



ANALYSIS

## THE BELARUSIAN ARMED FORCES

STRUCTURES, CAPABILITIES, AND DEFENCE RELATIONS WITH RUSSIA

| KONRAD MUZYKA |

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Cover page photo: President Lukashenko speaks during a parade marking the 75th anniversary of the Victory of the Soviet people in the Great Patriotic War, May 2020. Photo credit: Press Service of the President of the Republic of Belarus, 2021.

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## LIST OF ABBREVIATIONS

<b>AADC</b>	Air and Air Defence Command
<b>APC</b>	Armoured Personnel Carrier
<b>BAF</b>	Belarusian Armed Forces
<b>CBRN</b>	Chemical, Biological, Radiological and Nuclear
<b>CEP</b>	Circular Error Probable
<b>EW</b>	Electronic Warfare
<b>GDP</b>	Gross Domestic Product
<b>IFV</b>	Infantry Fighting Vehicle
<b>MLRS</b>	Multiple Launch Rocket System
<b>MoD</b>	Ministry of Defence
<b>RGF</b>	Regional Group of Forces
<b>SAM</b>	Surface-to-Air Missile
<b>SAP</b>	State Armaments Programme
<b>SOF</b>	Special Operations Forces
<b>SPG</b>	Self-Propelled Gun
<b>SPH</b>	Self-Propelled Howitzer
<b>TEL</b>	Transporter Erector Launcher
<b>VKS</b>	Russian Aerospace Forces (Vozdushno-kosmicheskiye sily)

Soviet personnel returning from the German Democratic Republic further inflated military numbers in Belarus. By the early 1990s, it had become the country with the highest concentration of military forces in the world, with a ratio of one military personnel per 43 civilians.<sup>3</sup>

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## INTRODUCTION

The Belarusian Armed Forces (BAF) were created in May 1992 when the Soviet Belarusian Military District was dissolved. The Main Staff (a precursor of the current General Staff) and the Ministry of Defence (MoD) were subsequently established to manage the remnants of what had been one of the most militarised military districts of the Soviet Union.

Throughout the Cold War, units stationed in the Belarusian Soviet Socialist Republic were tasked with being a spearhead that would, had a conflict broken out, push through NATO's defences in Germany. This mission necessitated the sustainment of a very large military presence equipped with the most modern hardware fielded by Warsaw Pact forces. At the end of 1991, the Soviet Union had approximately 24 500 tactical and strategic nuclear warheads deployed on the territories of Belarus, Russia, Ukraine, and Kazakhstan.<sup>1</sup> Those on the territory of Belarus alone would have equated to the sixth-largest nuclear arsenal in the world. A quarter of the Soviet 'Topol' (SS-25) intercontinental ballistic missiles were deployed in Belarus.<sup>2</sup>

<sup>1</sup> Robert S. Norris and Hans M. Kristensen, "Global nuclear weapons inventories, 1945–2010," *Bulletin of the Atomic Scientists*, vol 66, no. 4 (2010), 83.

<sup>2</sup> Irina Pimoshenko, "Белорусско-Российские Военные Отношения: От Нейтралитета До Коллективной Безопасности [Belarusian-Russian Military Relations: From Neutrality to Collective Security]," *Белорусский журнал международного права и международных отношений [Belarusian Journal of International Law and International Relations]*, no. 3, 2001.

Today, Belarus claims that it "firmly adheres to a peace-loving policy and retains the status of a security donor in the region," and that the Belarusian Army "has never threatened anyone, does not threaten and is not going to threaten."<sup>4</sup> This narrative, presenting Belarus as a benign actor in the regional security architecture, has been pushed by Minsk for years, if not decades. It is partly true: the BAF's capabilities are insufficient for conducting independent, combined arms military operations; and Belarus does not train for such operations on its own.<sup>5</sup> But this security assessment does not reflect changes that have recently occurred in Minsk's foreign policy. Belarus' relationship with the West has deteriorated sharply, in particular after Minsk's violent repression of the anti-government protests that followed the August 2020 election, while its co-operation with Russia has grown and continues to deepen across different areas.

Minsk's ever closer defence relationship with Moscow could propel Belarus into a more belligerent posture in the region. This

<sup>3</sup> Rafał Czachor, "Białoruska polityka neutralności i bezatomowości w latach 90 [Belarusian policy of neutrality and atomicity in the 90s]," *Zeszyty Naukowe Dolnośląskiej Wyższej Szkoły Przedsiębiorczości i Techniki [Scientific Papers of the Lower Silesian University of Entrepreneurship and Technology]*, no. 4, 2011, 97.

<sup>4</sup> "Лукашенко утвердил новый план обороны Беларуси. На чем сделаны акценты? [Lukashenko approved a new plan for the defence of Belarus. What are the highlights?]," *Belta*, 19 December 2019.

<sup>5</sup> In August 2020, the BAF conducted the largest readiness exercise in its history. Officially almost all military units were mobilised and deployed from their bases. However, analyses of satellite imagery and videos posted on social media indicated exercises at company- and battalion-level only. Konrad Muzyka, "IMINT Analysis – Grodno Training Range," *Rochan Consulting*, 27 August 2020; Konrad Muzyka, "Mobilisation of the Belarusian Armed Forces," *Rochan Consulting*, 25 August 2020.

would not necessarily mean a more intensive modernisation effort or an increase in the size of the BAF – it seems that the political leadership is content with their current state, even if their Russian counterparts are not. Minsk would look to Moscow to provide any significant capability enhancements. But Lukashenko seems no longer to have room for manoeuvre or opportunities to postpone Russian attempts to further integrate the two militaries.<sup>6</sup>

### *Minsk's ever closer defence relationship with Moscow could propel Belarus into a more belligerent posture in the region*

As it is, Belarus' defence cooperation with Russia already spans all levels of defence planning and includes tactical, operational, and strategic aspects. The entire Belarusian ground and special forces are part of a Regional Group of Forces (RGF) with Russia's 1<sup>st</sup> Guards Tank Army, an arrangement that in wartime would effectively put them under the command of Russia's Joint Strategic Command West (via the Belarusian General Staff).<sup>7</sup> In peacetime, the BAF appear to be permitted a more prominent role – in February, for example, the Belarusian General Staff organised a joint headquarters training of the RGF in Minsk.<sup>8</sup> In the air domain, the two countries operate a Joint Regional Air Defence System.<sup>9</sup> Russia also maintains two permanent military facilities in Belarus: the 474<sup>th</sup> Independent Radio-Technical Unit in Hantsavichy, which operates the Volga-type early-warning radar; and the 43rd Communications Centre of the Russian Navy near Minsk, which retransmits very low frequency signals from the Russian Navy Command to Russian submarines operating in the northern Atlantic.

<sup>6</sup> Konrad Muzyka, "[Endgame? Russia to deepen military cooperation with Belarus](#)," Rochan Consulting, 16 September 2020.

<sup>7</sup> "[Танковая армия на западе РФ примет участие в стратегических учениях с Белоруссией](#) [Tank army in the west of the Russian Federation will take part in strategic exercises with Belarus]," Interfax, 9 June 2021.

<sup>8</sup> "[Началась совместная штабная тренировка](#) [Joint staff training has begun]," Voen TV, 8 February 2021.

<sup>9</sup> It is also known as the Eastern-European Joint Regional Air Defence System.

The BAF, though, are a mere shadow of their former selves. While Belarus' relinquishment of nuclear capability was only to be expected at the end of the Cold War, given international pressure and the costs associated with maintaining strategic weapon systems, the size of its conventional forces also decreased significantly. In terms of equipment, the BAF remains a Soviet-legacy force. Although there are islands of modernity, the bulk of equipment fielded by its two main services (the ground, and air and air defence forces) is still predominantly of Soviet origin. Little was done between 1993 and the early 2010s to address this issue, especially for high-end capabilities such as combat aircraft, long-range surface-to-air missile (SAM) systems, missile artillery, or even main battle tanks (MBT).

While it is true that the BAF can contribute little in terms of military capabilities, the two countries have worked together in recent years to improve Belarus' ability to provide host nation support to Russian units. These improvements have included the modernisation of rail lines, and the development of a robust network of storage facilities to provide materiel and equipment for Russian and Belarusian forces

### *The two countries have worked together in recent years to improve Belarus' ability to provide host nation support to Russian units*

in crises and during conflict. This significantly increases Russia's ability to deploy into Belarus and from there, if required, further west or north. Occasional speculation about a possible Russian invasion of Belarus, as could be heard, for example, during 2016-17, rarely takes account of this high and still growing level of military cooperation between the two states.

This analysis provides an up-to-date assessment of the BAF order of battle and capabilities to undertake military operations, both as a stand-alone force and jointly with Russia. It looks at how Belarus has upgraded its infrastructure to host Russian units and support Russian combat operations. Chapter 1 describes the structures and capabilities of the BAF. Chapter 2 analyses BAF modernisation efforts, while Chapter 3 assesses the MoD budget. Chapter 4 evaluates Russian-Belarusian defence cooperation.



# 1. STRUCTURES AND CAPABILITIES

The structure of the BAF is peculiar (see Figure 1). It demonstrates that Belarus has no desire to create independent forces: organisationally and doctrinally, the BAF is strongly influenced by the Armed Forces of the Russian Federation.

its members. The President also nominates the Minister of Defence, currently Lieutenant General Victor Khrenin. Since its inception, the MoD has always been run by former military commanders, all of whom have served in the Soviet Armed Forces and later the BAF. Every current high-ranking Belarusian military commander has graduated from a Russian military academy. This has two effects: on the strategic-operational level, there is no independent, Belarusian military thought; and consequently, Russia shapes the way the BAF change and develop, both organisationally and doctrinally. For example, the saturation of artillery units within

Belarusian ground force structures is closely in line with similar developments in the Russian Armed Forces.

*The structure of the BAF demonstrates that Belarus has no desire to create independent forces*

President Alexander Lukashenko is the Commander-in-Chief of the BAF, allowing him to shape the high command of the Armed Forces by appointing and dismissing

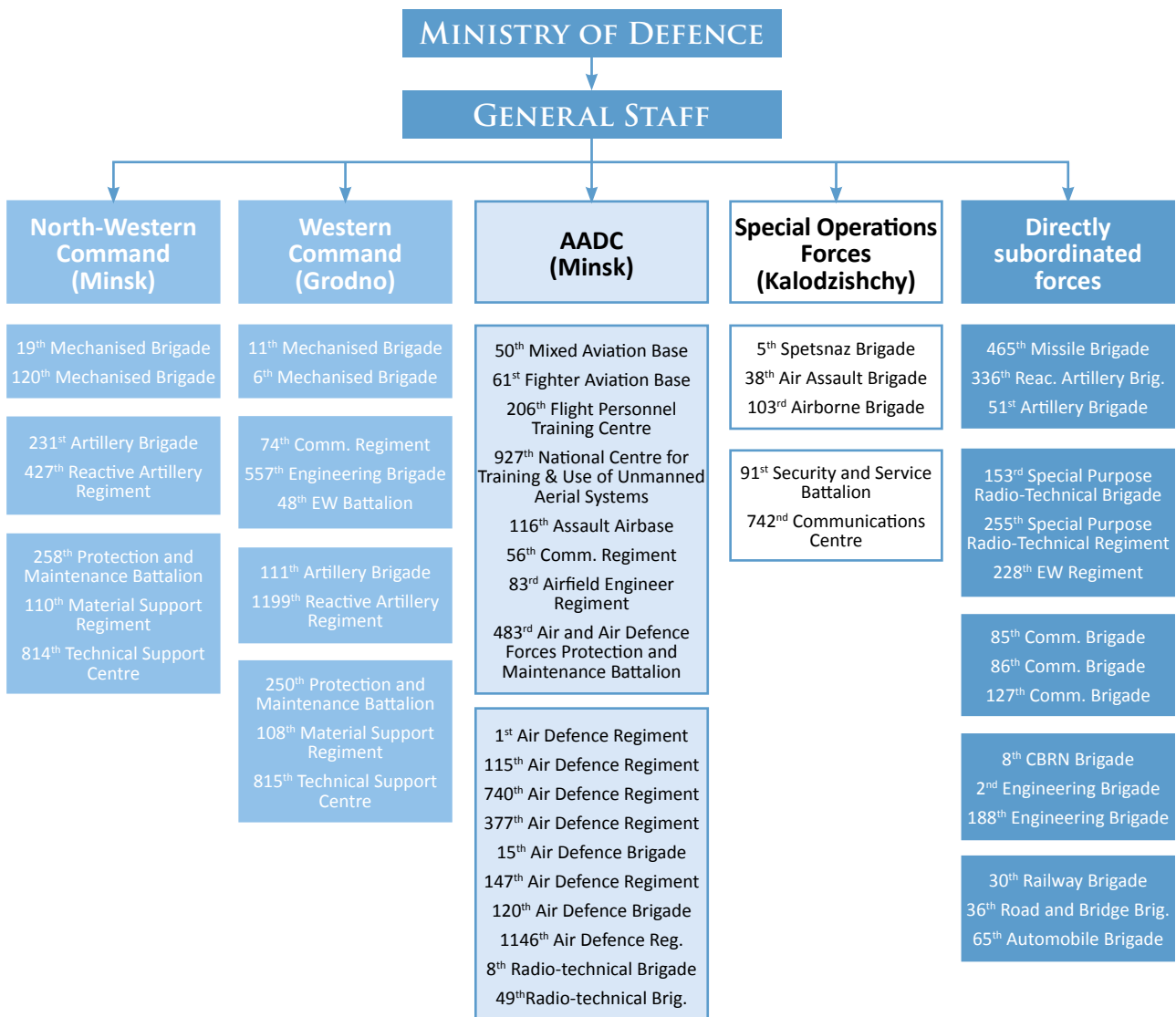


Figure 1. Structure of the BAF



The Minister of Defence is at the top of the command chain of the armed forces. His first deputy is concurrently the Chief of the General Staff. One level below are the Air and Air Defence

## 1.1. OPERATIONAL COMMANDS

The North-Western Command in Minsk commands units responsible for conducting defensive or offensive operations against Lithuania and Latvia. The Western Command in Grodno is responsible for operations against Poland and Lithuania (see Figure 2).

There is no operational command for units deployed in the eastern parts of the country, not least because military presence there is scarce. Russian-Belarusian military cooperation is so deep-rooted that – despite the sinusoidal state of Minsk-Moscow political relations – there has never been any military threat to Belarusian territorial integrity from the east.

*Russia shapes the way the BAF change and develop, both organisationally and doctrinally*

Command (AADC), and the Western and North-Western Commands to which all ground force manoeuvre units are subordinated. This again indicates the BAF's very close cooperation with, or even subordination to, Russia's armed forces: with no single overarching command, the ground forces do not conduct operational- and strategic-level exercises on their own; these are instead devised and planned in Moscow.<sup>10</sup>



Figure 2. BAF Ground Forces

<sup>10</sup> The Ground Forces Command was 'reduced' in 2011-12 as part of optimisation efforts and replaced by combat training and territorial defence directorates.

### 1.1.1. NORTH-WESTERN COMMAND

The North-Western Command is responsible for protecting the northern approaches to Minsk, specifically from Lithuania and Latvia. The location of forces indicates a prioritisation of the defence of Minsk itself. The entire northern flank is defended by one mechanised brigade and two artillery brigades, which

*The entire northern flank is defended by one mechanised brigade and two artillery brigades, which is insufficient for the conduct of significant military operations*

is insufficient for the conduct of significant military operations – these forces would be spread too thinly over the 200km of the border with Latvia and Lithuania for which they are responsible.<sup>11</sup> This area would thus need to be significantly strengthened with manpower and equipment to allow for the defence of the region, let alone to undertake offensive missions.

The command directs the 19<sup>th</sup> and 120<sup>th</sup> Mechanised Brigades, which are stationed in Zaslonovo and Minsk respectively. The 19<sup>th</sup> Mechanised Brigade is heavily structured and has enough equipment to field two T-72 MBT and four BMP-2 Infantry Fighting Vehicle (IFV) battalions. Its artillery components are also sizable and include a mix of 2S1 Gvozdika Self-Propelled Howitzers (SPH) and 2S3 Akatsiya Self-Propelled Guns (SPG) for artillery support,

*It is unclear whether the battalions are fully manned, and the state of their military hardware is questionable*

and BM-21 Grad Multiple Launch Rocket Systems (MLRS) for counterbattery fire. It

<sup>11</sup> In the offense, a Russian motor rifle or tank brigade operates on a 6-km wide and 10-15-km deep front. A Belarusian brigade could possibly cover slightly more terrain due to the higher number of manoeuvre battalions, but it would still be insufficient for effective operations, both in the offense and defence. V. I. Aleksandrov, A. M. Kabachenko, V. V. Kulikov, A. N. Leunov and I. V. Pestrouhov, *MotorstrelkovaJa (TankovaJa) Brigada V Osnovnyh Vidah BoJa Chast 1, Uchebnoe Posobie*, [Motorized rifle (tank) brigade basic types of combat, Part 1, study guide] (Moscow: State University of International Relations, 2011), 142.

is unclear, however, whether the brigade's battalions are fully manned, and the state of their military hardware is questionable. Their readiness is thus uncertain, but it is unlikely that all six manoeuvre battalions are fully maintained and ready for combat operations with little warning.

The Minsk-based 120<sup>th</sup> Mechanised Brigade has enough equipment to field two tank and three mechanised battalions, but it likely suffers from similar manning and equipment problems to the 19<sup>th</sup> Mechanised Brigade. At full strength, both brigades should field some 4 500 personnel each, but the peacetime number is probably closer to a skeleton 2 000.<sup>12</sup> As a result, these units would need to rely on an influx of reservists to bring their manning to full strength.

*Elements of the 120th Mechanised Brigade were used in central Minsk during the summer 2020 protests*

The role of the mechanised formations is not only limited to the conduct of military operations against conventional opposing forces. For instance, elements of the 120<sup>th</sup> Mechanised Brigade were used in central Minsk during the summer 2020 protests.<sup>13</sup>

The two mechanised brigades are supported by the 231<sup>st</sup> Artillery Brigade stationed in Borovka. This brigade is equipped with 2A65 Msta-B 152 mm towed howitzers, 2S5 Giatsint-S 152 mm SPGs, and 9P140 (BM-27) Uragan 220 mm MLRS. These are Soviet-designed systems and, except for the BM-27, are not suitable for contemporary warfare, which favours speed of manoeuvre and deep fires.

Belarusian press reports indicate that the command also has an artillery unit devoted exclusively to counterbattery fire missions – the

<sup>12</sup> Numbers of combat vehicles, unit strengths, and numbers of battalions are the author's estimates, derived from analyses of official press releases and videos, news reports, and satellite imagery.

<sup>13</sup> "Октябрьскую площадь в Минске охраняли бойцы 120-й механизированной бригады [Kastychnitskaya Square in Minsk was guarded by soldiers of the 120th mechanized brigade]," Reformation, 7 September 2020.

427<sup>th</sup> Reactive Artillery Brigade, based in Lepel. This unit is equipped with the BM-27 MLRS.<sup>14</sup>

Other units under the North-Western Command include the 7<sup>th</sup> Engineering Regiment, 10<sup>th</sup> Electronic Warfare Battalion, 60<sup>th</sup> Communications Regiment, 258<sup>th</sup> Protection and Maintenance Battalion, 110<sup>th</sup> Material Support Regiment, and the 814<sup>th</sup> Technical Support Centre (all based in Borisov).<sup>15</sup> This last unit provides repair and restoration capability for ground force units within the command.<sup>16</sup>

### 1.1.2. WESTERN COMMAND

The Western Command is responsible for securing the western and north-western approaches to Minsk. Like their counterparts in the North-Western Command, the ground forces located in the western parts of the country are spread too thin to fully cover the borders with Poland and Lithuania. A large

*The border with Ukraine is utterly undefended with no ground forces present to cover this area*

augmentation effort would again be needed to build forces adequate to conduct offensive or defensive operations against these countries.

<sup>14</sup> Alexander Alesin, "[Армия Беларуси повышает боевой уровень, переделывая советское «железо»](#)" [The army of Belarus raises its combat level by remaking Soviet 'iron'], Naviny, 30 June 2019.

<sup>15</sup> "[В центр Минска стянуты внутренние войска. Начались задержания и перебои со связью](#)" [Internal troops are concentrated in the centre of Minsk. Detentions and interruptions to communication have begun], Fontanka, 11 August 2020; "[Полевой выход 10-го отдельного батальона РЭБ](#)" [Field exit of the 10th separate EW battalion], Belarus Military Information Portal, 25 March 2020; "[Веское слово комбатова](#)" [A strong word for combatants], Seldon News, 22 June 2020; Vadim Banny, "[Один день в 258-м отдельном батальоне охраны и обслуживания](#)" [One day in the 258th separate guard and service battalion], Belarus Today, 22 February 2018; "[Второй контракт и дальняя дорога](#)" [The second contract and a long journey], Belarus Military Information Portal, 29 March 2019; "[Встреча с представителями 814 Центра технического обеспечения Голуб Марией Сергеевной и Шкляником Дмитрием Леонидовичем](#)" [Meeting with representatives of 814 Technical Support Center Golub Maria Sergeevna and Shklyanik Dmitry Leonidovich], Ministry of Education of the Republic of Belarus, Main Department for Education of the Minsk Regional Executive Committee, 5 April 2019.

<sup>16</sup> "[Мастерская для армейских машин](#)" [Workshop for army vehicles], Belarus Military Information Portal, 4 June 2018.

At the same time, the border with Ukraine is utterly undefended with no ground forces present to cover this area. The force structure is like that of the North-Western Command: there are two mechanised brigades and two artillery brigades in support.

The 11<sup>th</sup> Mechanised Brigade is located in Slonim. It fields around 60 MBTs and around 120 BMP-1/BMP-2s, which allow for the deployment of two tank and three mechanised battalions. These are supported by 2S1 Gvozdika SPH, 2S3 Akatsiya SPG and BM-21 MLRS. The Grodno-based 6<sup>th</sup> Mechanised Brigade can field two tank and four mechanised battalions.

The 111<sup>th</sup> Artillery Brigade, in Brest, provides artillery support to the command and has similar capabilities to the 231<sup>st</sup> Artillery Brigade of the North-Western Command. The unit fields 2A65 Msta-B 152 mm towed howitzers, 2S5 Giatsint-S 152 mm SPG, and 9P140 (BM-21) Uragan 220 mm MLRS. The 1199<sup>th</sup> Reactive Artillery Brigade, also from Brest, provides additional fire support for this command's manoeuvre elements.<sup>17</sup>

Other units stationed in the Western Command's area of responsibility include the 557<sup>th</sup> Engineering Brigade (Grodno), 108<sup>th</sup> Material Support Regiment (Navahrudak), 74<sup>th</sup> Separate Communication Regiment (Grodno), 48<sup>th</sup> Independent EW Battalion (Brest), 250<sup>th</sup> Protection and Maintenance Battalion (Chekhovshchina), and 815<sup>th</sup> Logistics Centre (Baranovichi).<sup>18</sup>

<sup>17</sup> Alexander Alesin, "Армия Беларуси повышает боевой уровень, переделывая советское «железо»."

<sup>18</sup> Veronica Kozlovskaya, "[Найти и обезвредить. Как проходят полевые учения саперов 557-й инженерной бригады](#)" [Find and neutralise. Field exercises of the sappers of the 557th engineering brigade], Grodno News, 17 March 2021; "[108-й полк материального обеспечения отметил свой профессиональный праздник – День тыла Вооруженных Сил](#)" [The 108th Logistics Regiment celebrated its professional holiday - the Day of the Rear Services of the Armed Forces], Novgazeta, 29 March 2021; "[Преемники «Катюши», «Гвоздика» и «Град». Как проходил праздничный парад в Гродно](#)" [Successors to Katyusha, Carnation and Grad. How was the festive parade in Grodno], Novgazeta, 3 July 2019; "[В войсках РЭБ – новая техника](#)" [New equipment for the electronic warfare troops], Belarus Military Information Portal, 12 May 2021; "[С заботой о детях](#)" [Taking care of children], Belarus Military Information Portal, 23 December 2020; "[«Полевая академия» ремонтников](#)" [Field Academy of repairmen], Seldon News, 6 April 2020.

The location of these forces raises several issues. First, Brest is located on the Polish-Belarusian border, while Grodno is located 10 km and 40 km away from the borders of Poland and Lithuania respectively. These units are at risk of being destroyed in the early stages of a conflict, even by short-range artillery systems firing from Poland and Lithuania. Second, their movement and readiness can be tracked and monitored using electronic warfare (EW), and signals and imagery intelligence assets deployed in these NATO countries. Third, any build-up of forces in these border regions can also be monitored by NATO's intelligence-gathering platforms and means.

*Any build-up of forces in these border regions can be monitored by NATO's intelligence-gathering platforms and means*

### 1.1.3. MANOEUVRE FORCES: SUMMARY

The North-Western Command and Western Command can together deploy four tank and seven mechanised battalions, giving a total of some 240 T-72Bs MBTs and around 560 BMP-1/BMP-2 IFVs. The BAF ground forces' strength is thus comparable, if a little

*Belarusian forces do not appear to be capable of undertaking complex military operations at the higher end of the warfare spectrum*

smaller, to the ground forces deployed by the Russian Federation in the Kaliningrad Oblast. However, the Belarusian forces do not appear to be capable of undertaking complex military operations at the higher end of the warfare spectrum. The territory of Belarus is predominantly flat, favouring fast manoeuvre operations, and there are too few units able to undertake such missions in either the offence or defence. Combat support, meanwhile, relies on Soviet-era weapon systems and would thus be hard-pressed to provide meaningful contributions against better equipped and technologically superior opposing forces with deep fires capability.

Some 12 000 servicemen would be required to fully man the operational units, however, as of mid-2021 the manning level is around

*In a conflict, Minsk would need to both generate additional units and mobilise reservists to bring the manning of existing ones to appropriate levels*

50%. In a conflict, Minsk would need to both generate additional units and mobilise reservists to bring the manning of existing ones to appropriate levels. Belarus does indeed organise regular reservist training: not only standard dismounted infantry drills, but also training or retraining on more sophisticated pieces of equipment such as main battle tanks and missile systems. There is also a large quantity of equipment held in storage bases in Belarus, indicating that the BAF likely plans to generate new manoeuvre formations in wartime. Although the effectiveness of land forces that rely on large-scale mobilisation is questionable, the ability to mobilise personnel and provide them with equipment is a key aspect of Belarusian defence planning – the MoD devotes around 5% of its budget to maintaining its capacity for mobilisation.<sup>19</sup>

## 1.2. UNITS SUBORDINATED DIRECTLY TO THE GENERAL STAFF

In addition to units under the North-Western and Western Commands, several units that provide specialist capabilities for the ground forces are directly subordinated to the Belarusian General Staff (see Figure 3). In a combat scenario they could be used wherever the General Staff deemed necessary, across the entire battlefield.

<sup>19</sup> “О республиканском бюджете на 2021 год [On the budget of the Republic 2021],” Национальный правовой Интернет-портал Республики Беларусь [National Legal Internet Portal of the Republic of Belarus], 18 December 2020, 20.





with a CEP of 45 m. A well-trained crew can deploy, conduct a strike, and start withdrawing from a firing position to avoid counterbattery fire in around 10 minutes.

Another high-level system fielded by the 336<sup>th</sup> Reactive Artillery Brigade is the 9A52-2 BM-30 Smerch MLRS. The launcher carries 12 rockets that can be launched in 38 seconds with a reload time of 25-35 minutes, depending on how well-trained the crew is. Once the rockets are fired, the vehicle needs just one minute to change its position. When first introduced, the BM-30 could fire rockets with eight different warheads (including fragmentation submunition scattering cluster, and anti-tank mine scattering cluster variants) to a maximum range of 70 km (Russia is now introducing 13 new rocket variants with a reported range of 120 km).

Like Polonez, Smerch is designed to attack missile, artillery and mortar batteries, destroy strongpoints, and eliminate enemy nodes of resistance. One Smerch launcher can cover an area of 67.2 ha, compared to 4 ha for BM-21, and 29 ha for BM-27. Each battery of eight launchers is intended for use against the division-level operations of an opposing force. Three launchers can provide a level of destruction comparable to that of two Tochka-U-equipped brigades.<sup>22</sup>

The 51<sup>st</sup> Artillery Brigade is also located in Asipovichy. Its structure and equipment are similar to the artillery brigades subordinated to the two operational commands, including 2A65 Msta-B howitzers, BM-27 Urugan MLRS, and 2S5 Giatsint-S SPG. In wartime, the brigade would be held in reserve and deployed to provide additional artillery support on one axis.

### 1.2.2. MISCELLANEOUS UNITS

The General Staff also commands the 153<sup>rd</sup> Special Purpose Radio-Technical Brigade (Volozhin), the 255<sup>th</sup> Special Purpose Radio-Technical Regiment (Navahrudak), and the 228<sup>th</sup>

Electronic Warfare Regiment (Polotsk).<sup>23</sup> Radio-technical units undertake radio reconnaissance and signal intelligence missions.

Secure communications are provided by the 85<sup>th</sup> and 127<sup>th</sup> (Baranovichi) and 86<sup>th</sup> (Kolodishchi) Communications Brigades.<sup>24</sup> The General Staff also commands the only unit within the BAF trained to deal with Chemical, biological, radiological, and nuclear (CBRN) threats: the 8<sup>th</sup> CBRN Brigade (Staryye Dorogi).<sup>25</sup>

The 2<sup>nd</sup> and 188<sup>th</sup> Engineering Brigades, in Sosny and Mogilev respectively, provide army-level mining, demining, and engineering support.<sup>26</sup> The General Staff also commands the 30<sup>th</sup> Railway Brigade (Slutsk), responsible for ensuring the uninterrupted movement of trains.<sup>27</sup> This includes building, repairing, and operating relevant railway lines and associated infrastructure, such as floating bridges across rivers. The 36<sup>th</sup> Road and Bridge Brigade is tasked with building and repairing bridges and roads to support the movement of military

<sup>23</sup> Nikita Melkozerov, "[Парень считает, что его незаконно призвали в армию, и требует 10 000 рублей компенсации. У Минобороны другое мнение](#) [This guy believes that he was illegally drafted into the army and demands 10 000 rubles in compensation. The Ministry of Defence has a different opinion]," Onliner, 22 July 2019; "[255-й отдельный радиотехнический полк отметил 55-ю годовщину](#) [The 255th separate radio engineering regiment celebrated its 55th anniversary]," Grodno News, 11 December 2016; Elena Kalenik, "[В 228-й отдельный полк радиоэлектронной борьбы поступили новые образцы вооружения](#) [The 228<sup>th</sup> separate electronic warfare regiment received new weapons]," Polotski News, 2 June 2020.

<sup>24</sup> "[Пробег состоялся в Барановичах в честь 100-летия войск связи](#) [A run took place in Baranovichi in honour of the 100th anniversary of the signal troops]," Baranovichi City Executive Committee, 7 October 2019; "[Связь, как воздух](#) [News]," Belarus Military Information Portal, 15 June 2020.

<sup>25</sup> "[Поздравление 8-ой Варшавской бригады радиационной, химической и биологической защиты](#) [Congratulations for the 8<sup>th</sup> Warsaw Radiation, Chemical and Biological Defence Brigade]," Main Department for Healthcare of the Minsk Regional Executive Committee, 4 December 2020.

<sup>26</sup> "[«Глаза горят, желание есть – это самое главное»: 2-я инженерная бригада ВС Беларуси показала условия службы солдат-срочников](#) [‘Eyes are burning, desire is the most important thing’: the 2nd Engineering Brigade of the Armed Forces of Belarus showed the conditions of service of conscripts]," CTV, 30 November 2017; "[188-я гвардейская инженерная бригада предложила школьникам Могилева окунуться в армейскую жизнь](#) [188<sup>th</sup> Guards Engineering Brigade invited Mogilev schoolchildren to plunge into army life]," TVR, 7 December 2019.

<sup>27</sup> "[День открытых дверей в 30-й отдельной железнодорожной бригаде](#) [Open day in the 30<sup>th</sup> separate railway brigade]," Belarus Military Information Portal, 30 January 2018.

<sup>22</sup> Konrad Muzyka, "[Smerch from Kaliningrad](#)," Rochan Consulting, 1 April 2020.

units, while the 65<sup>th</sup> Automobile Brigade provides road transportation services for the armed forces. Both units are based in Zhodino

### 1.3. SPECIAL OPERATIONS FORCES

The Special Operations Forces (SOF) Command is headquartered in Kalodzishchy, northeast of Minsk and controls all military units earmarked for special operations.<sup>28</sup> Units subordinated to the SOF Command are the only high-readiness units within the Belarusian ground forces. The three brigades under the SOF Command together have around 6 000-7 000 personnel –

*Units subordinated to the SOF Command are the only high-readiness units within the Belarusian ground forces*

a similar number to one of the ground forces' operational commands. They are, however, fully staffed, No additional manpower is needed to bring them to readiness, further increasing their quick deployment capabilities.

There are five military units subordinated to the command. The 38<sup>th</sup> Air Assault Brigade is based in Brest. It is composed of two air assault battalions equipped with BTR-80 armoured personnel carriers (APC), and one artillery battalion with 120 mm towed Nona-M1 2B23 mortars and 122 mm D-30 howitzers for manoeuvre support. It is also possible that the brigade has an air defence capability, likely a battery-sized formation.

The Vitebsk-based 103<sup>rd</sup> Airborne Brigade is composed of three airborne battalions, which are equipped with a mix of BTR-70s and BTR-80s. Its artillery battalion has the same structure as that of the 38<sup>th</sup> Air Assault Brigade. Since 2003, the unit has been subordinated to the SOF command (it had previously been under the North-Western Command) and in 2016 changed its designation from mobile to airborne brigade. Apart from its standard airborne missions, the 103<sup>rd</sup> Airborne Brigade is the primary peacekeeping unit of the Belarusian land component. In the past,

<sup>28</sup> "Силы специальных операций [Special Operations Forces]," Belarus Military Information Portal.

elements of this brigade have trained for peacekeeping operations with the UK's 42 Commando Royal Marines.<sup>29</sup>

The 5<sup>th</sup> Special Forces (Spetsnaz) Brigade, based in Marina Gorka, is tasked with conducting long-range reconnaissance, target acquisition, and diversionary operations behind enemy lines, especially against high-value targets. The structure of the brigade is unclear and there is little information in open sources regarding its training and missions. Some SOF elements, including personnel from this brigade were reportedly involved in riot dispersal operations in Minsk following the presidential elections.<sup>30</sup>

The SOF Command also commands the 91<sup>st</sup> Security and Service Battalion, and the 742<sup>nd</sup> Communications Centre, which is responsible for providing reliable communications between the command and its field units.<sup>31</sup>

One intrinsic feature of the Belarusian special operations and airborne forces is that they are closely linked on all levels to their Russian counterparts.<sup>32</sup> Like the ground forces operational commands, the Belarusian SOF Command is subordinated to the General Staff and, through it, in wartime, to the RGF.<sup>33</sup>

*The Belarusian special operations and airborne forces are closely linked on all levels to their Russian counterparts*

Strengthening the SOF component is the main goal of Lukashenko's military reform.

<sup>29</sup> "Royal Marines complete training in Belarus," Royal Navy (UK), 23 March 2020.

<sup>30</sup> "Власти Бреста подтвердили привлечение десантников для сдерживания протестов [Brest authorities confirmed the use of paratroopers to contain the protests]," Sputnik, 12 August 2020; "В разгоне протестов принимают участие офицеры спецназа Минобороны в штатском? [Are officers of the special forces of the Ministry of Defense in civilian clothes taking part in the dispersal of the protests?]," Our Niva, 28 September 2020.

<sup>31</sup> "Эшелоны уходят в Мулино [Echelons leave for Mulino]," Belarus Military Information Portal; Alexander Alexandrov, "ССО всегда на связи [SSO is always in touch]," Krasnaya Zvezda, 21 December 2020.

<sup>32</sup> Including relationships with Russia's 7th, 76th, 106th Airborne Divisions, and 31st Air Assault Brigade.

<sup>33</sup> Konrad Muzyka, "Slavic Brotherhood – Day by day developments," Rochan Consulting, 28 September 2020.



In 2018, he stated that tanks or combat aircraft are “not the main thing” for Belarus, but that special forces “must quickly appear anywhere in Belarus (if something suddenly happens), strike at the bandits and those who dare to poke their nose at us, and leave,” adding that speed and manoeuvrability are key.<sup>34</sup>

#### 1.4. AIR AND AIR DEFENCE COMMAND

The AADC, based in Minsk, is responsible for the management, training and operations of all Belarusian air and air defence assets (see Figure 4). While the Belarusian Air Force has recently taken delivery of some

combat and training aircraft from Russia, its capabilities are generally deteriorating. The pace of modernisation has been too slow to deliver meaningful results in terms of combat

*While the Belarusian Air Force has recently taken delivery of some combat and training aircraft from Russia, its capabilities are generally deteriorating*

potential. The same pertains to long-range air defence systems. Although many transporter erector launchers (TEL) are deployed to shield strategically important sites, air defence still relies on the older generation S-300 family.

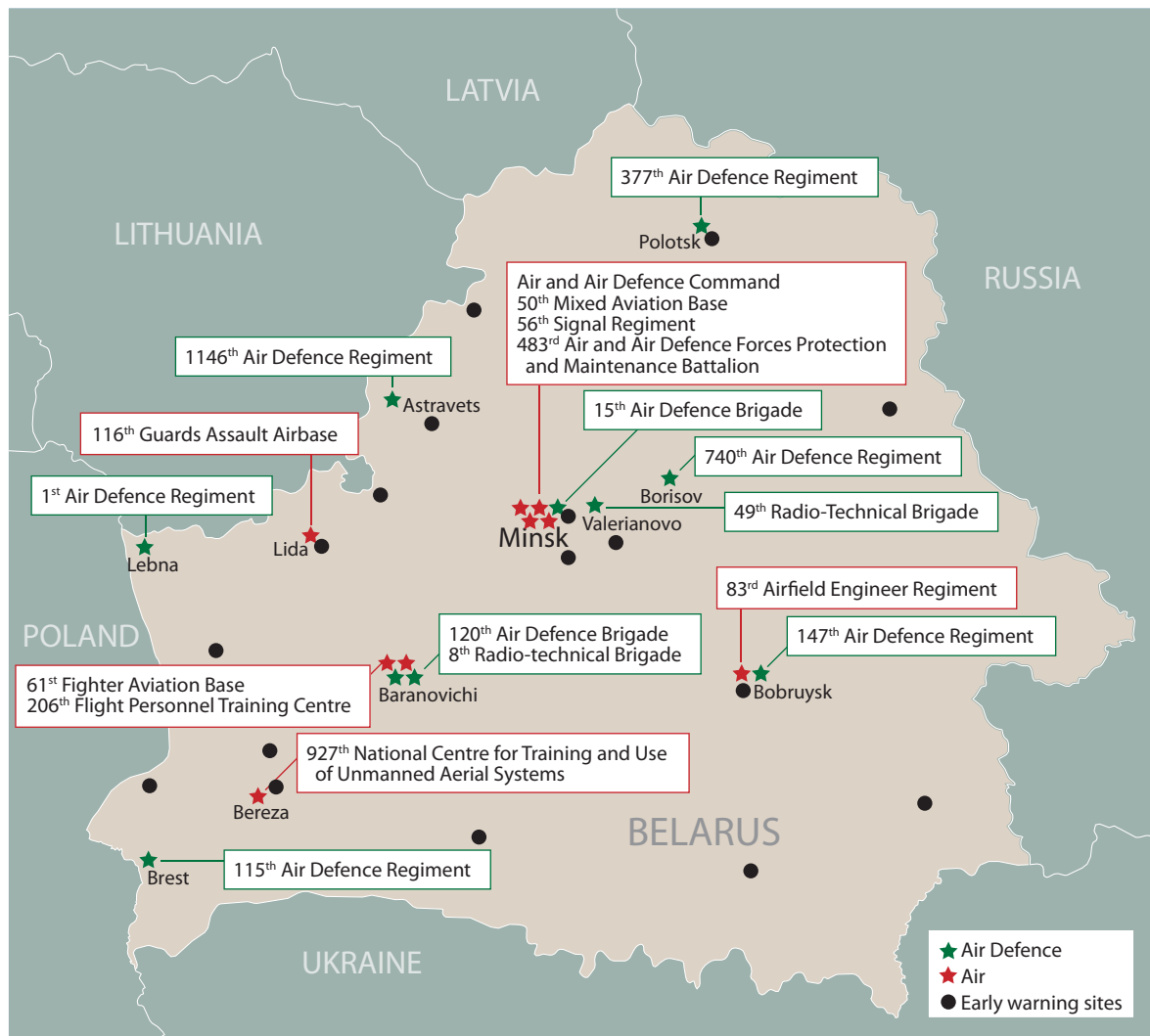


Figure 4. Air and Air Defence Command

<sup>34</sup> “Осмотр современных образцов отечественного вооружения и военной техники [Inspection of modern domestic weapons and military equipment],” President of the Republic of Belarus, 5 October 2018.

### 1.4.1. FLYING UNITS

Air assets are located at three main bases. The bulk are located at the 61<sup>st</sup> Air Base in Baranovichy, which hosts two squadrons of Mig-29s.<sup>35</sup> It is unclear how many aircraft are operational, but it is unlikely that all 24 airframes are fully serviceable. Satellite imagery also shows some Su-24s at the base, however, they were withdrawn from service in 2012 and are probably earmarked for export. The newest additions to the Belarusian Air Force, four Su-30SM multi-role fighter aircraft, are also located here.

The MiG-29s are responsible for quick reaction alert along the western and northern borders with Poland and Lithuania. It was a MiG-29 from the 61<sup>st</sup> Air Base that intercepted a Ryanair flight from Athens to Vilnius in May 2021, leading to the detention of Belarusian opposition leader, Roman Protasevich.<sup>36</sup>

The 116<sup>th</sup> Air Assault Base in Lida operates a mix of around 20 Su-25 close air support aircraft, and 11 Yak-130 and some 10 L-39 Albatros advanced jet trainer aircraft.<sup>37</sup> The base also hosts the 206<sup>th</sup> Flight Personnel Training Centre, which provides initial and continuation training for fighter pilot crews.<sup>38</sup>

The 50<sup>th</sup> Mixed Aviation Air Base, at Machulishchy, is primarily tasked with VIP transport services and the provision of tactical and strategic airlift capability for ground units. It fields a mix of platforms including Il-76MD strategic airlifters, An-24/26 tactical airlift aircraft, Tu-134 VIP aircraft and rotary-wing assets such as Mi-24s, Mi-8 and Mi-8MTV-5.<sup>39</sup> Although not directly related to military

activities, the 50<sup>th</sup> Mixed Aviation Base also manages a Ministry of Emergency Situations helicopter detachment, with four Mi-26s.<sup>40</sup>

### 1.4.2. STANDBY AIR BASES

Belarus maintains more air bases than it needs. They may be used as reserve air bases during a dispersal operation and/or by the Russian Aerospace Forces (VKS) to reinforce Belarusian air units. There are also several air bases that do not host any air assets but are maintained in a condition that allows for the prompt reception of personnel, SAM and early warning systems, and fixed- and rotary-wing aircraft. These include Babruysk Air Base, which for many years was earmarked to be the main hub for Russian aviation presence in Belarus.<sup>41</sup> The base is empty, but equipped with three radar systems: 36D6 Tin Shield, P-12/18 Spoon Rest, and P-19 Flat Face B.

*Several air bases do not host any air assets but are maintained in a condition that allows for the prompt reception of personnel, SAM and early warning systems, and aircraft*

Balbasovo Air Base in Orsha is also fully maintained. It is used by the Orsha Aircraft Repair Plant, but could host Russian aviation assets, including strategic airlift aircraft.<sup>42</sup> There is also an early warning site north of the city, which features a mix of three radar systems: 55Zh6 Tall Rack, P-12/18 Spoon Rest, and P-35/37 Bar Lock. A former S-75 SAM site is located nearby. Although no SAM assets are deployed there, the site is preserved, even expanded, indicating the possible presence of a regional radio-technical centre. Historically, Russian air defence forces have set up new air defence batteries or battalions at bases previously occupied by older generation

<sup>35</sup> The base also hosts around 20 Su-27s, but they have been withdrawn from service.

<sup>36</sup> Ivan Nechepurenko and Anton Troianovski, "[Belarus Forces Down Ryanair Flight Carrying Journalist](#)," The New York Times, 23 May 2021.

<sup>37</sup> One Yak-130 crashed in May 2021.

<sup>38</sup> Alexander Alesin, "[Под вывеской учебного центра в Лиде может появиться российская авиабаза](#) [Russian airbase may appear under the sign of the training centre in Lida]," Naviny, 26 March 2021

<sup>39</sup> Assets diverted from the disbanded (2015) 181<sup>st</sup> Helicopter Regiment in Pruzhany. The author estimates that the AADC fields around 10 Mi-24s and 30 Mi-8s Ilya Kryzhevich, "[Чем сегодня живет легендарная 50-я смешанная авиабаза в Мачулищах](#) [How the legendary 50th mixed air base in Machulishchy lives today]," Belarus Today, 17 August 2020.

<sup>40</sup> "[Какие вертолеты нужны Беларуси? Часть 2](#) [What kind of helicopters does Belarus need? Part 2]," Belarus Security Blog, 14 January 2020; "[Звено вертолетов Ми-26 аэромобильного отряда ГААСУ «АВИАЦИЯ»](#) [Unit of Mi-26 helicopters of the 'GAASU AVIATION' airmobile detachment]," Ministry of Emergency Situations of the Republic of Belarus, 8 October 2020.

<sup>41</sup> Siarhei Bohdan, "[The Russian Air Force Base in Belarus: Getting the Facts Straight](#)," Belarus Digest, 27 October 2014.

<sup>42</sup> The plant repairs Belarusian rotary-wing assets, Il-76s and Tu-134s airlifters

systems, such as S-75, S-125, or S-200. This site could thus be used if Russia were to decide to reinforce Belarus with more robust EW or SAM assets.

Other examples are Borovitsy Air Base (north of Polatsk), and Luninets Air Base which, although empty, hosts early warning systems (one each of 36D6 Tin Shield, P-35/37 Bar Lock, and P-19 Flat Face radars, and two P-12/18 Spoon Rest systems).

### 1.4.3. AIR DEFENCE

The 1<sup>st</sup> Air Defence Regiment is based in Labna, west of Grodno, 10 km from the border with Poland, and 20 km from Lithuania.<sup>43</sup> The unit is tasked with the air defence of Grodno, Lida and the north-western approaches to Belarus. It also monitors the airspace over north-eastern Poland (including the Suwałki corridor) and southern Lithuania. The regiment's assets are concentrated at two sites, both at Labna: one seems to operate SAM and EW systems, while the other seems to be a storage facility. There are 12 S-300PS TELs (two battalions) at the base, supported by 5N63S Flap Lid and 5N66M Clam Shell radars. The base also hosts a 40V6 mast assembly, which allows radar systems to be placed higher above the ground, increasing the detection range of EW systems and enhancing performance against low-flying targets. An additional site north of Grodno in Lapenki hosted seven S-300PS TELs in 2018, but 2020 satellite imagery shows no activity there.

The 115<sup>th</sup> Air Defence Regiment is located in Brest.<sup>44</sup> This unit protects the southern and south-western approaches towards Belarus and monitors air activity in eastern Poland and north-western Ukraine. Satellite imagery suggests that the unit has two S-300PS battalions: one located north of Brest has 10 TELs; a second at the regiment's deployment site in Brest (4 km from the Polish border) had six TELs in late 2020.

<sup>43</sup> Илья Krasovskiy, "[Здесь нет выходных и праздников: мы посмотрели, как охраняет воздушные границы страны 1-й зенитный ракетный полк](#) [There are no weekends or holidays here: we saw how the 1<sup>st</sup> anti-aircraft missile regiment guards the country's air borders]," Belarus Today, 10 April 2021.

<sup>44</sup> "[115-й зенитный ракетный полк отметил 70-летие со дня образования](#) [The 115<sup>th</sup> Anti-Aircraft Missile Regiment celebrated its 70<sup>th</sup> anniversary]," Tomin, 31 December 2019.

The 377<sup>th</sup> Air Defence Regiment, garrisoned in Polotsk, is responsible for air defence of approaches from southern Latvia and eastern Lithuania.<sup>45</sup> Due to its proximity to the Russian border, it can also augment Russia's air defence capability. The regiment is equipped with S-300PS SAMs, with assets (two S-300PS SAM battalions each comprising seven TELs) deployed at one site north of Polotsk.

As of mid-2020, the three regiments together deployed around 42 TELs, which constitutes seven batteries (each battery fields six TELs) or slightly more than three SAM battalions (a battalion comprises at least two batteries). They form an outer air defence ring that seeks to detect and if possible, engage air threats flying from the Baltic states and Poland.

The outer ring is complemented by an inner air defence ring around Minsk, formed by battalions attached to the 15<sup>th</sup> Air Defence Brigade and intended to protect the capital against ballistic, and cruise missile and other air-breathing threats. Altogether there are eight SAM sites around Minsk, four with S-300PS and four with S-300PT SAMs.<sup>46</sup> Each S-300PT site has 12 TELs, half of which could be seen on combat duty on satellite imagery in mid-2020. The S-300PS sites also have a total of 25 TELs with around 50% on combat duty. Thus, 73 TELs protect Minsk alone – around 292 missiles that could be fired in a single salvo. In total, 115 TELs protect Belarusian airspace.

*Belarus' long-range SAM system is more robust than its combat air, but in the longer term, air defence will also need to be upgraded with new platforms*

Overall, Belarus' long-range SAM system is more robust than its combat air, but in the longer term, air defence will also need to be upgraded with new platforms to respond to

<sup>45</sup> Lyubov Savko and Rustam Mirzoev, "[Ключи от неба. Чем живёт 377 Гвардейский зенитный ракетный полк](#) [Keys to the sky. How the 377<sup>th</sup> Guards Anti-Aircraft Missile Regiment lives]," Sammit TV, 16 March 2019.

<sup>46</sup> It is unclear how many subunits are subordinated to the 15<sup>th</sup> Air Defence Brigade. The author provides the total number of TELs deployed around Minsk without attaching them to a particular air defence unit. In 2018 there were five S-300P sites, but one was empty as of late 2020.

modern-day threats. There are nevertheless gaps in SAM coverage: there are no long-range air defence sites near the border with Lithuania that would extend airspace monitoring over Vilnius; and the distances between Grodno and Polotsk, and Grodno and Brest are too large for full coverage. These deficiencies could be exploited by low-flying assets, such as helicopters and cruise missiles to strike targets deep in Belarus.

Other units under the AADC provide shorter-range air defence for ground forces or strategically important sites. Units in Borisov are protected by the 740<sup>th</sup> Air Defence Regiment. This unit is equipped with up to three battalions of Osa-AKM short-range air defence systems.<sup>47</sup> The 147<sup>th</sup> Air Defence Regiment in Bobruisk, also equipped with Osa-AKM is tasked with defending the local air base.<sup>48</sup> The 120<sup>th</sup> Air Defence Brigade in Baranovichi has the same mission. This unit is equipped with three batteries (12 launchers) of the 9K332MK Tor-M2K short-range SAM.<sup>49</sup> The 1146<sup>th</sup> Air Defence Regiment in Astravets fields two Tor-M2K batteries (eight launchers) to protect the Astravets Nuclear Power Plant.<sup>50</sup>

Russian operational-level formations, such as combined arms armies, have their own air defence brigades or regiments, equipped with systems such as Buk, Osa or Tor, while long-range SAMs are under the command of the VKS. The Belarusian operational commands do not possess organic air defence units – all long-range and tactical SAMs are directly subordinated to the AADC. As a consequence, in wartime OSA and Tor-equipped units would be allocated to provide air defence for operational units, leaving some key local areas exposed.

<sup>47</sup> «Встречают всей семьей... [Meet the whole family...],” Belarus Military Information Portal, 26 May 2020.

<sup>48</sup> Converted from a brigade in 2017. “[Годовой праздник 147-го зенитного ракетного полка ВВС и войск ПВО \(1949\)](#) [Annual holiday of the 147<sup>th</sup> anti-aircraft missile regiment of the Air Force and Air Defence Forces (1949)],” Belarus Military Information Portal; “[Боевая Подготовка 147 Зенитного Ракетного Полка](#) [Battle preparation 147 anti-aircraft missile regiment],” Bobruisk 360, 24 March 2020, YouTube video, 2:18.

<sup>49</sup> «ТОР-М2» в готовности! [‘TOR-M2’ is ready!],” Belarus Military Information Portal, 22 January 2014.

<sup>50</sup> Belarus Military Information Portal, “[«Тор-М2» на защите мирного атома](#) [‘Tor-M2’ to protect the peaceful atom],” 27 December 2018.

This shortfall could be filled by withdrawing additional systems from storage or by fielding Russian-owned and possibly Russian-operated systems.

*In wartime OSA and Tor-equipped units would be allocated to provide air defence for operational units, leaving some key local areas exposed*

#### 1.4.4. MISCELLANEOUS UNITS

There are numerous support units attached to the AADC. They include the 483<sup>rd</sup> Air and Air Defence Forces Protection and Maintenance Battalion (Minsk), the 56<sup>th</sup> Communications Regiment (Uruchye), and the 83<sup>rd</sup> Airfield Engineer Regiment (Bobruisk).<sup>51</sup> The command may also operate the 1169<sup>th</sup> Aviation Equipment Storage Base at the Luninets airfield, although there are no recent reports about its activities.<sup>52</sup> At Bereza-Osovcy the AADC maintains the 927<sup>th</sup> Centre for the Preparation and Use of Unmanned Aerial Systems, which trains operators of unmanned systems.<sup>53</sup>

The AADC also operates the 8<sup>th</sup> and 49<sup>th</sup> Radio-Technical (radar) Brigades, in Baranovichi and Valerianovo respectively.<sup>54</sup> Together they operate a robust, albeit relatively old, network of early warning and battle management systems in support of the long-range SAM systems. Belarus has an estimated five 5N64S

<sup>51</sup> «БЕЛАЗ» своих не забывает [“BELAZ” does not forget its own],” Belarus Military Information Portal, 18 July 2018; Maria Krushevskaya, “[56-й отдельный полк связи – лучшая часть обеспечения Военно-воздушных сил и войск противовоздушной обороны](#) [The 56<sup>th</sup> Separate Signal Regiment is the best part of supporting the Air Force and Air Defence Forces],” Belarus Today, 11 December 2020; “[Строят чтобы летать! 83-й отдельный инженерно-аэродромный полк завершил очередной строительный сезон](#) [Build to Fly! The 83<sup>rd</sup> separate airfield engineering regiment has completed the next construction season],” Bobruisk City Executive Committee, 21 November 2019.

<sup>52</sup> Leonid Spatkai, “[Вертолётная авиация Вооруженных Сил Беларуси](#) [Helicopter aviation of the Armed Forces of Belarus],” Yandex, 14 November 2018.

<sup>53</sup> “[В 927-ом Центре подготовки и применения беспилотных авиационных комплексов прошёл День части](#) [The Day of the Unit was held at the 927<sup>th</sup> Centre for the Preparation and Use of Unmanned Aerial Systems],” Berezacity, 3 July 2020.

<sup>54</sup> Dmitry Shibeko, “[49-й радиотехнической бригаде сегодня 87 лет](#) [49<sup>th</sup> radio engineering brigade is 87 years old today],” Ostrovets, 1 August 2019



Big Bird B battle management radars and 11 36D6 Tin Shield radar sites to provide additional coverage.

The positioning of the various radar sites provides the network with some degree of overlap in early warning coverage. There is also some system redundancy as the 36D6 radars can provide targeting support to the S-300PS batteries if the 5N64S systems become inoperable. These radar sets can be mounted on 40V6 masts for increased low-altitude detection capability, meaning that their target acquisition capability would approach that of the 5N64S.<sup>55</sup>

EW sites hosting P-12/18 and P-19 radars are also scattered across northern and western Belarus, augmenting radar coverage and increasing the AADC's readiness.

## 2. BAF MODERNISATION

In December 2019, President Lukashenko signed the Belarus Defence Plan and the Armed Forces Development Concept until 2030. The Defence Plan regulates issues relating to the functioning of the state during periods of increased external threat and war. It also emphasises the need to prevent aggression by 'strategic deterrence' – for which, in practice, Belarus relies heavily on its relationship with Russia.

*The armed forces' combat capabilities are to grow, through enhanced combat training and the procurement of new hardware*

The Armed Forces Development Concept until 2030 defines the structure and composition of the armed forces and their role in peacetime and wartime. While the structure and composition will remain the same, the armed forces' combat capabilities are to grow, through enhanced combat training and the procurement of new hardware.<sup>56</sup> To meet these goals, Belarus is to increase its defence budget to 1.5% of Gross

<sup>55</sup> A 36D6 has a 165 km detection range compared to 300 km for 5N64S. Sean O'Connor, "[Kaliningrad's Strategic Air Defenses](#)," IMINT and Analysis blog, 21 August 2008.

<sup>56</sup> "Лукашенко утвердил новый план обороны".

Domestic Product (GDP) although a timescale for this has not been set.<sup>57</sup>

Belarus' more recent military procurements have been directed by the 2016-2020 State Armaments Programme (SAP). The details of the programme are unknown but, judging by the numbers of new platforms delivered to the armed forces and the rates of replacement of old generation equipment with modern equivalents, unambitious. In April 2017, for example, then Deputy Minister of Defence for Armaments, Major General Igor Lotenkov, listed all procurement and modernisation initiatives for that year, but most were related to the overhaul of existing platforms rather than the acquisition of new ones.<sup>58</sup>

Although the T-72B/T-72BM1 MBT remains the mainstay of Belarusian armour, some steps have been taken in recent years to replace these vehicles with their modernised variant, the T-72B3. This tank is the main element of Russia's armoured capability – Belarusian attempts to acquire it will further synchronise the equipment used by its own and Russian units. As of mid-2021, Belarus has 20-30 T-72B3s divided between the 120<sup>th</sup> Mechanised Brigade (two companies) and the 969 Reserve Tank Storage Base, which is tasked with servicing and maintaining the tank fleet. In February 2021, 150 reservists were called up to train on these tanks, part of wider efforts to provide refresher training for reserve personnel to ensure they can operate the BAF's newest hardware.<sup>59</sup>

The T-72B3 procurement was coupled with a modernisation package for the existing T-72Bs, which delivered the T-72BM1 variant. Externally, this resembles the T-72B3. The main element

<sup>57</sup> Ibid.

<sup>58</sup> Lotenkov mentioned procurement of Su-30SM aircraft, radio monitoring systems, 120 mm mortars, 2B23 Nona-M1, and unmanned aerial systems for various purposes. In the meantime, T-72s, BTR-70s, BMP-2, Mi-24Ks, Mi-8PS helicopters, Il-76MD aircraft would be modernised. "[За последний год для нужд Вооружённых Сил Беларуси было закуплено более 250 новых образцов вооружения и военной техники](#) [Over the past year, more than 250 new types of weapons and military equipment were purchased for the needs of the Armed Forces of Belarus]," The Military-Political Review, 4 February 2017.

<sup>59</sup> Nikolay Grishchenko, "[Под Гродно проходят учения танкистов-резервистов на Т-72Б3](#) [Reservist tankers are training on T-72B3 near Grodno]," The Union State, 8 February 2021.

of the overhaul was an improvement of the fire control system, including a new, multi-channel Sosna-U gunner's sight and PNK-4S-01 commander's sighting and observation complex, and an automatic target tracking capability. In addition, a wind sensor was added, the electrical power supply circuits and ballistic sensors were replaced, and protection systems were improved with the introduction of additional Kontakt V armour modules and a soft-kill active protection system. However, the most important and most expensive parts of the tank – the engine, autoloader, and main gun – have not been modernised.

The modernisation programme for the BTR-70BM1 shared the same shortcomings. While ballistic protection, mobility and various systems were modernised, the machine gun was not.

### *In the air domain, the main combat potential of the air force rests on antiquated Soviet-era MiG-29s*

In the air domain, the main combat potential of the air force rests on antiquated Soviet-era MiG-29s. In 2017, Belarus signed a contract for the delivery of 12 Su-30SM multirole fighters, four of which have been delivered and are on combat duty at the 61<sup>st</sup> Air Base in Baranovichi.<sup>60</sup> A further four are to be delivered in October 2022.<sup>61</sup>

These deliveries are too slow to provide a much-needed increase in combat capability. In the meantime, the air force has augmented its capabilities with Yak-130 AJT aircraft, which have also been used in close air support missions. Belarus received 12 airframes between 2015 and 2019, but one aircraft crashed in May 2021.<sup>62</sup> It also took delivery of 12 Mi-8MTW-5 helicopters in 2016-17 to improve troop transport capability and interoperability between the Russian and Belarusian SOF.

<sup>60</sup> “[На страже мирного неба](#) [On guard of the peaceful sky],” Belarus Military Information Portal, 10 February 2021.

<sup>61</sup> “[Поставка второй партии истребителей Су-30СМ в Беларусь запланирована на октябрь 2022 года](#) [Delivery of the second batch of Su-30SM fighters to Belarus is scheduled for October 2022],” Belarus Military Information Portal, 5 February 2021.

<sup>62</sup> “[Two pilots dead after Yak-130 combat training plane crashes in Belarus](#),” Tass, 19 May 2021.

There are two possible explanations for the slow pace of air force modernisation. First, it is too expensive. For many years, Minsk has asked Moscow for donations of new combat aircraft, a request which has fallen on deaf ears. Second, the Belarusian political-military

### *Without the support of the VKS, there seems to be little interest in maintaining a capable Belarusian air force*

leadership may have judged that upgrading its aviation components is not cost-effective due to the risk of them being destroyed in the opening stages of a conflict. Consequently, without the support of the VKS, there seems to be little interest in maintaining a capable Belarusian air force.

For air defence, Belarus has acquired Tor-M2 short-range SAM systems from Russia. Five were delivered to the AADC between 2011 and 2018. At this pace (similar to that of the T-72B3s) it will take decades to fully replace Soviet-era equipment. It is unclear, though, whether this pace is due to Belarus' limited procurement budget, or because Minsk believes that it can rely on protection from Moscow rather than acquiring new systems.

Belarus has also requested free donations of S-400 SAM and Iskander (SS-26 Stone) surface-to-surface missiles from Moscow, claiming that the Russian Federation should contribute heavily to the modernisation of the BAF as Belarus is a front-line country of the Union State.<sup>63</sup> Moscow has always rejected such requests, demanding that Minsk should pay the full export price. While there is a need to replace older variants of the S-300 SAM family to extend the range and capabilities of Belarus' long-range air defence, this disagreement with Russia has effectively derailed any modernisation attempts. But as defence cooperation between the two countries grows, SAM capability, especially around Minsk, will probably be upgraded in the medium term.<sup>64</sup>

<sup>63</sup> Author's interview with anonymous Belarusian defence analyst.

<sup>64</sup> Alexander Alesin, “[Военно-техническое сотрудничество: то, что дороже денег](#) [Military-technical cooperation: what is more valuable than money],” Belrynok, 28 January 2021.

One result of the stand-off with Russia over the S-400 procurement is that Belarus was effectively forced to co-develop the 301 mm Polonez MLRS with China. It seems, however, that this was a one-off decision, not a genuine attempt to diversify supply of military equipment (although Belarus had previously also acquired some armoured personnel carriers from China).<sup>65</sup> In any case, Russia would likely not welcome China’s intrusion into this important military market and would be concerned about the problems of integrating Chinese-made equipment into its close cooperation with Belarus. Belarus must thus rely on Russian supplies to maintain and develop its forces.

### 3. THE DEFENCE BUDGET

Belarusian defence spending has been stable at around 1% of GDP (see Figure 5). In 2021 a total of BYR 4 236 million is planned to be spent on National Defence and the Provision of National Security, which is around 5.35% of total government spending for that year.<sup>66</sup>

However, the armed forces are funded by only part of this allocation and will receive BYR 1 463 million (1.7% of total government spending, or 0.93% of GDP).<sup>67</sup>

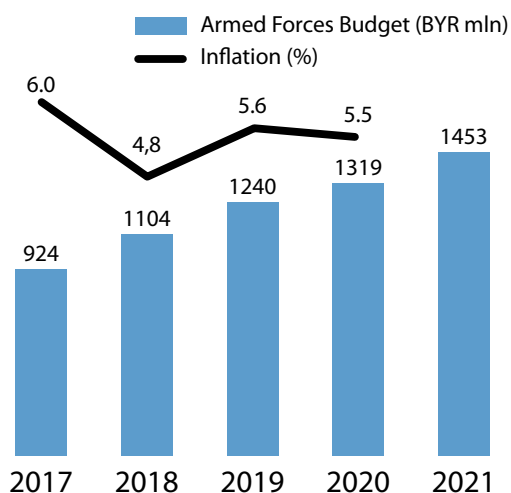


Figure 5. Belarusian Defence Budget

<sup>65</sup> “Chinese armored personnel carriers to enter service with Belarus Armed Forces,” Belarus Official Website, 21 June 2017.

<sup>66</sup> “Бюджет Республики Беларусь для граждан на 2021 год [The budget of the Republic of Belarus for citizens for 2021],” Министерство Финансов Республики Беларусь [Ministry of Finance of the Republic of Belarus], 22.

<sup>67</sup> Author’s calculations.

In nominal terms, spending on the armed forces in 2021 will be around 10% higher than in 2020 (2020: BYR 1 319 million). However, the increase in real terms is considerably smaller due to annual inflation (5.5% in 2020) and the heavy devaluation of the Belarusian rouble.<sup>68</sup>

The Stockholm International Peace Research Institute assesses Belarusian defence spending to be USD 655 million in 2016, increasing to USD 845 million in 2020.<sup>69</sup> However, Michael Kofman, Director of the Russia Studies Program at the Center for Naval Analyses, estimates a figure of USD 2-2.5 billion based on a purchasing power parity currency conversion.<sup>70</sup> Because Belarusian- and Russian-made equipment is cheaper compared to its Western analogues, Minsk is able to get much more ‘bang for its buck’.

### 4. RUSSIAN-BELARUSIAN DEFENCE COOPERATION

In 2016, Russia stood up a motor rifle division in Smolensk Oblast, opposite the border with Belarus – not to threaten the regime with military action, but to be able to quickly reinforce its Belarusian allies with two motor rifle and one tank regiment in case of an armed conflict with the West. Moscow’s eagerness for defence cooperation with its less than capable neighbour can only be understood in the context of its expectations for Belarus in a wartime situation: the main role of Belarus is to provide depth for manoeuvre warfare, push conflict as far as possible from Russia’s borders and, with the support of Russian forces, close the Suwałki corridor. Any Belarusian combat operations will be conducted in close cooperation with Russia.

The dismantling of the Belarusian Ground Forces Command in 2011-12 and the creation of the RGF means that all Belarusian wartime ground operations will be planned in Moscow

<sup>68</sup> “Belarus - Average consumer prices inflation rate,” Knoema.

<sup>69</sup> “SIPRI Military Expenditure Database,” Stockholm International Peace Research Institute.

<sup>70</sup> Interview with Michael Kofman. For further information on the PPP estimate see: Richard Connolly, “Russian Military Expenditure in Comparative Perspective: A Purchasing Power Parity Estimate,” CNA, October 2019



and commanded by a Russian general. Belarus does not organise exercises above the company or battalion level and has no experience in

*Moscow's eagerness for defence cooperation with its less than capable neighbour can only be understood in the context of its expectations for Belarus in a wartime situation*

conducting large-scale operations – its main source of knowledge and experience is the Russian-organised *Zapad* and *Union Shield* exercises. The BAF's subordination to Russia's armed forces through the RGF was apparent during the *Zapad* 2017 exercise, which saw various Belarusian units and subunits placed under the command of the 1<sup>st</sup> Guards Tank Army.<sup>71</sup>

In peacetime, the defence relationship seems more equal. The 140 defence activities between the two countries planned for 2020 is another good indicator of the fact that Russia is eager to further broaden and deepen defence integration with Belarus. In March 2021, the Belarusian and Russian Ministries of Defence agreed a five-year strategic partnership programme – the first time such a document has been signed.<sup>72</sup> There is no information as to what the programme includes, but it can be assumed that it contains measures to accelerate military integration.

*All Belarusian wartime ground operations will be planned in Moscow and commanded by a Russian general*

In the air domain, both countries signed an agreement in 2009 to create a Joint Regional Air Defence System, which became operational in 2016.<sup>73</sup> The agreement places Belarus' Air and Air Defence commander on the same level

<sup>71</sup> During *Zapad*-17, a Russian Colonel gave commands to Belarusian generals. Vaidas Saldžiūnas, „*Zapad*“ atakos ir atsitraukimai: kai kurios detalės – labai iškalbingos Skaitykite daugiau [Zapad attacks and retreats: some details are very eloquent],“ Delfi, 19 September 2017.

<sup>72</sup> „*Минобороны Беларуси и России подписали программу стратегического партнерства на 5 лет* [Defense Ministries of Belarus and Russia signed a strategic partnership program for 5 years],“ The Executive Committee of the Commonwealth of Independent States, 3 March 2021.

<sup>73</sup> It is also known as the Eastern-European Joint Regional Air Defence System.

as the commander of the Russian 6<sup>th</sup> Air and Air Defence Army (Western Military District), effectively subordinating the Belarusian air and air defence forces to the commander of Russia's Joint Strategic Command West during conflict. This makes the Belarusian air force an operational-level formation that can support theatre operations under Russian strategic command. All Belarusian

air defence assets are now an extension of Russia's air defence networks, allowing it to better monitor NATO air activity in the Baltic states, Poland, and Ukraine. At the same time, Russian aircraft can use Belarusian airspace to conduct various air missions, from monitoring, through reconnaissance to combat.<sup>74</sup>

*All Belarusian air defence assets are now an extension of Russia's air defence networks*

It was further announced in April 2021 that Russian and Belarusian air defence units will, starting from the summer, conduct joint combat duties at one of the Belarusian air bases.<sup>75</sup> Meanwhile, the Belarusian air base in Bobruysk is dedicated to hosting Russian combat and logistics aircraft. These developments may mark the end of a several-year long saga during which Minsk remained immune to Russian pressure to allow it to station combat aircraft and other assets on Belarusian territory. Although at present, press releases only indicate “joint combat duty”, it is probable that the VKS presence will grow and may ultimately take the form of a permanent or rotational deployment of Russian air and air defence units to Belarus.<sup>76</sup>

Russia has not, so far, deployed strategic bomber aircraft to Belarus. If it did, it would

<sup>74</sup> As evidenced during the Slavic Brotherhood 2021 exercise. Konrad Muzyka, “Slavic Brotherhood.”

<sup>75</sup> “*ВВС и ПВО РФ и Беларуси летом приступят к совместному дежурству на белорусском аэродроме* [The Air Force and Air Defence of the Russian Federation and Belarus will begin joint duty at a Belarusian airfield in the summer],“ Belta, 15 April 2021

<sup>76</sup> Russian aircraft were previously deployed to Belarus between December 2013 and May 2015. In the early days of the conflict in Crimea, Russia also deployed additional aircraft to Belarus, which among others included six Su-27SM3 and an A-50 AWACS aircraft. “*Снова о российской авиабазе в Беларуси* [Again about the Russian airbase in Belarus],“ Belarus Security Blog, 5 March 2021.

likely take the form of a short, PR visit only, highlighting the special nature of the Russian-Belarusian relationship and the continuous threat that Russia wants to be seen to pose to NATO.

Apart from these visible and very public developments, there has also been integration to enhance Belarusian support for Russian military operations against NATO. For Russia, Belarus' key strength is its ability to host and provide for a large-scale Russian presence on its territory. Indeed, there are around 30 storage facilities in bases in Belarus ready to be used by Russia even before a conflict breaks out, reducing the logistical trace and footprint and increasing the readiness of Russian combat and support units. In 2016, an agreement on the "joint technical support of the regional grouping of troops (forces) of the Russian Federation and the Republic of Belarus", specified the ways in which Russia can use Belarusian storage bases before and during a conflict. It stipulates the readiness level at which military infrastructure that could

*For Russia, Belarus' key strength is its ability to host and provide for a large-scale Russian presence on its territory*

be used to support Russian and Belarusian units must be always maintained. Equipment and stock held within Belarusian storage bases are allocated to Belarusian and Russian elements of the RGF. This equipment and stock comes from the reserves of the Russian Armed Forces, who are responsible for accumulating and maintaining appropriate levels during peacetime. In periods of increased threat, equipment would be moved to Belarusian stationary material and technical bases, and in wartime used jointly by Belarusian and Russian combat and support units.<sup>77</sup>

<sup>77</sup> ["Соглашение между Правительством Российской Федерации и Правительством Республики Беларусь о совместном техническом обеспечении региональной группировки войск \(сил\) Российской Федерации и Республики Беларусь"](#) [Agreement between the Government of the Russian Federation and the Government of the Republic of Belarus on joint technical support of the regional grouping of troops (forces) of the Russian Federation and the Republic of Belarus], "Электронный фонд правовых и нормативно-технических документов" [Electronic repository of legal and normative-technical documents], 30 October 2017.

In a conflict with NATO, speed of mobilisation and strategic redeployment would be a key factor. To increase the speed of mobilisation, the Belarusian and Russian Ministries of Defence have made efforts to modernise the Belarusian rail network under the "development and improvement of a unified system of technical cover for regional railways" programme.<sup>78</sup> This initiative sought the creation of a joint development and maintenance system for regional rail lines to improve transport and

*The Belarusian and Russian Ministries of Defence have made efforts to modernise the Belarusian rail network*

mobilisation capacity. At the same time, Belarus has been modernising its rail lines to increase the average speed of passenger and cargo trains. Around 180-190 km of rail-lines have been upgraded each year, and a further 350-400 km subject to essential maintenance work.<sup>79</sup> In 2020 alone, approximately 260 km of tracks were renovated, 239 switches were replaced, and approximately 350 km of railway lines saw speed limits increased.<sup>80</sup> Trains travelling from Orsha (40 km from the Russian border) to Minsk, for example, can now achieve a maximum speed of 140 km/h and those from Minsk to Baranovichi, 120 km/h.<sup>81</sup>

Electrification is still at a relatively low level (around 25%) but in wartime, electric lines can be damaged, while diesel locomotives allow cargo to be moved without disruption.

## CONCLUSIONS

The BAF are constrained by underinvestment, low manning levels, and mostly Soviet-legacy hardware. In wartime, they can mobilise

<sup>78</sup> ["Программа «Развитие и совершенствование единой системы технического прикрытия железных дорог региона» на 2016-2020 гг](#) [The program 'development and improvement of a unified system of technical cover for regional railways' for 2016-2020], Information Analysis Portal of the Union State, 3 January 2016.

<sup>79</sup> ["Путь И Путьевое Хозяйство"](#) [Track and Track Facilities], Belarusian Railways.

<sup>80</sup> ["БЖД в 2020 году отремонтировала более 260 км пути"](#) [Belarusian Railways repaired more than 260 km of track in 2020], Belta, 8 January 2021

<sup>81</sup> The maximum speed for cargo trains on Belarusian rail lines is 80-90 km/h.

significant numbers of reservists to man existing units and generate additional units, but perhaps their most important contribution would be their ability to serve as a logistics hub and host nation to sustain the war effort of Russian Armed Forces on Belarusian territory. The ground forces, entirely part of the RGF alongside Russia's 1<sup>st</sup> Guards Tank Army, comprise four mechanised brigades that can deploy 8 tank (around 250 MBTs) and 14 mechanised (560 APCs/IFVs) battalions. The BAF could, in theory, commit this level of capability to combat operations in the first three months of a war. But because the brigades have current manning levels of 40-50%, only half-strength units would be available with a couple of weeks warning. In total, the ground forces have some 45 000 personnel, and around 1 200 MBTs and 3 400 APCs/IFVs scattered across active units and storage bases. It is highly unlikely that all are maintained in a state of readiness. Substantial logistical support and funds would be needed to modernise vehicles, remove them from storage and deploy them to front-line formations.

Air and air defence capability also lack modern combat assets, limiting the air force's potential not only to conduct operations on its own, but also to assist Russia. In peacetime, the AADC is a junior partner to the Russian VKS based in western Russia, and in wartime the command would be subordinated to Russia's

Joint Strategic Command 'West'. With only approximately 60 combat aircraft, of which just 15% are modern (Su-30SM and Yak-130), the air component would struggle to make a meaningful contribution to a Russian war effort. Russian air defence assets would also need to be moved to Belarus to improve the joint air defence posture.

Moscow's defence planning is key to understanding its desire to have close defence cooperation with Belarus. The main role of Belarus in wartime is to provide depth for manoeuvre warfare, push conflict as far as possible from Russia's borders and, with the support of Russian forces, close the Suwałki corridor. Any combat operations would be conducted in close cooperation with Russia.

Belarus is Russia's sole ally on its western border. The contested August 2020 presidential election has left Lukashenko ostracised and in desperate need of Russian support. This has come at all levels: political, economic, and military. In return, Belarus has increased its integration within the Union State and will continue to do so. On the military front, it seems to be a question of 'when' rather than 'if' Russia military will establish a permanent presence in Belarus. It is clear today that the BAF are already subordinated to their Russian counterparts and will follow orders from Moscow, not Minsk.

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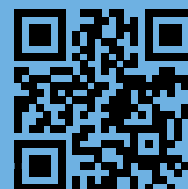
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