeatedly throughout history (e.g. Caucasian wars, Chechen war, Syria etc.). Long before the scandalous article “What Should Russia Do to Ukraine?”, published by the Kremlin propaganda newspaper *RIA Novosti*, suggested mass ethnic cleans-

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<sup>31</sup> Sabbagh, Dan: “Ukraine depends on morale and Russia on mercenaries. It could decide the war”, *The Guardian*, 17 September 2022.

<sup>32</sup> Such as the Holodomor (an artificial famine arranged by the Communist Party in 1932–1933 in areas predominantly inhabited by Ukrainians), Stalin’s repressions in the late 1930s, the laws banning Ukrainian language and culture (e.g. Valuev Circular of 1863, Ems Decree of 1876), the deportation of wealthy Ukrainian farmers (“kulaks”) after confiscating their land and material goods and many other oppressive events.

ing,<sup>33</sup> the applied methodology “on the ground” already showed where this would lead. Thus, the vast majority of Ukrainians believe that it is better to fight than to give up and experience the fate of Mariupol – to be erased from the face of the earth.

The Russian leadership has clearly not learned the lesson of the last years and is still committed to breaking Ukrainian morale. After the failures on the battlefield in the fall of 2022, the Kremlin continues to use asymmetric methods of warfare, such as blackmail (e.g. nuclear threats), disinformation (e.g. Ukraine’s alleged manufacture of a “*dirty bomb*”), and terrorism (missile and drone attacks on civilian infrastructure). Indeed, such attacks create significant complications in Ukrainian daily life, as power outages cripple industry in particular, threaten medical care, and affect logistics. However, these attacks are unlikely to remain effective for the Russian leadership and break Ukrainian morale. Not only is Ukraine introducing new air defense systems in alliance with its Western partners, but Ukraine’s supply system is more resilient than expected. Communal services manage to repair damage in a very short time precisely because Ukraine inherited a Soviet infrastructure that took decades to remodel and upgrade with additional security resources to withstand a potential attack by the West during the Cold War.

Another Ukrainian social phenomenon in this war, the volunteer movement, emerged on the Maidan and spent eight years before the full-scale invasion equipping Ukrainian servicemen and women in the Donbas. In 2022, hundreds of cells and units, thousands of independent people, managed to raise resources via *crowdfunding* and buy needed goods for civilians or military: from provisions and medical kits to impressive campaigns to buy *Bayraktar TB2* drones or British *Spartan* infantry fighting vehicles for the army.<sup>34</sup> In the conditions of a total war, where everyone in Ukraine is a target of Russian warfare, such voluntary engagement is seen as a deliberate and unquestioned personal contribution to the country’s survival. Thus, while the Western public is astonished by Zelenskyy’s statement “I need

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33 Sergeytsev, Timofey: “Что Россия должна сделать с Украиной” [What Russia Should Do to Ukraine], RIA Novosti, 3 April 2022.

34 Myronenko, Toma: “Фонд Сергея Притулы объявил сбор на бронетранспортеры Spartan. Цель – 200 млн грн” [The Serhiy Prytula Foundation has announced a fundraising campaign for Spartan armored personnel carriers. Goal – 200 million hryvnias], Forbes, 2 November 2022.

ammunition, not a ride”,<sup>35</sup> his reaction in Ukraine is perceived as common-sense.

A protracted invasion by Russia has actually united Ukrainians and contributed to the nation's maturation. Since 2014, resilience, morale, and adaptability have improved, creating a robust obstacle to Putin's expansionism. At the same time, such continued attrition of the population by Russia reduces Ukraine's chances of agreeing to a compromise. Currently, both the population and the political leadership believe that a peace agreement can only be signed on the condition of the 2013 border line, with reparations paid and a tribunal arranged. But there is already a small segment of society that sees Ukraine as a state with a stable security only after the collapse of modern Russia and they are ready to fight until then – until “*Carthago delenda est*”. The ongoing Russian attacks are unlikely to break Ukrainian morale, whichever new creative forms these attacks may take. However, there is a high probability that the war crimes, which keep increasing on the account of the Russian army, will radicalize Ukrainian society. Europe must prepare for such scenario as well, although helping Ukraine to win this conventional war as soon as possible is one of the solutions to prevent the above-mentioned radicalization.

## *6 Ukraine's Security Cooperation with the West: From Formal Contacts to Existential Partnership*

For a number of reasons (e.g. failure of economic reforms in the 1990s, pro-Russian policies, corruption, centralized economy, oligarchy), Ukraine was unable to follow the path of the Baltic states – an integration into the Euro-Atlantic security architecture immediately after the collapse of the USSR. Since the beginning of security sector reform (SSR) in 1991, the partnership between Ukraine and the West in the defense sector has been constant but hardly consistent.<sup>36</sup> For both sides, it was less of an enduring

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<sup>35</sup> Kessler, Glenn: “Zelensky's famous quote of 'need ammo, not a ride' not easily confirmed”, The Washington Post, 6 March 2022.

<sup>36</sup> Melnyk, Oleksiy: “Putting Democratic Values at the Centre of International Assistance to Ukraine”, PeaceLab, 14 September 2020.

strategy and more of a litmus test, depending on the personal preferences of frequently changing leaders.<sup>37</sup>

Many European capitals were also very receptive to the Kremlin's intentions to keep Ukraine as a *buffer zone*<sup>38</sup> between NATO and Russia. Putin's large-scale incursion in 2022 scuppered the idea that Ukraine was a "neutral" state, and so did the West's long refrain from supplying heavy weapons to Ukraine.

The U.S. remains the largest partner of the Ukrainian defense sector – through financial assistance, training programs, and military equipment (including the delivery of *Mark VI*, *Island*, and *Sea Force* patrol boats, mortar radars, all-terrain armored vehicles, *Javelin* anti-tank missiles etc.).<sup>39</sup> Canada and the UK traditionally rank second in financial donations to the Ukrainian security sector, focusing mainly on training, medical equipment, and financial assistance.<sup>40</sup> The leading list of defense sector partners includes Turkey, with which Ukraine has signed three direct foreign economic contracts for the supply of arms and military equipment not manufactured in Ukraine (corvettes, unmanned aerial vehicles, and ammunition) by 2022.<sup>41</sup>

Europe's own existential dependence on closing gaps in the Ukrainian defense sector, as well as simply the moral intent to stop the heinous crimes of the Russian army in Ukraine, or even to prevent Putin's fascist intention to destroy the neighbor state,<sup>42</sup> forced the Western partners to start something that was unimaginable at the end of 2021: delivery of heavy weapons.

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37 Razumkov Centre: Ukraine: 30 Years on the European Path. Zapovit: Kyiv 2021, pp. 329–340.

38 A buffer state means that it is neutral. However, Ukraine was not neutral in 2010–2013 but pro-Russian. For more on the characteristics of a "buffer state", see Krause, Joachim: Wird Russland in Belarus militärisch intervenieren?, Institut für Sicherheitspolitik an der Universität Kiel, Policy Brief No. 8, August 2020.

39 Ukrainian Ministry of Defense: Аналіз стану міжнародного співробітництва в Міністерстві оборони та Збройних Силах України за 2020 рік [Analysis of the state of international cooperation in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine for 2020], 11 June 2021.

40 Ukrainian Ministry of Defense: Кількісні показники міжнародного співробітництва у 2014–2017 pp. [Quantitative indicators of international cooperation in 2014–2017].

41 Ukrainian Ministry of Defense: Аналіз стану міжнародного співробітництва в Міністерстві оборони та Збройних Силах України за 2020 рік [Analysis of the state of international cooperation in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine for 2020], 11 June 2021.

42 Sergeytsev, What Russia Should Do to Ukraine, 3 April 2022.

The earlier demand to first complete reforms in the judicial and economic sectors and to overcome corruption in the security sector (*Ukroboronprom* reform) remains the main condition for Ukraine's NATO accession,<sup>43</sup> but is definitely no longer an obstacle to close cooperation in the defense sector.

## 7 Complicated but Vital Relations between Ukraine and Germany in 2022

Compared to 2014, the unity of Western allies in the face of the challenge posed by Russian aggression has definitely endured and even grown stronger. Nevertheless, Kyiv (and probably sometimes Washington and Brussels) was expecting a stronger reaction from some European states to the registered war crimes and violations of international law by the Russian army. Among the “most problematic partners” for the Ukrainian government, Berlin with its *Ostpolitik* often left the Ukrainian side perplexed. While the German government was praised as one of the pioneers in taking in Ukrainian refugees, it also drew attention in the Ukrainian media for multiple scandals surrounding Frank-Walter Steinmeier and his pro-Russian *Ostpolitik*, the talks about Olaf Scholz reacting like a “*beleidigte Leberwurst*” (“sulking liver sausage”), or the repeatedly interrupted or delayed arms deliveries.

Germany has proven to be a complicated but indispensable partner for Ukraine. Nevertheless, hardly anyone in Ukraine can forget the Merkel government’s “pacification of the aggressor” since 2014, the “Steinmeier formula” that *de facto* froze the Donbas crisis, or the major victory of the Russian hybrid policy in Europe – the *Nord Stream 2* pipeline. Needless to explain why Ukraine was shocked when it heard from some German experts the rationale for exceptional relations with Russia in 2022. Berlin’s “special historical obligation” to Russia, but not to Ukraine, which was largely destroyed by the Wehrmacht in 1941–1943 and carried with the Belarus people the highest human costs, was perceived by the people of Ukraine as nothing but imperialism.

Until February 24, 2022, cooperation between Germany and Ukraine in the defense sector was one of the weakest among all Western partners.

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43 Hetmanchuk, Alyona/Solodkyj, Serhiy/Akhurdinova, Marianna: “Маршрут до членства. Чому Україні варто запропонувати дорожню карту для вступу до НАТО?” [Road to Membership. Why Should Ukraine Be Offered a Roadmap for NATO Accession?], New Europe Center, 2021.

However, as Ukraine's third-largest donor, Berlin had traditionally taken over the area of development programs<sup>44</sup> and support for reforms in various sectors. Kyiv tried to build relations with its powerful Western neighbor rather cautiously, with constant reminders of German economic interests in Russia or Germany's traditional stance against arms deliveries.<sup>45</sup>

However, Robert Habeck's visit to eastern Ukraine, his advocacy for arms deliveries, and recognition of Ukraine's right to self-defense in May 2021<sup>46</sup> gave Kyiv hope that the change of government in Berlin would lead to a significant change in approach towards the Ukraine question. For Kyiv, the government of former German Chancellor Angela Merkel did not view Ukraine as a strategic partner, but rather "kept an eye on the overall strategic situation with Russia and brought this perspective to NATO consultations".<sup>47</sup>

Despite Putin's claims that he was being "pushed to the wall" by the U.S.,<sup>48</sup> the Ukraine crisis of 2014–2021 remained a purely regional affair. The U.S. even abstained from participating in the Normandy Format peace talks from 2014. Washington consciously or unconsciously left this matter to the Europeans, offering France and Germany the opportunity to take a leading role, to demonstrate Europe's autonomy in defense matters, and to take responsibility for its own security.

With the first ceasefire violation by Russian-backed separatists from the DNR in December 2014,<sup>49</sup> as well as with "full support" for Gazprom's *Nord Stream 2* project, European states, including Germany, have failed to defend Europe. Over the past eight years, Berlin has avoided recognizing

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44 Brady, Kate: "What does Germany do for Ukraine?", Deutsche Welle, 26 September 2019.

45 However, the latter still evokes a slight cognitive dissonance in Ukraine, knowing that Germany and France were the leading arms exporters to Russia in 2015–2020 – despite the arms embargo, the annexation of Crimea, and Russia's presence in Syria (see Brillaud, Laure/Curic, Ana/Miñano, Leïla/Schmidt, Nico: "EU member states exported weapons to Russia after the 2014 embargo", Investigate Europe, 17 March 2022).

46 Rippert, Ulrich: "German Green Party leader Habeck wants to arm Ukraine against Russia", World Socialist Web Site, 28 May 2021.

47 Ibid.

48 Putin, Vladimir: *Обращение Президента Российской Федерации* [Address by the President of the Russian Federation], Kremlin, 21 February 2022.

49 OSCE: OSCE SMM Patrol caught up in small arms crossfire, 26 December 2014.

that Ukraine's independence and territorial integrity are also Germany's security interests,<sup>50</sup> for at least three reasons:

- a stable and resilient neighbor is economically advantageous for Germany;
- the integrity of Ukrainian territory ensures the rule of law and preserves modern security order in Europe;
- it was in Germany's interest to protect the regional *status quo*, in which Berlin played a leading role. The ongoing changes caused by the war dynamics could shift the axis further east and turn Eastern Europe into a new center of the EU, where Berlin's interests may also be pushed aside.

After nine months of war in Ukraine, despite Germany's mistakes and missed opportunities, it must nevertheless be acknowledged that Germany has made significant contributions to Ukrainian successes on the battlefield. Through special assistance from the German Federal Ministry of Economy and Climate Protection,<sup>51</sup> the Ukrainians received *M113* armored personnel carriers as early as June 2022.<sup>52</sup> These 54 AMPV units played an important role in the August-September offensive, when the Ukrainian command announced the Kherson offensive but in reality launched a counterattack around Kharkiv. With *M113s* the Ukrainian command ultimately gained a unique opportunity to move troops hundreds of kilometers in a very short time. Two of the most effective German air defense systems *Iris-T SLM*,<sup>53</sup> promised in April 2022, finally reached Ukraine in October 2022 and March 2023, and immediately delivered impressive results in countering Russian attacks on (critical) infrastructure. Berlin's consideration of delivering *Bergepanzer* (armored recovery vehicles) is also a creative way to avoid delivering main battle tanks: during the expected damp winter season, Ukrainian forces could pull out Russian tanks stuck in the mud and take them over for their own use.

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50 Melnyk, Putting Democratic Values at the Centre of International Assistance to Ukraine, 14 September 2020.

51 Information from a private source of the author, who wishes to remain anonymous, a conversation from 20.05.2022.

52 The Federal Government (of Germany): Military support to Ukraine, 25 October 2022.

53 Ibid.

## 8 Conclusion

Despite all the pessimistic forecasts, Ukraine has been able to withstand the Russian large-scale attack in 2022 and even achieve some impressive results while counterattacking. This is undoubtedly due to the resistance of the Ukrainian civilian population as well as the massive supply of weapons by the partners. The latter could well have continued to maintain their cautious support of Ukraine with limited type of weapons, as was the case after the Crimean occupation. However, after the Russian invasion of Ukraine in February 2022, Ukraine did demonstrate an ability to withstand Russian forces in an impressive manner, so the West decided to provide the Ukrainian army with effective defense equipment. The Ukrainian successful fall offensive in the Kharkiv and Kherson areas, undoubtedly, are the result of such military support. This has further erased some NATO members' remaining skepticism about Ukraine's ability to adopt new weapons systems, creatively integrate them into the tactics and landscape of eastern Ukraine, and halt the Russian army's advance. The war has turned into a war of attrition, and now, thanks to dedicated Western military support as well as strong Ukrainian morale (resilience and perseverance), Kyiv has a significant chance of winning – whether the definition of such victory is the Western or the Ukrainian one.

In the back of many Ukrainian minds, however, still remains the thought that much earlier Western support for the Ukrainian army could have made the Russian damage to Ukraine and Europe much less severe. Given the missed opportunities, it is therefore important that Western allies – and Berlin in particular – devise a new, sensible strategy for both Ukraine and Eastern Europe after February 24. Thus, Berlin must also recognize that Germany, as well as the entire democratic world, depends on Ukraine's success in the war against Russia – not least to prevent the war from spreading to other countries.

The non-hesitant deliveries of the latest NATO military systems and ammunition *en masse* can bring an end to the ongoing brutal war in Ukraine and prevent further escalation in Eastern Europe. It is also important that the political and financial aspects of German assistance to Ukraine, as well as Germany's strategic interest in Ukraine as an investment in common

European security and in Germany's own security, are recognized and clearly communicated to its own population.<sup>54</sup>

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<sup>54</sup> For more on this, see the chapter by Dr. Timo Graf in this anthology.

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