INFO FLASH
Finabel
The European Land Force Commanders Organisation

FINABEL - THE EUROPEAN LAND FORCE COMMANDERS ORGANISATION

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I. Introduction - The Estonian Model

The full-scale invasion of Ukraine in February 2022 sparked a renewed concern for Baltic security. Given the hard-earned independence process of Baltic countries, Russia's aggression and hostile rhetoric push Baltic countries to boost their defensive capabilities. Until 2022 (or the Annexation of Crimea in 2014), Baltic states have relied heavily upon ally stationing and hosting NATO troops in joint operations. However, with the full-scale invasion of Ukraine, the defence strategy of these countries quickly shifted towards increasing their offensive measures and modernising the current inventory.

While Baltic countries have always cooperated in many fields since their independence (Vaiksnoras, 2002), military spending requires national-level importance and adaptation. Between Latvia, Lithuania, and Estonia, the case of Estonia carries specific attention, as it is the smallest nation (population approx. 1.3 million) and has the highest GDP per capita. The economic advantage also pushes the Estonian Government to test different approaches to the concept of military strategy and be able to deliver better technological advancement to its units.

Estonia's approach to security presents an interesting case for the Baltic security framework. Unlike traditional firepower or manpower superiority, Estonia relies on a civil-military orientation strategy in which the concept of security expands in different domains (Karabeshkin, 2007). Like the Finnish model, Estonia applies mandatory military service to every male citizen after the age of 18, which enables the mobilisation of the nation as a reserve in case of war, even after military service is finished (Besch & Westgaard, 2024). The Estonian conscription system is also made-up of a part-time volunteer body, which is composed of citizens wishing to stay in the military after their service, and receiving military training for war or crisis management cases. Women can also be a part of the volunteer service under Naiskodukaitse (Women`s voluntary defence organization), taking different roles (Kaitseliit, n.d.)

However, the country's successful branding as an internet-intelligent nation also allows for the local development of technological domains in the defence sector, such as cybersecurity, AI or robotics (Jermalavičius & Hurt, 2021). The recent success of first-person view (herein FPV) drones, integration of cyber defence command chain and volunteer units with technological know-how are all part of this new "modernisation" process that this paper will discuss.

II. Current Strategy and Progress of the Estonian Defence Forces

The latest version of the Estonian national security concept, updated in 2023, defines the Russian Federation as the biggest threat to Estonia's national sovereignty (Ministry of Defence of Estonia (Kaitseministeerium), 2023, p. 6). Russia's invasion of Ukraine has significantly motivated Estonia to set clear national goals. The current strategy aims to guarantee security, but it also raised questions about societal balance, considering the proximity of the border and the number of ethnic Russians residing in Estonia. Therefore, the primary objective of Estonia is maintaining necessary territorial defence deterrence (Ministry of Defence of Estonia, 2023, p. 13) and ensuring social cohesion amid any external provocation (Ministry of Defence of Estonia, 2023, p. 6).

The current strategy is based on a 10-year plan to increase the Estonian Defence Forces' (EDF) defensive capabilities by 2031 (Ministry of Defence of Estonia, 2021). This strategy includes many improvements, from innovating the EDF with the latest technology to acquiring HIMARS and air-defence systems (Morwinsky et al., 2024). The projected size of this total modernisation is also reflected visibly in the military expenditure. Between 2021 and 2023, Estonia's military spending rose to €1.103 billion, standing close to the projected goal of 3% of GDP on military expenditure (Chmielewski & Tarociński, 2024).

Increased military spending covers a wide range of weapon systems overall. The 10-year plan that was established in 2021 as a precaution to possible invasion scenario includes replenishing Soviet-made AK-47s with newer MARS-L assault rifles (Estonia R20 variant), Harpy long-range loitering munition (LM) from Israeli contractors, and High Mobility Artillery Rocket System (HIMARS) from the US, which proved its effectiveness against the Russian units in Ukraine (Defense Security Cooperation Agency, 2022; Global Data, 2022; Gosselin-Malo, 2023). On land, the EDF mainly relies on the CV90 tank program, which proved to be a success for the EDF (Valpolini, 2024). In addition, the Estonian government announced the purchase of armoured personnel carriers (APC) from Turkish manufacturer Otokar to boost EDF's mobilised infantry (Malyasov, 2023).

Drones are another game-changer factor for the EDF. After the success of the "Drone Coalition" for Ukraine, local drone production has become a focal point for the trajectory of defence (Australian Government of Defence, 2024). As a member of this Coalition, Estonia aims to increase its production and knowledge, hence supplying the land units with a drone army of its own at a relatively cheap price (Skove, 2024). Local companies such as Threod Systems, Milrem and KrattWorks continue to work closely with the armed forces to deliver experimental tech in FPV drones and environmental superiority (Klementi, 2024; Rojoef, 2024).

III. Blended Model of Citizen-Professional Army

Estonia has been using mandatory military service for its citizens since 1991, ranging from eight to eleven months (Estonian Defence Forces, n.d.). Like its northern neighbour Finland, Estonia has developed a civil society that actively serves as a reserve force in case of a full-scale war. This approach creates a citizen-professional army model, considering the population of Estonia, where a significant percentage (80% since 2013) of the society supports the current military system and shows readiness to resist any aggression (Ministry of Defence of Estonia, 2020). According to Veebel and Ploom (2018), the "comprehensive" approach to national security stems from the examples of Georgia and Ukraine, in which territorial defence played an important role in Estonia's defining resilience and deterrence (p. 6). The comprehensive model explains security as a concept of peace where different levels of society (citizens, officials, companies) engage in power and peace together (Buzan, 1991, p. 26). Today, Estonia considers citizen-military engagement crucial for nonmilitary industry, civilian capacity and military strategy, reinforcing the Estonian identity and national security together (Binnendijk & Kepe, 2021, p. 77).

The best example of this civil engagement in Estonian society is the Kaitseliit (Estonian Defence League). Built on voluntary personnel, Kaitseliit is a national organisation under the EDF, as old as Estonia's independent history (SHAPE, 2018). Historically, Estonia (and, in general, Baltic states) had experience of forming volunteer guerilla divisions, such as Forest Brothers during the Soviet Occupation of Estonia (Morard, 2019). The country's constant struggle for national integration is a resonating concept that reimagines the EDF and Kaitseliit as the nation's backbone (Piirimäe, 2020). In light of this, the discourse of national survival and the need to "do more with less" introduced the concept of totaalkaitse (total defence), stemming from the old doctrine of using every means possible (Veebel et al., 2020, p. 3). Most recently, Estonia's approach resembles more of a mix of comprehensive and total approach that blends into maakaitse (land defence) rather than total defence, which Estonian officials name territoriaalkaitse (territorial defence) (Juurve, 2020). It incorporates the territorial entity of different fields (land, civil, cyber…) where the civil society blends into different tasks of land defence.

The case of civic engagement is bound to land defence and the armament of volunteers. This model highlights the importance of public and private actorness (Ministry of Defence of Estonia, 2017). From institutions to local startups, Estonians can be a part of the modernisation process without directly being involved in the Estonian Defence Forces. One example is the University of Tartu's engagement with local NGOs to produce camouflage and helmet nets for the Estonian Defence Forces and the Ukrainian army (University of Tartu, 2024). Private companies and startups such as Milrem and KrattWorks also cooperate with

the military, especially in cybersecurity and large-scale drone production, which is becoming a turning point for the Estonian Defence League (Skove, 2024).

IV. New Warfare Technology and Limitations

With the proliferation of the use of drones in the war in Ukraine, drone strategies started to have significant importance for European states. Estonia is among the nations planning a future drone-equipped division (Skove, 2024). Considering the relatively small size of Estonia, drone technology creates a valuable alternative to defend the territory and close the manpower shortage. Kaitseliit actively works on investing in drone/anti-drone training via material and personnel (ERR, 2023). A successful comprehensive approach to the military strategy also allows for private companies to test out new technologies and keep a close interest in the Estonian military (Sillasoo, 2024).

Apart from drones, cybersecurity and AI are major domains where Estonians are proud of their achievements. As one of the pioneers of digital society, Estonia ranks among the highest in global cybersecurity (International Telecommunication Union, 2021). Following the full-scale invasion of Ukraine, the government emphasised the need for modernisation in the cyber domain, ranging from deterring Distributed Denial of Service (DDoS) attacks to creating chain command centres for any organised cyber-attack on national infrastructure (Estonian Information System Authority, 2024). The 4-year plan published in 2014 stresses the importance of developing national cyber defence capabilities, hence building civil and military resilience against cyber-attacks (The Ministry of Economic Affairs and Communications, 2014).

Since 2022, Estonia's approach to cybersecurity has been a top priority following the increased cyber-attacks, which caused Estonia to build cyber deterrence alongside resilience nationwide (Kuik, 2023). Currently, Estonia hosts the NATO Cooperative Cyber Defence Centre of Excellence, and a Cyber Defence Unit operates under Kaitseliit (Küber-Kaitseliit, Estonian Defence League's Cyber Unit), which helps with technical and human needs (Padar, 2019). This Cyber Defence Unit consists of the members of the Kaitseliit, with the aim of "responding to any threats arising from the development of information technology" (Kaska et al., 2013, p. 8).

Another crucial area of civil advancement is artificial intelligence. Estonia's government has rolled out several AI initiatives, including KrattAI, an AI-powered system designed to organise public sector services and enhance decision-making processes (e-Estonia, 2020). AI is also being leveraged in the defence sector by private companies and small-scale local startups. In defensive AI, Estonia uses a "civic" approach, where the military strategy is shared with public

initiatives via research institutions and volunteer groups (Jermalavičius, 2024, p. 159).

However, there are challenges to the complete overhaul and modernisation of the army. Estonia faces several limitations in modernising its military, especially regarding material provision and rapid production. Although the country has significantly increased its defence spending to 3% of GDP since 2022, there are gaps in equipping the armed forces (Chmielewski & Tarociński, 2024). Challenges remain in areas like overall capability in air defence and technological resilience against cyber threats, which have grown increasingly due to geopolitical tensions. In contrast to the modernisation and extension of the land forces, Estonia lacks air defence (Andžāns & Veebel, 2017). The current state of the army relies heavily on Allied assistance and stationing (mainly the United States) alongside the territorial forces (Lawrance, 2023). As for production, Estonia depends on NATO equipment since the country's industrial complex primarily targets cyber defence solutions and autonomous systems (Ministry of Defence of Estonia, n.d.).

In the cyber domain, DDoS attacks targeting critical infrastructure demonstrated vulnerabilities in Estonia's digital systems in 2007. Estonia has responded by ramping up cybersecurity measures, including the formation of a national strategy and specialized Red Teams to pre-empt attacks and conducting cybersecurity awareness campaigns (e-Estonia, 2024). On the drone development front, Estonia is working on enhancing its intelligence, surveillance, and reconnaissance (ISR) capabilities, though it still lags behind more advanced military powers. Budgetary constraints and the need for stronger collaboration with defence industries delay the progress in this area (Defence Industry Europe, 2023).

V. Conclusion - A Compact Army: Fundamentals for the Baltic Security?

The case of the comprehensive approach to modernisation in Estonia shows an example for other Baltic states to adopt more advanced solutions. On the one hand, the size and capacity limits push Estonians and other Baltic advisors to try out new technologies and quickly refurbish their existing units. On the other hand, this reflects the need for continuous Western assistance to defend a region that is highly subjected to the possibility of Russian aggression. Estonia provides an interesting approach by blending the concept of territorial defence into civil society, thus transforming the nation into a defence-conscious ally with high civil capabilities in the defence industry.

While the classic argumentation of army modernisation refers to a gradual transformation of some aspects by which the army envisions itself in terms of equipment and capacity in future state (Kamara, 2023), Estonians take modernisation at a societal level given the country's need to reflect on the Soviet past since the 1990s. This article has investigated

different domains of modernisation in Estonia, the integration of civil society with the military, and the future of advanced technology. The Estonian expertise on cybersecurity and the proliferation of AI defence marks the possible change in the Baltic security framework.

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