## Northern European and Transatlantic Security (NOTS)

# Latvia's Military Capability 2020

Jakob Gustafsson

Latvia's long history of Soviet occupation shapes its security and defence policy. Since regaining independence in 1991, Latvia has sought to establish itself as a Western liberal democracy, firmly integrated in Western structures and in the European security architecture. Its 2004 NATO accession and post-2008 economic turmoil led to a reduction of the Armed Forces and gave priority to out-of-area operations, as the threat from Russia was primarily seen as economic and political. Since 2014 and the expressed return of a territorial military threat, Latvia has markedly increased its defence spending, strengthened its land forces and developed allied support, including the eFP and an improved capability to receive further allied reinforcements.<sup>1</sup>

#### **SECURITY AND DEFENCE POLICY**

Since 2014, there has been political unity on the importance of increased defence spending and the allied presence in Latvia. Russia's annexation of Crimea served as a catalyst for a renewed focus on national defence, as opposed to the earlier era of expeditionary operations, although the latter was meant to ultimately secure allied support to Latvia in the case of threats from Russia.<sup>2</sup> The change of policy provided funding and implementation of defence reforms long in the making. Deterrence, both by increasing national military capabilities and by ensuring NATO presence on Latvian soil and adequate infrastructure to receive reinforcements, became the priority of Latvian security and defence policy. Now, apart from NATO and the bilateral Latvian-US relationship, Latvia also seeks close cooperation with the UK, its Baltic neighbours, Poland, Canada and Germany.<sup>3</sup>

The 2016 State Defence concept has guided Latvia's efforts to strengthen deterrence. It introduced Russia as the main threat and NATO as the cornerstone of Latvian security. In addition to strengthening NATO cohesion and collective defence capabilities, it gave priority to the

development of the land forces, including the sizable National Guard. Given Russia's demonstrated ability to launch military attacks at short notice, Latvia must be able to respond to threats rapidly. Additionally, infrastructure that facilitates the reception of NATO reinforcements and host nation support is vital. Reflecting Latvia's total defence aims, the concept underlines that national defence is the responsibility of every Latvian citizen and emphasises that Latvia can defend itself against a militarily superior aggressor.<sup>4</sup>

The State Defence concept was updated in 2020. In general, the new version confirms the direction from 2016, stating that increased Latvian military capabilities and the deployment of NATO's eFP battlegroup have enhanced deterrence. While the concept notes a limited US appetite for global engagements, the country remains Latvia's most important partner.<sup>5</sup>

Since 2014, Latvia has embarked upon a major reform of its land forces. The country has modernised equipment and improved manning levels, readiness and mobility, instead of markedly expandingforces. These priorities reflect Latvia's hesitant stance towards conscription as well as



<sup>1</sup> Chivvis, Christopher S. et al., *NATO's northeastern flank: Emerging opportunities for engagement*, (RAND, 2017), p. 152; Rostoks, Toms and Vanaga, Nora, 'Latvia's security and defence post-2014', *Journal on Baltic Security*, vol. 2, no. 2, 2016, p. 71–72.

<sup>2</sup> The social-democratic Harmony Party, popular among Latvia's roughly 25 per cent Russian-speaking minority, is an exception, but has never been part of government and its support has decreased since 2014. See Chivvis, et al., *NATO's northeastern flank*, p. 134–144; 156.

<sup>3</sup> Rostoks and Vanaga, 'Latvia's security', p. 72–74; and Vanaga, Nora, 'Latvia's defence strategy', in Vanaga, Nora and Rostoks, Toms (eds.), Deterring Russia in Europe: Defence strategies for neighbouring states (Abingdon: Routledge, 2019), p. 171–174; and Saeima, Nacionālās drošības koncepcija, 26 September 2019. For more details on Baltic cooperation, see chapter on Estonia.

<sup>4</sup> Saeima, Valsts aizsardzības koncepcija, 2016, p. 8–12.

<sup>5</sup> Latvian Ministry of Defence, Valsts aizsardzības koncepcija, 2020, p. 5-7; 20.

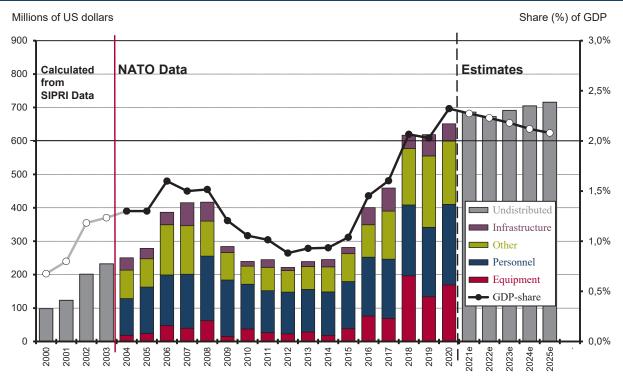


Figure: The military expenditures of Latvia 2000–2025: Millions of US Dollars/2015 prices (columns) and as share (%) of GDP (curved line)

**Source:** Bergstrand, Bengt-Göran, *NATO military expenditures*, Working Document (Stockholm: Swedish Defence Research Agency – FOI, October 2020).

NB: Estimates based on budget data for 2021 and on the assumption that Latvia will spend around 2.15% of GDP on defence in 2022 – 2025.

the assessment that there would not be time for large-scale mobilisation in case of conflict.<sup>6</sup>

#### MILITARY EXPENDITURES

There are large similarities in both the economic and military developments in the Baltic countries, Estonia, Latvia and Lithuania. The financial crisis in 2007–08 hit the three countries severely, with GDPs falling 15 to 20 per cent, leading to drastic cuts in government spending, including defence. The Russian aggression against Ukraine in 2014 compelled them to revise their policies and rapidly increase their military expenditures, and all three countries now allocate more than 2 per cent of their GDP to defence.

Latvian military expenditures have thus varied considerably since 2000. They rose sharply from USD 100 million in 2000, and a GDP share of 0.7 per cent, to USD 417 million in 2008, and a GDP share of 1.5 per cent; see

graph below. The expenditures were then drastically cut to USD 240 million in 2010, remaining roughly at this level up to 2014. The reductions had then lowered the GDP share to a level below 1 per cent, but the new increases raised the share to 2 percent in 2018, meaning that military expenditures – as illustrated by the graph – rose about 2.5 times, from USD 245 million in 2014 to USD 627 million in 2018. Importantly, much of the increase was used for equipment, marked with red in the graph, which rose tenfold, from USD 19 million in 2014 to USD 196 million in 2018. In 2019/20, Latvia used 24 per cent of its military expenditures of EUR 634 million for equipment purchases.<sup>7</sup>

In various policy documents, Latvia has made a commitment to spend 2 per cent of GDP on defence.<sup>8</sup> During the coming five years 2020/21–25, Latvian military expenditures are expected to continue to increase steadily, albeit at a less dramatic pace than they did during the noted years

— 2 —

<sup>6</sup> Szymański, Piotr, The multi-speed Baltic states: Reinforcing the defence capabilities of Lithuania, Latvia and Estonia (Warsaw: Centre for Eastern Studies, 2015), p. 14–15.

<sup>7</sup> Saeima, Nacionālās drošības koncepcija.

<sup>8</sup> Defence ministers from the three Baltic countries also issued a joint declaration in June 2020 that, even though they are suffering from the corona pandemic, they will maintain and not reduce their defence allocations. See Baltic Times, 'Baltic states commit to not reducing defence spending', Baltic Times, 16 June 2020.

2015–18. The projection of military expenditures for 2021 is based on Latvian defence budget data. With the decline in the GDP, caused by the corona pandemic, expenditure as share of GDP will increase to higher levels in 2020–2021. The projections for the following years are therefore based on the assumption that expenditures as a percentage of GDP will gradually decline during 2022–2025, and lie at a level which on average is comparable to the allocations made to defence before the outbreak of the coronavirus.

#### **ARMED FORCES**

The Latvian Armed Forces consist of the standing forces and the National Guard (*Zemessardze*). The former comprise the army's lightly mechanised brigade, the navy and the air force. The National Guard is part of the Armed Forces but mainly staffed by volunteers commanded and trained by army officers. Given the regular army's modest size, the four National Guard brigades are a vital part of Latvia's defence and Host Nation Support.

#### **Army**

The professional army brigade is stationed in Ādaži, about 25 kilometres northeast of Riga. Its 1500 soldiers are professionals, ensuring high readiness. It comprises two lightly mechanised battalions, a forming artillery battalion, a combat-support battalion and a combat service support battalion. The brigade has received most of the advanced equipment procured since 2014. This includes about 120 used but modernised CVR(T) armoured fighting vehicles (AFV) and 47 used M109A5 self-propelled howitzers. The brigade is establishing a third infantry battalion, manned mainly by National Guard soldiers. While the army reserves number some 3000, the number of units in relation to the number of soldiers suggests that there are vacancies to address.

The Canada-led eFP battlegroup, deployed to Latvia since 2017, is reportedly fully integrated into the mechanised brigade and an integral part of the national

defence plan.<sup>12</sup> As with the other eFP-units, the deployment primarily serves to increase deterrence and signal Alliance cohesion, but also contributes capabilities that the Latvian army lacks, most notably a handful of main battle tanks. However, as of 2017, a lack of adequate infrastructure has limited deployment options, for example of heavy artillery, for the eFP-battlegroup.<sup>13</sup> The Canada-led battlegroup is the most multinational, which could exacerbate issues related to national caveats. Additionally, the US rotates units to Latvia for training and deterrence, as part of its European deployments. As an example, in 2019 this included a detachment of 13 Black Hawk helicopters and 150 soldiers, and a subsequent deployment of 70 soldiers and 12 Abrams tanks.<sup>14</sup>

#### **National Guard**

Latvia is modernising and strengthening the combat readiness of the long underfunded National Guard and its 8350 soldiers. The structure, formerly built around three military districts, has been reorganised into four brigades with territorial areas of responsibility, more closely integrating the command and control of the regular army and the National Guard. Professional army officers lead and train the mainly volunteer soldiers, who go through three weeks of basic training upon entering service and then train for up to 30 days annually. Latvian officials stress that the National Guard is fully integrated with the Armed Forces, creating a force structure of a total of five brigades. Their headquarters are located in Riga, Valmiera, Rēzekne and Kuldiga.

From 2014 to 2018, Latvia spent EUR 70 million to finance more frequent exercises and improve the mobility, personal equipment and manning levels of the National Guard. Its core tasks remain territorial defence, delaying actions and protecting critical infrastructure. In line with the closer integration between the Army and the National Guard, professional units, including one combat-support battalion and one combat support company, are being

- 9 Latvian Ministry of Finance, 1.pielikums "2021., 2022. un 2023.gada valsts budžeta bāzes kopsavilkums", 2020.
- 10 International Institute for Strategic Studies IISS, The military balance 2020, p. 122.
- 11 Sargs, 'Zemessargs ar brūno bereti dienests jaunizveidotajā 3. kājnieku bataljonā', 27 February 2020.
- 12 Stoicescu, Kalev and Järvenpää, Pauli, Contemporary deterrence: Insights and lessons from enhanced Forward Presence (Tallinn: International Centre for Defence and Security, 2019), p. 8–9; and Rostoks, Toms, 'Latvia as a host nation', in Lanoszka, Alexander, Leuprecht, Christian and Moens, Alexander, Lessons from the Enhanced Forward Presence, 2017–2020, (NATO Defense College, November 2020), p. 56–58.
- 13 Szymański, *The multi-speed Baltic states*, p. 23. For a discussion on regional defence planning and NATO command and control arrangements for Baltic forces and eFP battlegroups, see the chapter on Estonia.
- 14 Andžāns, Māris, 'Latvian defence: Gradually advancing', in *Latvian foreign and security policy yearbook 2020* (Riga: Latvian Institute of International Affairs, 2020), p. 123. While the combat power of such deployments is negligible, the deterrent value of American presence is high. See chapter on the US for more details on its rotational presence in Europe.
- 15 Nikers, Olevs, 'Latvia strives to modernize its command and control', Jamestown Foundation, 4 April 2016.
- 16 Rebo, Eero, 'Cooperation with Latvia', Estonian defence forces yearbook 2017, 2018, p. 25.

created within the National Guard brigades, in strategically located areas in the country's east and north. These employ self-propelled howitzers, man-portable air defence missiles (FIM-92 Stinger) and anti-tank missiles (Spike). Additionally, the National Guard has developed 18 high-readiness units since 2015, which probably amounts to a company from each battalion. A personnel increase, to 12,000, was expected to follow the structural changes but has yet to materialise, suggesting that vacancies remain.<sup>17</sup>

#### Navy

The small navy consists of 500 sailors and is headquartered at Liepaja. It consists of a mine countermeasures squadron of five Alkmaar-class minehunters and a patrol boat squadron of five Skrunda-class vessels. The coast guard's six coastal patrol boats are part of the naval forces.<sup>18</sup>

#### **Air Force**

The Air Force consists of 500 airmen. <sup>19</sup> Lacking fighter jets, the Latvian Air Force's main task is air surveillance and securing allied reinforcements. Its capability to support the ground forces' mobility will improve in the coming years, as four Black Hawk helicopters are added to the handful of older transport airplanes and helicopters currently in use. <sup>20</sup> Since 2017, the Air Force has received sophisticated radars (TPS-77 and AN-MPQ-64F1) and new man-portable air defence systems (Stinger and updated RBS-70), increasing early warning and its capability to provide point defence, support ground forces and protect critical infrastructure. However, the lack of longer-range air defence remains a key vulnerability. Latvia, including its National Guard, exercises Close Air Support and Joint Terminal Attack Control with NATO allies such as the US. <sup>21</sup>

#### Personnel and materiel

Judging from the information in the IISS report, The Military Balance 2020, the Latvian Armed Forces have increased from 5310 active servicemen to 6900, including professional National Guardsmen, since 2014.22 The increase of some 1600 personnel is primarily driven by 'Joint Staff' personnel, which may explain why Latvia has not established a third professional infantry battalion or otherwise expanded the force structure, except for the nascent artillery battalion. However, the numbers do not show improvements in the readiness, availability and capabilities of existing personnel.<sup>23</sup> Officials assess that the Armed Forces could easily use 9000 active service members, but recruitment is hindered by demographics, emigration and private sector competition. Thus far, discussions on introducing conscription in order to remedy the recruitment problems have concluded that the costs would outweigh the benefits.

As part of the army brigade's mechanisation, Latvia has received and integrated the 47 M109A5 self-propelled howitzers procured in 2017, as well as the 123 modernised British CVR(T) tracked combat vehicles. Some CVR(T)s will field 30mm cannons and Spike anti-tank missiles. Latvia has ordered 82 additional CVR(T)s, to be modernised domestically. In 2020, Latvia procured the SitaWare Battle Management System, for frontline support to tactical commanders, a system also used by the US, Lithuania and Germany.

Additionally, Latvia has striven to secure ammunition stocks for its howitzers and anti-tank weapons, an improvement that is hindered by inadequate storage facilities. Equally, infrastructure and maintenance for the advanced equipment is lacking, as evidenced by the sending of CVR(T)s to the UK for repairs.<sup>26</sup> From 2019 to 2022, Latvia will spend EUR 50 million on infrastructure

<sup>17</sup> Zemessardze, 'Vidzemē uzsāk veidot profesionālā dienesta apakšvienības', 17 February 2020; and Szymański, Piotr and Gotkowska, Justyna, *The Baltic states' territorial defence forces in the face of hybrid threats, (Warsaw: Centre for Eastern Studies, 2015)*, p. 4, 8; and Rostoks and Vanaga, 'Latvia's Security and Defence Post-2014', p. 81–82.

<sup>18</sup> IISS, The military balance 2020, p. 122.

<sup>19</sup> Ibid., p. 123.

<sup>20</sup> Latvian Public Broadcasting, 'Latvia in line to buy four Black Hawk helicopters' 6 August 2018.

<sup>21</sup> Whitlock, Chase, 'Northern Strike - Joint training strikes Michigan', Citizen-Soldier, 24 October 2017.

<sup>22</sup> International Institute for Strategic Studies - IISS, The Military Balance 2015, 2015, p. 111; and IISS, The military balance 2020, p. 122.

<sup>23</sup> This kind of comparison might be misleading, as the source material may differ between years. NATO statistics, however, correspond well, showing an increase from 4600 to 6400 (professional National Guardsmen excluded) during the same period. However, the 2019 numbers are an estimate. See Andžāns, 'Latvian Defence', p. 122.

<sup>24</sup> LETA, 'NBS saņēmuši visas 2014. gadā parakstītajā līgumā paredzētās kāpurķēžu izlūkošanas mašīnas CVR(T)', Sargs.lv, 26 October 2020.

<sup>25</sup> Latvian Armed Forces, 'National Armed Forces sign command and control software supply contract', 20 January 2020.

<sup>26</sup> Andžāns, 'Latvian Defence', p. 121; and LETA/TBT Staff, 'Repairs of CVR(T)s supplied to Latvian Army Still Conducted in UK', *Baltic Times*, 4 November 2019; and Interview, April 2020.

**Table:** Personnel and materiel in the Latvian Armed Forces

Personnel/Materiel <sup>a</sup>	Numbers in 2020	Planned reforms towards 2024
Personnel		
Regular force	6000	8000 by 2024 <sup>b</sup>
Territorial defence forces	8350	10,000 by 2024 <sup>c</sup>
Reserves	3000	
Materiel		
Tanks		
Armoured combat vehicles	123 CVR(T)s (different versions).	82 additional CVR(T)s
Heavy artillery pieces	47 M109A5 23 K-53 (towed) 25 M120 mortars	
Attack helicopters		
Surface combatants		
Submarines		
Combat aircraft		
Transport aircraft	4 An-2 Colt 2 PZL Mi-2 Hoplite helicopters	4 Black Hawk helicopters
Air defence	24 L/70 (40mm) Man-portable: RBS-70, Stinger	

**NB**: **a**. Data, if not stated otherwise, is from IISS, *The military balance 2020*, p. 122--123, **b**. Latvian Ministry of Defence, *Valsts aizsardz bas koncepcija*, p. 24, **c**. Ibid. However, Latvia has struggled to meet previous goals.

annually. Latvia has prioritised the barracks, warehouses and maintenance facilities at Ādaži military base, where most of the professional soldiers and the eFP battlegroup are stationed. Other priorities include the facilitating of allied reinforcements, including changes to the reception capabilities at Lielvārde airbase, training areas and shooting ranges.<sup>27</sup>

#### ASSESSMENT OF MILITARY CAPABILITY

Overall, Latvia's trajectory towards modern and ready armed forces continues. The pivot from out-of-area operations to territorial defence, aimed at capable self-defence while awaiting NATO reinforcements, remains. The top priorities and challenges are likely to remain mechanisation, fully manning the army brigade, readiness and modernising the National Guard during the coming years. Additionally, infrastructure development is vital to accommodate the advanced equipment acquired and the

increased effort to deliver sufficient host-nation support to NATO allies.

Latvian planning includes scenarios that involve weeks of advance warning, but mainly presuppose that the time for preparations will be very short, perhaps 24 hours.<sup>28</sup> Given a week's notice, the two lightly mechanised battalions, a battery of self-propelled artillery from the still forming artillery battalion, and the towed artillery of the combat-support battalion should be available, in addition to the Canada-led eFP battlegroup. These are all stationed just north of Riga and primarily tasked with securing the capital during an invasion, while the invader's movement is delayed and disrupted by the National Guard. Although the newly procured howitzers and CVR(T) vehicles come with greater firepower and protection, Latvia still lacks sufficient amounts of protected vehicles, which reduces its capability for offensive and mobile actions.<sup>29</sup> In this, the eFP battlegroup could provide important mobility.

<sup>27</sup> Latvian Ministry of Defence, 'Latvia plans to invest the average of €50 million a year in the development of military infrastructure over the next four years', 26 February 2019; and Rostoks and Vanaga, 'Latvia's security and defence post-2014', p. 82. Host-nation support (HNS) refers to 'civil and military assistance rendered in peace, crisis, and war by a Host Nation to allied forces and NATO organisations, which are located on or in transit through the Host Nation's territory'.

<sup>28</sup> Interview, April 2020.

<sup>29</sup> This might be addressed through the joint programme, with Finland and Estonia, launched in 2020, in which the countries cooperate to develop a common armoured wheeled vehicle system from Patria 6x6 chassis. See Finnish Ministry of Defence, Estonia joins the development programme for sustained army mobility enhancement with Finland and Latvia, 6 April 2020.



Equally, as for all Baltic states, the lack of air defences is a key shortcoming that, apart from leaving army units vulnerable to aerial attack, makes allied reception infrastructure and ammunition depots vulnerable. All the Baltic states have procured artillery and armoured vehicles since 2014. Latvia has arguably opted for the least capable variations, but has on the other hand already received most of its equipment, which introduces firepower and ranges formerly unavailable.

Given the National Guard's territorial responsibility, an aggressor's line of advance determines which units are most relevant. Given a week's notice, its high-readiness units, potentially a company from each battalion, and parts of remaining units, should have time to mobilise and prepare for defence. Its main engineering capabilities, however, are concentrated to a battalion of the 2nd Brigade, which could be a vulnerability for succeeding with fortification and destruction in time. It is unclear how far along the recently created professional units are in their development, but their new indirect fire and anti-tank capabilities will constitute – when they are operational – a marked improvement. Nonetheless, its high-readiness units, specialised in mine-laying and engineering, should be able to contribute to the delaying of and infliction of losses on an enemy, especially in Latvia's densely forested north and east.<sup>30</sup> Additionally, these units can restrict an aggressor's freedom of movement and provide targeting for allied airpower.

The Navy and Air Force are primarily tasked with ensuring the arrival of allied reinforcements by keeping sea lines of communications and Lielvārde airbase open. Given a week's notice, the air defence battalion and at least parts of the mine countermeasures and patrol boats squadrons could be mustered, but their operational impact would likely be limited, albeit dependant on the nature of the aggression.

Within three months, the available units have become roughly the same, with the addition of fully mobilised National Guard brigades. The units' capabilities would also most certainly have improved, through an extended period of combat training and preparations.

During the coming years, Latvia is likely to fine-tune the reforms launched since 2014 by increasing personnel, adding infrastructure, developing maintenance capabilities for the equipment procured, and strengthening Host Nation Support. For example, Latvia will develop decentralised equipment andammunition storage that will contribute to more efficient mobilisation and reduce the vulnerability to long-range strikes.<sup>31</sup> Additionally, the recently launched armoured vehicle project is likely to provide the remaining battalions of the army brigade with appropriate transportation. However, the impact of the economic fallout of the coronavirus pandemic remains to be seen. Officials assess that future plans could be delayed a year or two, but also point out that recruitment could become easier.<sup>32</sup>

This memo is an extract from FOI's report Western Military Capability in Northern Europe 2020 – Part II: National Capabilities, FOI-R--5013--SE

<sup>30</sup> Nikers, Olevs, 'A year in review: Baltics steadily grow their armies', 18 January 2018.

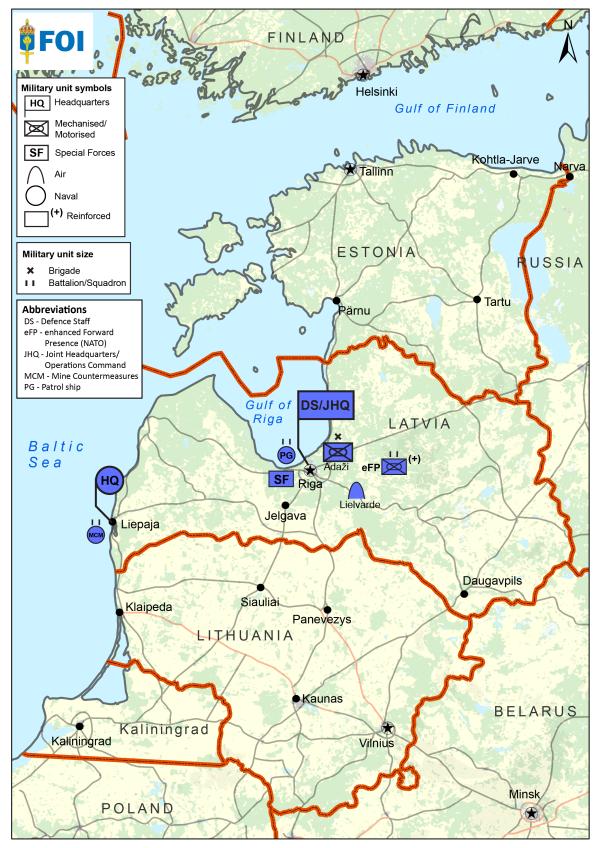
<sup>31</sup> Latvian Ministry of Defence, 'Latvia plans to invest the average of €50 million'.

<sup>32</sup> Interview, April 2020.

### Table: Force structure of the Latvian Armed Forces

	Organisation 2020 <sup>a</sup>	Planned reforms towards 2025	Assessment of forces available at short notice
Joint	Joint headquarters Special forces		
Army	1 Army headquarters 1 mechanised (light) brigade (2 mechanised (light) battalions 1 infantry battalion (forming) 1 artillery battalion (forming) 1 combat support battalion 1 combat service support battalion) <sup>b</sup> 4 national guard brigades (13 infantry battalions, combat-support battalions)		2 mechanised (light) battalions 1 combat-support battalion 1 self-propelled artillery battery  18 high-readiness companies, parts of remaining units
Navy	1 naval forces headquarters 1 mine countermeasures squadron 1 patrol boat squadron Coast guard		Parts of the mine countermeasures and patrol boat squadrons
Air Force	1 air force headquarters 1 transport squadron 1 air defence battalion 1 radar squadron		Air defence battalion

**NB**: **a.** If not stated otherwise, see IISS, *The military balance 2020*, p. 122–123, **b**. The support battalions are listed as HQs by IISS, but not by the Latvian Armed Forces and officials.



Map: Overview of Latvian armed forces and their basing

**NB:** Design by Per Wikström. The map covers only operational headquarters and manoeuvre forces.

#### References

- Andžāns, Māris. 'Latvian defence: Gradually advancing', in *Latvian Foreign and Security Policy Yearbook 2020*. Riga: Latvian Institute of International Affairs, 2020.
- Baltic Times. 'Baltic states commit to not reducing defence spending'. Baltic Times, 16 June 2020. https://www.baltictimes.com/baltic\_states\_commit\_to\_not\_reducing\_defense\_spending/. Accessed: 28 October 2020.
- Bergstrand, Bengt-Göran. *NATO military expenditures.* Working Document. Stockholm: Swedish Defence Research Agency (FOI), October 2020.
- Chivvis, Christopher S. et al. NATO's northeastern flank: Emerging opportunities for engagement. RAND, 2017.
- Finnish Ministry of Defence. 'Estonia joins the development programme for sustained army mobility enhancement with Finland and Latvia', 6 April 2020. https://www.defmin.fi/en/topical/press\_releases?588\_m=10264#38b8c304. Accessed: 1 October 2020.
- International Institute for Strategic Studies IISS. *The military balance* 2015. 2015.
- International Institute for Strategic Studies IISS. *The military Balance* 2020. 2020.
- Interview (by telephone), Riga, April 2020.
- Lanoszka, Alexander, Leuprecht, Christian and Moens, Alexander. Lessons from the Enhanced Forward Presence, 2017–2020. NATO Defense College, November 2020.
- Latvian Armed Forces. 'National Armed Forces sign command and control software supply contract', 20 January 2020. https://www.mod.gov.lv/en/news/national-armed-forces-sign-command-and-control-software-supply-contract. Accessed: 1 October 2020.
- Latvian Foreign and Security Policy Yearbook 2020. Riga: Latvian Institute of International Affairs, 2020.
- Latvian Ministry of Defence. 'Latvia plans to invest the average of €50 million a year in the development of military infrastructure over the next four years', 26 February 2019. https://www.mod.gov.lv/en/news/latvia-plans-invest-average-eu50-million-year-development-military-infrastructure-over-next. Accessed: 1 October 2020.
- Latvian Ministry of Defence. *Valsts aizsardzības koncepcija*. 2020. https://www.mod.gov.lv/sites/mod/files/document/AiM-VAK\_2020\_projekts.pdf. Accessed: 1 October 2020.
- Latvian Ministry of Finance. 1.pielikums "2021., 2022. un 2023.gada valsts budžeta bāzes kopsavilkums". Latvian Ministry of Finance, 2020. https://www.fm.gov.lv/lv/sadalas/valsts\_budzets/valsts\_budzeta\_izstrade/\_budzets2021/#izdevumuParskatisana. Accessed: 28 October 2020.
- Latvian Public Broadcasting. 'Latvia in line to buy four Black Hawk helicopters', 6 August 2018. https://eng.lsm.lv/article/society/defense/latvia-in-line-to-buy-four-black-hawk-helicopters.a287706/. Accessed: 1 October 2020.

- LETA. 'NBS saņēmuši visas 2014. gadā parakstītajā līgumā paredzētās kāpurķēžu izlūkošanas mašīnas CVR(T)'. *Sargs.lv*, 26 October 2020. https://www.sargs.lv/lv/tehnika-un-ekipejums/2020-10-26/nbs-sanemusi-visas-2014-gada-parakstitaja-liguma-paredzetas. Accessed: 2 November 2020.
- LETA/TBT Staff. 'Repairs of CVR(T)s supplied to Latvian Army still conducted in UK. *Baltic Times*, 4 November 2019. https://www.baltictimes.com/repairs\_of\_cvr\_t\_s\_supplied\_to\_latvian\_army\_still\_conducted\_in\_uk/. Accessed: 1 October 2020.
- Nikers, Olevs. 'Latvia strives to modernize its command and control'. *Jamestown Foundation*, 4 April 2016. https://jamestown.org/program/latvia-strives-to-modernize-its-command-and-control/. Accessed: 1 October 2020.
- Nikers, Olevs. 'A year in review: Baltics steadily grow their armies'. *Jamestown Foundation*, 18 January 2018. https://jamestown.org/ program/year-review-baltics-steadily-grow-armies/.
- Rebo, Eero. 'Cooperation with Latvia'. Estonian Defence Forces Yearbook 2017, 2018. Accessed: 1 October 2020.
- Rostoks, Toms. 'Latvia as a host nation', in Lanoszka, Alexander, Leuprecht, Christian and Moens, Alexander. *Lessons from the Enhanced Forward Presence*, 2017–2020. NATO Defense College, November 2020.
- Rostoks, Toms and Vanaga, Nora. 'Latvia's security and defence post-2014'. *Journal on Baltic Security.* Vol. 2, no. 2, 2016.
- Saeima. Valsts aizsardzības koncepcija. 2016. http://titania.saeima. lv/LIVS12/saeimalivs\_lmp.nsf/0/85B0D8DD6951FBCCC-2257FCD003C9E78?OpenDocument. Accessed: 1 October 2020.
- Saeima. *Nacionālās drošības koncepcija*. 26 September 2019. https://titania.saeima.lv/LIVS13/saeimalivs\_lmp.nsf/0/731B392A54C-331CCC22585DF0028C53C?OpenDocument. Accessed: 1 October 2020.
- Sargs. 'Zemessargs ar brūno bereti dienests jaunizveidotajā 3. kājnieku bataljonā', 27 February 2020. https://www.sargs.lv/lv/nbs/2020-02-27/zemessargs-ar-bruno-bereti-dienests-jaunizveidotaja-3-kajnieku-bataljona. Accessed: 1 October 2020.
- Stoicescu, Kalev and Järvenpää, Pauli. Contemporary deterrence: Insights and lessons from enhanced Forward Presence. Tallinn: International Centre for Defence and Security, 2019.
- Szymański, Piotr. The multi-speed Baltic states: Reinforcing the defence capabilities of Lithuania, Latvia and Estonia. Warsaw: Centre for Eastern Studies, 2015.
- Szymański, Piotr and Gotkowska, Justyna. The Baltic states' territorial defence forces in the face of hybrid threats. Warsaw: Centre for Eastern Studies, 2015.
- Vanaga, Nora. 'Latvia's defence strategy', in Vanaga, Nora and Rostoks, Toms (eds.). *Deterring Russia in Europe: Defence strategies for neighbouring states*. Abingdon: Routledge, 2019, p. 171-174.
- Vanaga, Nora and Rostoks, Toms (eds.). Deterring Russia in Europe: Defence strategies for neighbouring states. Abingdon: Routledge, 2019.

Whitlock, Chase. 'Northern Strike – Joint training strikes Michigan'. *Citizen-Soldier*, 24 October 2017. https://citizen-soldiermagazine.com/joint-training-strikes-michigan/. Accessed: 1 October 2020.

Zemessardze. Vidzemē uzsāk veidot profesionālā dienesta apakšvienības. 17 February 2020. https://www.zs.mil.lv/en/node/473. Accessed: 1 October 2020.