

Fortress Poland?

Uncertainty Remains as Strategic Defence Review Marks New Era for Weapons, Force Trade-Offs

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MSP0 2017 in Anticipation of the Technical Modernisation Plan Revision

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The upcoming 25th jubilee International Defence Industry Exhibition (MSP0) in Kielce will shine a spotlight on the recently completed Strategic Defence Review (SDR), which establishes an overall vision for Polish defence procurement priorities through 2032. The SDR offers up a robust response to the aggressive posture of the Russian Federation, which is seen as the main threat not only for Poland, but for NATO allies in the region. To counter Moscow, Poland aspires to at least double the size of its armed forces to 200,000 soldiers by 2025, and increase defence spending from 2.0% of gross domestic product (GDP) in 2018, to 2.2% of GDP in 2021 and 2.5% of GDP by 2030. This is not the start of a wild procurement rush, however. The development of military capabilities will be determined by a cost-effects

ratio of newly procured military hardware, and a national “fortress” concept, which links short- and medium- range air defence with offensive systems such as rocket and traditional artillery, attack helicopters, air-to-surface guided missiles, submarine-based cruise missiles, and anti-tank missiles. This fortress approach can be viewed as the Polish equivalent of the well-known Anti-Access Area-Denial (A2/AD) concepts now employed by a wide range of countries globally. These plans fit into a broader economic, demographic and political context, which will shape how much of the SDR is actually implemented and on what timeframe. That is because the recommendations come at a critical moment in Poland, which faces decreasing GDP growth and difficult demographic trends in the 2020s.

Although the SDR is a confidential document, analysis of the publicly available “Concept of Defence of the Republic of Poland,” and recent comments by Ministry of National Defence (MND) decision makers provide significant insight into the outlook for Polish defence procurement.

The Impact of the SDR on the Defence Procurement Priorities

Air and Missile Defence

Poland is on the cusp of potentially transformational air and missile defence (AMD) acquisitions. The SDR confirmed the importance of the AMD programmes, but recent MND comments may complicate any deals. The nation’s AMD requirements were originally enshrined in the bellwether medium-range Wisła programme and the short-range Narew systems planned under the 2013-2022 Technical Modernization Plan (TMP). While progress has been made, obstacles remain with regard to the implementation of the Wisła programme. The main issue is the US government’s reluctance to transfer key Patriot system technologies previously requested by the MND. On July 6, the MND signed a non-binding memorandum of intent (MoI) with the US Department of Defence for purchase

of the Patriot system. According to the MoI, the contract will be implemented in two phases. The first part, which could be signed by December 2017, would provide two Patriot batteries in the latest configuration with PAC-3 MSE missile and a network-centric Integrated Air and Missile Defence Battle Command System (IBCS). The second phase, signed by December 2018, would add up to six batteries with integrated SkyCeptor interceptor, a 360-degree active electronically scanned array (AESA) radar, based on Gallium Nitride (GaN) technology, and IBCS systems.

However, the recent memorandum does not resolve the problematic issues such as offsets and technology transfers. Furthermore, the MND has recently sharpened its stance on both subjects, threatening to cancel the deal if Poland’s requirements are not met. The hardening of Poland’s position should be seen as negotiation; nevertheless it will not help to swiftly complete

negotiations on the key modernisation programme for the Polish military. It is also worth mentioning that the MND is still considering the MEADS system as a reserve option, in case negotiations break down. Another alternative could see the merging of the Wisła and the Narew air defence programmes. Consequently, the contract for the Wisła system will most likely not be signed this year. This delay could negatively impact the implementation of the Narew initiative, which should be implemented based on the technologies acquired from the Wisła programme.

Of note, recent MND comments appeared to soften the hard line previously taken in Wisła negotiations. The tension between Poland’s goal of increasing long-term defence industrial capability and meeting near-term threats are likely to persist, however, and industry observers will be watching Wisła as a test case for the direction of future procurements.



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Surface-to-Surface Fires

In contrast to the air defence domain, the investment in surface-to-surface projects stands to significantly increase and proceed at a quickening pace. On 4 July, Polska Grupa Zbrojeniowa (PGZ) recommended Lockheed Martin’s offer as the preferred option for further talks on the squadron-level fire-module of multiple rocket launchers under the Homar programme. In addition, the MND is going to triple the number of procured launchers from the initial 56 systems to 164 launchers. Additionally, the SDR recommended an increase of the number of already procured Krab 155mm self-propelled tracked howitzers, Rak 120mm self-propelled mortar systems and suggests further development of the Kryl 155mm self-propelled wheels howitzer. If these recommendations are implemented, the army will substantially increase its firepower, which is one of the lessons learnt from Russia’s recent employment of artillery fires in Ukraine. Of note for foreign defence suppliers, the main beneficiary of the increased orders for artillery systems will be the local defence industry, specifically Huta Stalowa Wola (HSW), a subsidiary of PGZ, which is at the centre of Polish artillery systems production.

Attack Helicopters

The SDR also prioritised the procurement of attack helicopters. Consequently, the MoD will most likely kick off procurement for an attack helicopter under the Kruk programme by the end of the year. It is worth noting that the MND is going to substantially increase the number of procured attack helicopters from 32 to about 60-64 units, although there are indications which suggest that the final number may reach over 100. The attack helicopters will be armed with new anti-tank missiles with a 8-10 km range. As an interim solution, the MND will likely modernise its fleet of aging Soviet-era Mi-24 helicopters to sustain the basic rotor-wing capabilities of the Polish Armed Forces (PAF). The new utility helicopters will replace the current platforms according to their service exit schedule.



The MND's modernisation agenda is very ambitious. The ministry is interested in purchasing among others two squadrons of fifth-generation aircraft, four submarines armed with long-range cruise missiles, additional Kormoran II minehunters and various artillery systems.

Combat Aircraft

The MND is also interested in purchasing two squadrons of fifth-generation aircraft. According to Min. Tomasz Szatkowski, "The fifth-generation combat aircraft -- stealthy, modern, and networked -- is the future of the Polish Air Force." However, in parallel, the ministry is also considering procurement of another two squadrons of F-16s, either second-hand or new-build aircraft to replace obsolete Su-22 and aging MiG-29 aircraft. Consequently, the Air Force armed with modern aircraft and long-range precision missiles will be Poland's key deterrent factor.

Naval Domain

On the naval front, the SDR shifts Polish defence priorities to undersea capabilities. Four submarines armed with long-range cruise missiles will form the core of the Polish Navy, in addition to a few minehunter surface vessels. The MND will increase the navy's fleet of submarines by at least one, in addition to the original Orka programme procurements. This year, the MND is expected to select a foreign shipbuilder to begin exclusive negotiations. According to the MND's plans the first submarine should be delivered in 2025. However, the MND has decided to split the acquisition of submarines and cruise missiles. In contrast to the investment in the submarine fleet, the surface fleet will be

reduced to Kormoran II minehunters and some unmanned vessels. The Czapla patrol vessel and the Miecznik coastal defence vessel programmes have been cancelled, although some sources at MND claimed that both surface programmes have only been postponed until after 2026. The composition of the naval fleet being narrowed to submarines and minehunters only is in direct contrast to the "Strategic Concept of Poland's Maritime Safety" strategy prepared by the presidential National Security Bureau, which recommended the expansion of the surface fleet. The most surprising fact is a downgrading in priority of the Czapla programme, which would have been deployed to protect maritime energy access routes-- a key element of the government's energy diversification policy. The production of relatively simple patrol vessels in Polish shipyards could also have helped to revitalise the local shipyards consolidated by PGZ.

Land Forces

With regard to land forces, the MND envisions a sweeping modernisation effort. The MND has designs on the development and coproduction of a next-generation European main battle tank (MBT), together with European partners. However, due to the fact that future tanks could enter service by the 2030s, the MND is interested in buying at least 50 second-hand MBTs such as the Leopard 2A4 or the

2A5 variant. In the meantime, the current Polish MBTs, mainly the PT-91 Twardy and a number of T-72s will go through a confined modernisation, narrowed down mainly to the fire-control system and the ammunition. At the same time, additional Rosomak armoured personnel carriers (APC) will be procured in a new better-protected version than the current model. Finally, the long-delayed infantry fighting vehicle (IFV) programme will be initiated, but the army will buy fewer and better-protected IFVs than were initially planned. Moreover, both Land Forces and the Territorial Defence Forces will be widely equipped with various anti-tank systems ranging from simple, disposable, rocket-propelled grenades, to attack drones and sophisticated anti-tank guided missiles.

R&D

With an eye on developing a technological battlefield advantage, the SDR recommends the prioritisation of research and development (R&D) on directed-energy weapon systems, the next generation tank, long-range precision-guided ammunition, unmanned systems, and new sensors including radars and optoelectronics. In this context, it is worth mentioning that the MND is obliged by law to allocate 2.5% of its annual budget on R&D; consequently military research spending will at least double by 2032.

Between Assumptions & Reality

The publicly presented “Concept of Defence of the Republic of Poland” does not provide any financial data or benchmarks which would allow a thorough analysis of affordability. Assuming aggressive top-line budget growth, all of the above-mentioned procurements are potentially feasible, simply because defence spending will increase from 2% of GDP in 2018 to 2.5% of GDP by 2030 and beyond.

However, the economic growth assumptions underlying this forecast may be too rosy. The chart below compares a forecast based on the MND’s assumption with Avascent’s

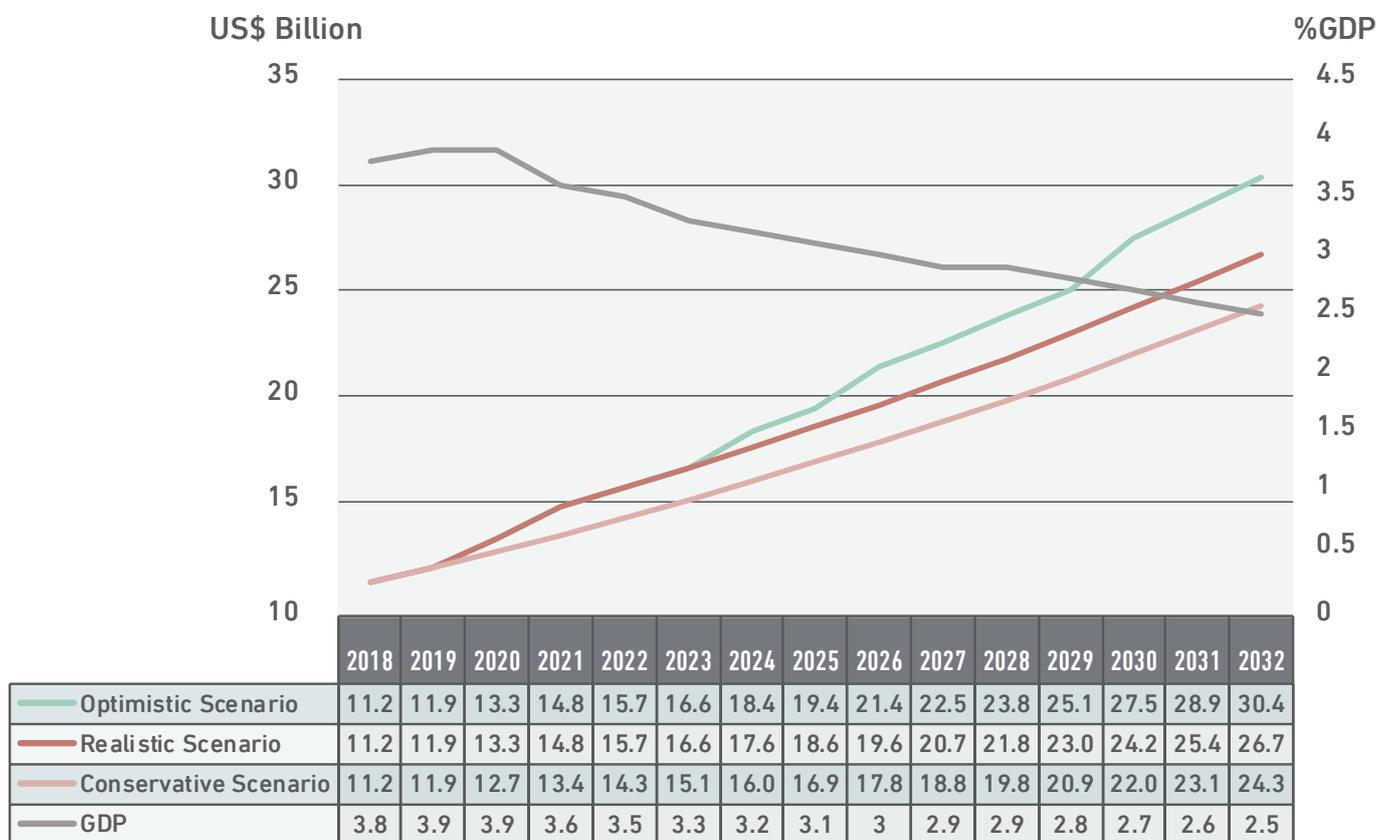
view of how “optimistic,” “realistic,” and “conservative” scenarios may materialize.

Under the optimistic scenario’s forecast, cumulative total spending from 2018 to 2032 is projected to be \$301 billion. Taking into account that defence investments, including R&D, will be allocated at 27.5%¹ of the total defence budget, then the cumulative value of defence investments will almost reach \$83 billion by 2032.

But in the upcoming years, the Polish economy will struggle with slowing GDP growth and two negative demographic factors. Poland is the fastest aging society within the European Union, which will cause substantial

budget pressure on the healthcare system, the social assistance system, and the pension system. Furthermore, there is a growing workforce shortage. According to various estimates, the workforce shortage will reach about 1.5 million people by 2030², a trend that may thwart the aspiration to double the size of the armed forces. Another fiscal pressure comes from the likely need to improve the financial terms of service for military and civilian personnel in order to attract sufficient numbers of new recruits who will also be in strong demand from private employers also facing demographic pressures. Without an improved system of long-term incentives for personnel,

MND Budget Forecast Scenarios, 2018-2032

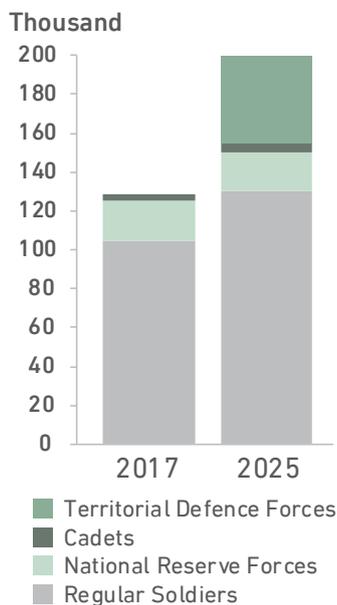


Sources: Avascent, GDP based on the Poland’s Ministry of Finance’s forecast

USD/PLN exchange rate 3.68

the army may have trouble filling even the current number of posts. As well, a larger military carries certain unavoidable costs, especially if it is to be militarily effective. Doubling the size of the PAF will lead to substantially higher spending on military infrastructure and operational and maintenance outlays. This risks cutting into spending allocated to hardware procurement.

Composition of Military Personnel 2017 & 2025

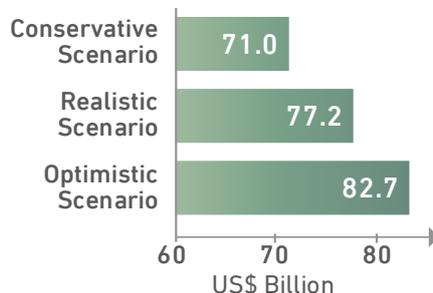


Source: MND

The realistic scenario forecasts that the government will not be able to allocate more than 2.2% of GDP on defence spending over the long term. In this case, total defence spending will reach \$281 billion by 2032, whereas defence investments will be \$77 billion.

However, if the macroeconomic situation were to deteriorate, for instance due to substantially lower transfers of EU funds or a global financial crisis, then the MND will have to substantially trim its modernisation expectations because it will not be able to allocate

Total Defence Investments 2018-2032



Source: Avascent analysis

more than 2% of GDP on defence. This possible scenario is captured by the conservative scenario. In this case, the MND's cumulative total spending is projected to be \$258 billion, while the total modernisation expenditures would reach \$71 billion by 2032.

Hard choices are inevitable, though they will vary in terms of the depth of the trade-offs. Even according to the conservative estimates, the level of total defence spending will at least double by 2032, while the level of defence investments will force the army to modernize at a level of about 100,000-120,000 troops. In this scenario, doubling the size of the PAF would likely force decision makers to make compromises regarding the scope and size of technical modernisation programs. Finally, it is also worth mentioning that Poland's inefficient defence procurement system is still badly in need of reform no matter the baseline economic forecast. Without a comprehensive and thorough overhaul of the government's defence acquisitions cadre, modernisation programmes will suffer continued delays. The Armament Inspectorate in its current structure and expertise is going to be hard pressed to efficiently and smoothly implement the procurement agenda envisioned by the SDR.

Ongoing Uncertainty

The SDR addresses most of the modernisation challenges of the Polish Armed Forces and their rapidly revised mission, which is a response to Russia's revived regional military ambitions. Turning the SDR's recommendations into reality will be difficult due to decreasing GDP growth and very unfavourable demographic trends in the late 2020s. In this sense, the coming decade presents the last window of opportunity for the MND and defence industry to modernise the Polish Armed Forces. Other political and bureaucratic pressures will likely curtail implementation of the full suite of SDR recommendations, as well. As an example, the presidential National Security Bureau has a dubious take on some of the recommendations regarding the new command structure of the PAF and the Navy's role. Additionally, every new minister of defence starts their tenure with a bias toward scepticism of their predecessor's modernisation plans and assumptions. Reading between the lines of the SDR, it becomes clear that there is plenty of uncertainty ahead for defence suppliers on the direction, cost and effectiveness of Poland's much-anticipated modernisation process.

- 1 An average defence investments allocation both in 2016 and 2017
- 2 Responsible Development Plan

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