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## Strategic Defence Analysis and Setting the Future Defence Strategy: A Comparison of the Czech Republic and Norway

### Strategická analýza obrany a nastavení budoucí strategie obrany: Srovnání České republiky a Norska

Josef Melichar, Fabian Baxa, Vladimír Vyklický, Josef Procházka

**Abstract:** The article brings a comparison of the approaches to the strategic defence analysis (SDA) and developing future Defence Concepts (DFDC) of the Czech Republic and Norway. The countries are in a different geopolitical situation, NOR being a country with borders that are part of the outer border of the Alliance, the Czech Republic being a country surrounded by three member countries of the Alliance and one PfP country. On the basis of the comparison of the two approaches, the authors identified differences and common points of the two. Based on the findings, the discussion provides inspiration for possible enhancements in the approach of the Czech Republic to SDA to ensure the future defence of the country. All that in context of current Security developments in Europe, that have an impact on how NATO member countries might deal with Article 3 and Article 5 of the Washington Treaty.

**Abstrakt:** Článek přináší srovnání přístupu ke strategické analýze obrany (SAO) a rozvoji budoucích koncepcí obrany (RBKO) České republiky a Norska. Státy jsou v odlišné geopolitické situaci, Norsko je státem s hranicemi, které jsou částí vnější hranice Aliance, České republiky je státem obklopeným třemi členskými zeměmi a jednou zemí, která je součástí programu Partnerství pro mír. Na základě srovnání těchto dvou přístupů autoři identifikovali rozdíly a společné body. Diskuse poskytuje inspiraci pro možná rozšíření v přístupu České republiky k SAO tak, aby byla v budoucnu zajištěna obrana země. To vše v kontextu vývoje současné bezpečnostní situace v Evropě, který má dopady na to, jak by mohly členské země NATO přistupovat k článku 3 a článku 5 Washingtonské smlouvy.

**Keywords:** Analysis; Capabilities; Defence Concept; Scenarios; Wargame.

**Klíčová slova:** Analýza; schopnosti; koncept obrany; scénáře; válečná hra.

## INTRODUCTION

The fluid nature of the security threats the modern state is facing requires sound, rigorous, and comprehensive planning for crisis and war under the pressure of profound insecurity. Therefore, in modern defence policy, formalized long-term planning is essential to make important organizational and policy decisions on reforms, investments, and acquisitions. Due to the deteriorating security environment, the debate on defence planning and its ability to adequately respond to new challenges is intensifying.

According to Henrik Breitenbauch and André Ken Jakobsson<sup>1</sup>, studying the preparation of the armed forces of tomorrow is arguably as important as studying the employment of the existing armed forces of today. To achieve credible deterrence and defence at reasonable and manageable costs requires a methodological framework, that can offer efficiency in planning.

NATO provides a framework<sup>2</sup> and methodology<sup>3</sup> for long term defence planning to the member countries and also offers frameworks for future defence considerations.

This paper is based on the outcome of a workshop held by the experts on long-term planning from Norway (NOR) and the Czech Republic (CZE) held in June 2022, where approaches to (SDA) and to the development of the future defence concepts (DFDC) were presented and discussed.

This article engages in the academic debate on defence planning by comparing these two approaches to SDA and DFDC. The authors compare the methodology of NOR and CZE that have been used to support strategic defence management and offer possibilities to apply best practice in SDA and DFDC.

NOR approach to conducting SDA and DFDC is being published with kind approval and owing to the contribution of Dr. Glaerum of Norwegian Defence and Research Establishment. CZE approach to conducting Strategic Defence Analysis and developing Future Defence Concepts is being published with kind approval and owing to the contribution of Dr. Baxa.

## 1 THE CONTEXT AND THE PROBLEM SETTING

In context of current developments of the security environment in Europe driven by the conflict in Ukraine, analyzing the status of defence and reviewing future defence concepts have become highly current and urgent topics for European governments.

<sup>1</sup> BREITENBAUCH, Henrik and André Ken JAKOBSSON. Defence planning as strategic fact: introduction. *Defence Studies* [online]. 2017, 18(3), 253-261 [cit. 2022-09-04]. ISSN 1470-2436. Available at: doi:10.1080/14702436.2018.1497443.

<sup>2</sup> NATO ACT, NATO Defence Planning Process (NDPP)

<sup>3</sup> NATO RTO, Handbook on Long Term Defence Planning, 2003, Ottawa, Canada ISBN 92-837-1088-3, available at: ADA414193.pdf (dtic.mil)

Since the beginning of the aggression of the Russian Federation in Ukraine, methodology of analyzing current status of defence and identifying possible ways to build a resilient and credible deterrence and defence is getting attention of most of the countries in Europe as well as on the North American continent.

As Paul K. Davis stated, the basis of well-crafted analysis is to start from reality and find or create relatively low-resolution analytical models that are appropriately parameterized.<sup>4</sup> The basic tenets of defence planning and analysis were expressed by Enthoven, the validity of which was confirmed by their reissue in 2005.<sup>5</sup> These tenets include:

- 1) Decisions should be based on explicit criteria of national interest and shared values, not on compromises between institutional forces.
- 2) Needs and costs should be considered simultaneously.
- 3) Major decisions should be made based on choices among explicit, balanced, and feasible alternatives.
- 4) The Ministry of Defence (MoD) should have an active analytical staff to provide relevant data and unbiased perspectives.
- 5) A multiyear force and financial plan should project the consequences of present decisions into the future.
- 6) Open and explicit analysis (including transparent data and assumptions) available to all parties, should form the basis for major decisions.<sup>6</sup>

Coherence and support of predictability, efficiency, and effectiveness are features expected from strategic planning and analysis. On the other hand, analytical methods must be able to take into account unexpected changes in their analyses. Researchers investigate them to avoid possible failures in strategic analyses. Davis<sup>7</sup> discusses analytical methods of planning under uncertainty in general but with regard to national security issues. Bracken et al. consider how to avoid strategic surprises in national security matters.<sup>8</sup>

According to Hrozenská et al<sup>9</sup>, a necessary condition for improving the defence planning system and achieving better defence results is to align the content of planning documents with realistic financial coverage expected for the defence department. The next step necessary to achieve better planning results is the creation of a unified

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<sup>4</sup> DAVIS, Paul K. *Capabilities for Joint Analysis in the Department of Defence: Rethinking Support for Strategic Analysis*. Santa Monica, Calif.: RAND Corporation, 2016. ISBN 978-0-8330-9548-0.

<sup>5</sup> DAVIS, Paul K. Defence planning when major changes are needed. *Defence Studies* [online]. 2017, 18(3), 374-390 [cit. 2022-09-06]. ISSN 1470-2436. Available at: doi:10.1080/14702436.2018.1497444.

<sup>6</sup> DAVIS, Paul K. Defence planning when major changes are needed. *Defence Studies* [online]. 2017, 18(3), 374-390 [cit. 2022-09-06]. ISSN 1470-2436. Available at: doi:10.1080/14702436.2018.1497444.

<sup>7</sup> DAVIS, Paul K. *Capabilities for Joint Analysis in the Department of Defence: Rethinking Support for Strategic Analysis*. Santa Monica, Calif.: RAND Corporation, 2016. ISBN 978-0-8330-9548-0.

<sup>8</sup> BRACKEN, Paul, Ian BREMMER a David GORDON. *Managing Strategic Surprise: Lessons from Risk Management and Risk Assessment*.

<sup>9</sup> Hrozenská, B., Cuník, M., Štepanovič, D., & Brezina, M. (2020). *Postupy obranného plánovania na Ministerstve obrany Slovenskej republiky: Rozvoj obrany – výzbroj, technika a materiál; komunikačné a informačné systémy* (2020 ed.). Slovak MoD.

catalogue of requirements for the development of capabilities needed to fulfil national defence tasks and international commitments.

According to Breitenbauch and Jakobsson<sup>10</sup>, academics can collaborate in this effort with practitioners who have experience with building defence strategy at the state bureaucracy level. Practitioners involved in research can bring into academic research a sense of reality, and thus enable merging reality with different academic approaches.

The identified problem is that countries have different approach to SDA and to DFDC. The authors focus in the article on differences in the above-mentioned approach between CZE and NOR. Both countries are NATO members; NOR makes part of the outer border of the Alliance; CZE is positioned inside the NATO territory. Since the end of WWII, the NOR MoD has been maintaining a strong analytical support function for decision making and solid institutional arrangements. The situation in the CZE MoD is rather different. After the defence sector transitions from cold war robust military to professional armed forces and in the same time by consuming a portion of peace dividend during the last tree decades, the analytical support function is relatively week and the institutional arrangements are subject to further consolidation. As a result, the Czech Republic lacks a standard system for conducting strategic analysis, including the implementation of various operational analyses using modern methods and supported by the appropriate software. Therefore, the quality of the results of the national defence planning process and the subsequent effectiveness of the development of the Czech Armed Forces are questionable.

## 2 RESEARCH DESIGN AND METHODOLOGY

The design of the research was based on a comparative analysis of the CZE and NOR approach to SDA and DFDC, looking for commonalities and differences. These are two relatively comparable countries. They face the same security challenges, but in different geographical locations and with different histories in the Alliance. Norway is a founder member. The Czech Republic became a member of the Alliance in 1999. Prior to 1990, the Czech Republic was part of the Eastern bloc.

During the workshop<sup>11</sup> in Brno Czech Republic 2022 the two approaches had been presented and discussed. Comparative analysis by selected criteria followed. Subsequently synthesis has been applied to draw conclusions and identify possibilities for future improvements to the current approach to SDA and methodology of CZE DFDC.

<sup>10</sup> BREITENBAUCH, Henrik and André Ken JAKOBSSON. Defence planning as strategic fact: introduction. *Defence Studies* [online]. 2017, 18(3), 253-261 [cit. 2022-09-04]. ISSN 1470-2436. Available at: doi:10.1080/14702436.2018.1497443.

<sup>11</sup> MELICHAR, Josef, BAXA, Fabian, PETRÁŠ, Zdeněk, VYKLICKÝ, Vladimír, GLAERUM, Sigurd. *Strategic defence analysis and setting the strategy*.

### 3 COMPARATIVE ANALYSIS OF THE CZE AND NOR METHODOLOGY

The analysis focused on the following criteria for comparison:

- Drivers of defence planning and decisions
- Defence concepts
- Force development concepts
- Application of the Armed Forces
- Analytical Support to Defence Planning and Decisions

#### 3.1 NOR Approach to Conducting Strategic Defence Analysis and Developing Future Defence Concepts

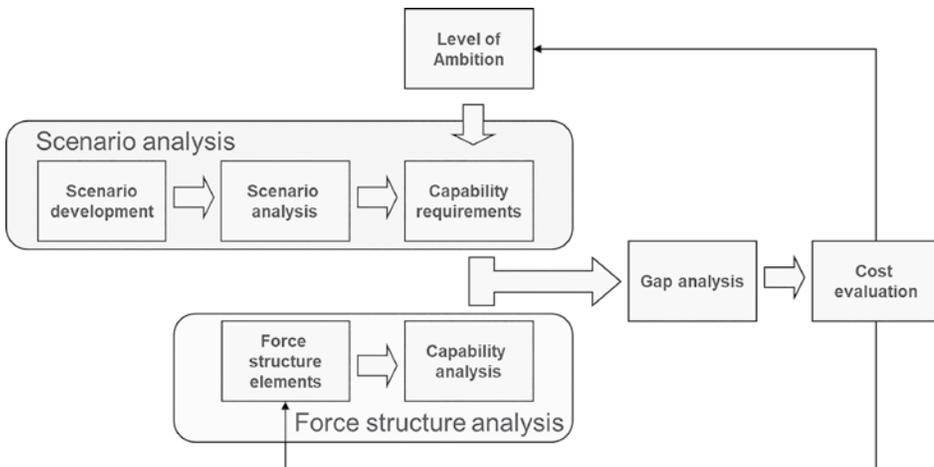
Norwegian approach to SDA and DFDC benefits from capabilities and experience of Norwegian Defence and Research Establishment (FFI) that supports MoD and Chief of Defence (CHOD) in conducting analyses of threats and challenges to Norwegian Security, conducting capability analysis, cost studies and concept development<sup>12</sup>.

There are two key aspects that drive the defence analysis and defence concepts development: relevance and affordability of the NOR Armed Forces.

Every four years, or based on the developments in the security environment (e.g., Russian activities in Ukraine – war in the neighbourhood of NATO), a review of the defence analysis is carried out. One of the main outputs of Defence analysis is a set of identified requirements that need to be met in order to ensure defence of the country.

During the defence analysis, several main steps are implemented: Scenario analysis, Force structure analysis, Gap analysis, and Cost evaluation (see Figure 1). Results may have an impact on the Level of Ambition so that decision makers can consider what scenarios can be handled and what scenarios cannot. For scenarios that cannot be handled, other solutions need to be identified and addressed.

<sup>12</sup> Sigurd Glaerum and Alf Christian Hennum. Analytical Support to Norwegian Long-Term Defence Planning. *Vojenské rozhledy – Czech Military Review*, 2016, 25 (Mimořádné číslo), pp 82-91. DOI: 10.3849/2336-2995.25.2016.05.082-091. ISSN 1210-3292 (print), 2336- 2995 (on-line). Available at: [www.vojenskerozhledy.cz](http://www.vojenskerozhledy.cz)



**Figure 1:** FFI's method for defence analysis  
Source: FFI

Defence analysis begins with the Security environment analysis to identify potential future challenges and missions (which enables developing scenario classes) and morphological analysis to identify mission types. For each mission type, there have been scenarios developed with specification of geography, threat parameters, concept of operation etc. The scenarios cover the challenges within each mission type. Scenario classes represent generic scenarios, and scenarios present scenario classes materialized in specific situation, geography, and conditions. The scenarios have to cover the challenges within each mission type. Another important factor that comes into play when identifying requirements is the Level of Ambition, which might be reconsidered if the requirements cannot be met and Security challenges are too high.

For developing scenario classes, morphological analysis has been used to provide answers to four questions related to four elements: Actor, Goal, Method, and Means (see Figure 2)

	ACTOR	GOAL	METHOD	MEANS	
• Purpose:	- Reduce complexity (2*3*9*6 = 324 solutions)	State	Regime change	Military control over all Norwegian territory	Large scale military forces
	- Extract meaningful definitions and categories	Non-state	Change of policies	Military control over part of Norwegian territory	Limited military forces
• Method:	- Identify consistent solutions: a) Logically consistent b) Empirically consistent		Other gains	Deny Norwegian or Allied military operations	Irregular forces
				Attack on civilian targets	Organized civilian group
• Result:	- Typology of security challenges			Show of Force	Sanctions
				Diplomacy	Economic resources
				Economic warfare	
				Offensive cyber ops	
			Influence ops		

**Figure 2:** Morphological matrix – example  
Source: FFI

Scenarios developed out of scenario classes represent defence tasks and span of Security challenges. Based on Scenario classes, scenarios have been developed for specific defence tasks. Scenarios are reviewed as required in a multidisciplinary effort. Scenarios are analyzed in a simplified Operations Planning Process with Course of Action (CoA) analysis, task decomposition, and task analysis. CoA analysis is implemented as a table-top exercise or using other methods to analyze and validate CoAs. During CoA analysis, there are considerations of scenario timelines, Allied reinforcements etc., the scenarios have been owned by FFI.

One of the major outputs of scenario analysis are Capability requirements as discussed as well in<sup>13</sup> and<sup>14</sup>. CoA selection in Strategic Assault scenarios is critical as it drives the majority of requirements. It enables developing assumptions on timelines and assumptions on Allied reinforcements. It is also a part of a concept development study at FFI. Scenario analysis is followed by Force structure analysis to analyze capabilities of Force Elements. For every Capability, there is a Yardstick established so that capabilities of each Force Element can be compared to the Yardstick Capabilities. This allows for comparing capabilities across different platforms and across services. This analysis is quantitative and uses military judgment, simulations, and calculations. The output of the Force structure analysis is an overview of capabilities of current and planned Force structure elements.

Comparing Capability requirements with Capabilities of the Armed Forces allows identifying Capability Gaps and Capability surpluses. When Capability gaps have been identified, cost analysis is being implemented to give the possibility to compare estimated costs with estimated budgets. As mentioned above, the results of defence analysis may lead to a reconsideration of the Level of Ambition.

The process of identifying requirements can be summarised in three steps:

- Security environment analysis to identify potential future challenges and missions, identify mission types using morphological analysis, and develop scenario classes that represent the scope of challenges.
- Defining scenarios for each mission type with specific geography, threat parameters, concept of operation etc.
- Appreciating the Level of Ambition to define what scenario classes and what scenarios the force structure should be able to handle and to allow considerations on combinations of simultaneous scenario classes/scenarios.

Scenarios are valuable elements in Norwegian Long-Term Defence Planning, scenarios make defence tasks concrete and quantifiable (capability requirements can be quantified, readiness requirements can be explicit), scenarios are joint and comprehensive (the

<sup>13</sup> PROCHÁZKA, Josef, MELICHAR, Josef. Methodological Framework for Capability Analysis. In: The XXIII. International Conference. The Knowledge-Based Organisation, Applied Technical Sciences and Advanced Military Technologies, Conference Proceedings 3. Sibiu, Rumunsko: Nicolae Balcescu Land Forces Academy Publishing House, 2017, s. 59-64. ISSN 2451-3113. ISBN 978-973-153-275-2. doi:10.1515/kbo-2017-0157

<sup>14</sup> MELICHAR, Josef. RÁMEC PRO PLÁNOVÁNÍ SCHOPNOSTÍ V PROSTŘEDÍ JEDNOTLIVÉHO STÁTU. In: Národná a medzinárodná bezpečnosť 2017. Slovensko, Liptovský Mikuláš: Akadémia ozbrojených síl generála Milana Rastislava Štefánika, 2017, s. 331-338. ISBN 978-80-8040-551-9.

NOR Armed Forces are measured against the entire scenario portfolio, capability requirements are not service specific). Scenarios offer a common framework for analyses at different levels (war gaming, acquisitions, technology studies, concept development) as discussed as well in<sup>15</sup>. The scenario portfolio is a flexible and dynamic tool and has been developed in cooperation with the Intelligence Service.

Force structure analysis is performed in two steps, review of Force structure elements and Capability analysis of each Force element. In the first step, all elements of the force structure are identified, including legacy units and platforms, planned acquisitions / replacements, and other potential future acquisitions.

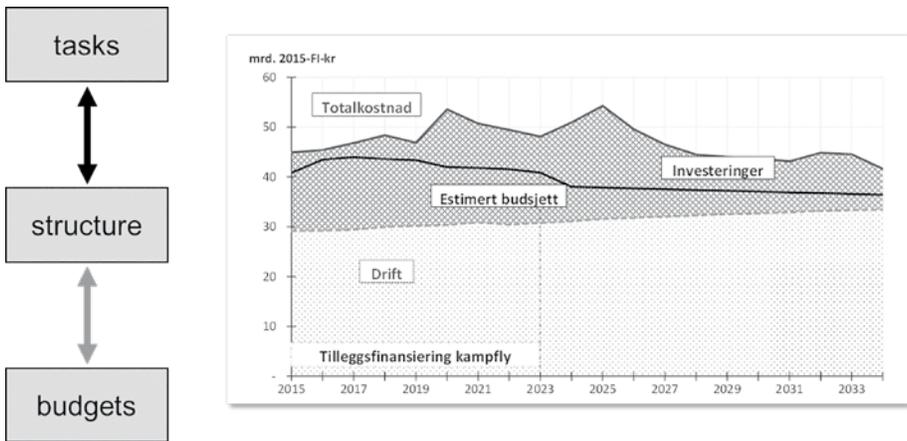
In the second step, capabilities of each element are being analyzed, and capacity of each element relative to yardstick / reference unit is assessed, rough assessment being produced. Furthermore, Life Cycle costs associated with each element are analyzed, producing rough estimates. Force structure analysis provides a possibility to perform quantitative capability analysis, however, it is challenging to assess capabilities across different platforms / units. Military judgement, simulations and calculations are being used in support of the analysis.

Multirolling and multitasking are being taken into account as well during Force structure analysis. Force structure analysis allows quantification of gaps and redundancies, allows for trade-offs across platforms and services, allows comparing 'apples and oranges'. It needs to be used with caution however, it allows only rough assessment of relative performance, it will in reality depend on type of scenario, weather conditions etc. Once the Capability requirements are identified and Force structure elements' capabilities assessed, a gap analysis can be performed. At this stage, the following elements are given: capability taxonomy, capability requirements, Level of Ambition (in terms of scenario classes and scenarios), current force structure development plans and force structure capabilities. Gap analysis produces quantified capability gaps and redundancies in the short, medium, and long term. Capability gaps represent a major analytical input into the NOR MoD's long-term planning. FFI uses J-Darts as a tool for implementing, running, and storing long-term planning analysis.

An important part of the process is cost analysis (see Figure 3) that includes all the lifetime aspects of the required capabilities. Cost analysis usually covers a long period of time reflecting the lifetime of the platforms. Conducting cost analysis over e.g. a 20 years timeline provides possibility to consider challenges related to future need to replace ageing capabilities or to planned future acquisitions.

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<sup>15</sup> MELICHAR, Josef. SCÉNÁŘE, TVORBA, VNITŘNÍ STRUKTURA, SCÉNÁŘE A BEZPEČNOSTNÍ HROZBY. *Vojenské rozhledy. (Czech Military Review.)*, 2017, 26 (58)(2), 18-32. ISSN 1210-3292. IF 0,100. doi:10.3849/2336-2995.26.2017.02.018-032.



**Figure 3:** Cost analysis – illustrative example

Source: FFI

There are considerations related to resource requirements necessary to run facilities, support personnel, and platforms. Increase in the prices of military equipment and estimated development of the defence budget are considered as well to identify potential future challenges.

The structured approach to long-term planning gives a few advantages; it is exploited to focus on capabilities instead of platforms, the analysis has a clear audit trail, it is repeatable, it points at problem areas in advance, and strategic trade-offs between different capabilities can be identified. Although this approach is very structured, it can lead to rigid thinking, tempting to accept this approach as the only approach to long-term defence planning. Thinking outside the box needs to be encouraged in order to find out if there are other ways to meet potential challenges. Thus, it is important to allow for a multidimensional approach to defence planning, encourage creativity, and challenge existing concepts. When using this approach, the focus should be on achieving balance between tasks, budgets, and force structure.

### 3.1.1 Concept Development

Concept development aims at achieving effective deterrence as one of the crucial defence concepts, the assumption being that the initial efforts must be handled by national Armed Forces. The deterrence presented as *‘Extended deterrence’* has three goals: denying the adversary to achieve his objectives, keeping the fight going, and providing support to the host nation. According to FFI, NOR focuses on operational deterrence, that is, denying the attacker the ability to achieve his operational objectives. This concept exploits the capabilities that can be used from distance, saving the force.

Concept development has been conducted as an interdisciplinary study, using war-gaming, tabletop discussions to test the force structure, explore new technologies, and

tactical concepts. Concept development results in number of potential defence concepts eg. strategic deterrence, Control, Tripwire, Operational deterrence etc., one of the concepts is taken as a lead concept and the rest are maintained as alternative defence concepts.

### 3.1.2 Strategic Defence Analysis

Strategic defence analysis was launched in 2021 as a project to advise the NOR CHOD on the strategic development of the NOR Armed Forces. The project output is an annual report, which comprises results of the research activities of FFI. A yearly report is produced as a classified report that informs on the Security environment, the status of the NOR Armed Forces, and brings selected strategic themes and specific advice based on the results of the analysis. Part of the project is a Project Advisory Board that meets four times a year and provides a place for strategic discussions. The content of the defence analysis comprises of scenarios, defence concepts, and strategic risk analysis, the main output being the Annual Report.

Part of the analysis is also program called „Tech Watch“ to monitor technological trends, identify promising technologies, and look at what concepts these technologies might make possible.

## 3.2 CZE Approach to Conducting Strategic Defence Analysis and Developing Future Defence Concepts

CZE approach to SDA and *DFDC lacks systemic, long term and comprehensive analytical support as well as* there is no analytical body, that would be providing analytical support to CZE MoD on regular basis. Analytical support is provided by researchers of CSMSS on an ad hoc bases by the requirements of CZE MoD and General Staff of the Army. Analytical support required by the MOD is provided usually during the development or during the update of strategic conceptual documents.

### **Purpose and Areas of Strategic Defence-Oriented Analysis**

Regarding strategic analysis itself, in accordance with the theory of management, analysis is considered as the first function of any planning, and planning as such is thought as the first function of management in general.

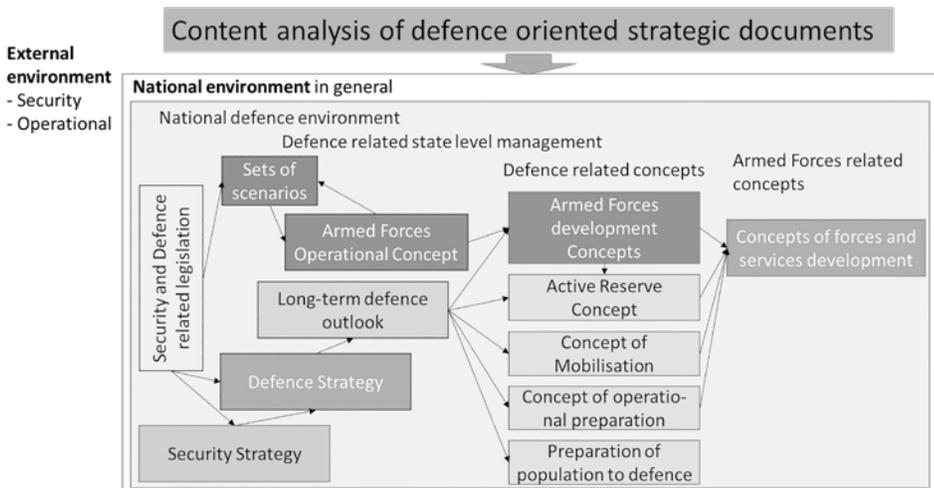
#### 3.2.1 Concept of defence of the Czech Republic

The concept of national defence planning is defined by Czech national legislation and is elaborated in a hierarchy of conceptual and strategic documents. These are published, among others, in the Capability Planning Methodology of the Ministry of Defence.<sup>16</sup> The basic planning document of the Ministry of Defence is Defence Minister Order (DMO) 66/2012 - Planning of activities and development in the Ministry of Defence. The Capability Planning Methodology in the Department of Defence defines the National Capability

<sup>16</sup> MO. 2021. Metodika plánování schopností v rezortu MO. Praha.

Planning Model. It describes the processes and sub-processes for planning, achieving, sustaining and sustaining capabilities.<sup>17</sup> This concept of defence, together with related legislation and the document hierarchy, is subject to internal analysis as well as external analysis. The external analysis is conducted at two levels, at which the defence as one of the state functions is analyzed among other state functions, analysis of the the intra-state environment, and international environment analysis. In all three cases (conceptual document analysis, intra-state environment analysis, international environment analysis), the current situation has been analyzed together with trends of current and possible future development in the intra-state and international environment.

Figure 4 illustrates the three levels of internal and external analysis together with the hierarchy of conceptual and strategic documents. These concepts and strategies are defence oriented, and they are divided into defence documents approved by the CZE Government and individual forces, services, and support of the CZE armed forces documents approved by the Chief of Defence. At the time of writing the article a new contribution to the existing family of defence concepts: ‚Future warfighting concept‘ was being in process of drafting and it is expected to provide a significant cornerstone to defence planning.



**Figure 4:** External Areas of strategic analysis of the defence at the Czech Republic level  
Source: CSMSS

The reason for this strategic analysis is to recognise whether the legislation and related documents cover current security and operational situation in the world with their trends satisfactorily and, if necessary, to aim and launch their regular or irregular revisions.

<sup>17</sup> Ibid, Ref. 15.

### 3.2.2 Analysis of the External Defence Environment

The analysis examines information from international and national sources (NATO, EU, and partly other organisations of which CZE is a member). As far as national sources of information are concerned, valuable sources of information are intelligence services, universities and their research capacities, other ministries and their sources, together with national think tanks oriented on security issues. From the methodology point of view, external environment analysis takes advantage of factor analysis in PESTLE<sup>18</sup> structure and its' variants, as well as the PMESII system analysis with its PMESII-M<sup>19</sup> variant. Analytical teams during the external environment analysis address possible developments usually from 10 to 15 years into the future. To come up with reasonable outputs, analytical teams work with linear and non-linear extrapolation together with other prognostic methods (Trend Impact Analysis, Futures Wheel, Scenarios etc.)<sup>20</sup> and<sup>21</sup>. When working with scenarios, concurrency of scenarios has been considered, as well as an important factor for improving Strategic Defence Concepts. Results of external environment analyses provide inputs into capability planning that includes considerations of technological development's impact on capabilities.<sup>22</sup>

### 3.2.3 Internal Defence Environment Analysis

The functional analysis tool DOTMLPFI<sup>23</sup> is the most frequently used instrument and support tool<sup>24</sup>. Internal environment analysis works with peace and crisis time establishment in four categories such as C3 (Command, Control, and Communication), combat forces, support, and service support elements. Information for internal strategic analysis has been obtained from international sources, such as NATO country assessment and national government evaluation reports with similar documents elaborated by other state-level audit organisations, CZE MoD auditions and inspections, and internal Armed Forces analysis.

<sup>18</sup> PESTLE – Political, Economic, Social, Technological, Legal and Environmental.

<sup>19</sup> PMESII-M – Political, Military, Economic, Social, Information, Infrastructure and Military.

<sup>20</sup> MELICHAR, Josef. SCÉNÁŘE, TVORBA, VNITŘNÍ STRUKTURA, SCÉNÁŘE A BEZPEČNOSTNÍ HROZBY. *Vojenské rozhledy. (Czech Military Review.)*, 2017, 26 (58)(2), 18-32. ISSN 1210-3292. IF 0,100. doi:10.3849/2336-2995.26.2017.02.018-032

<sup>21</sup> FUČÍK, Jakub, MELICHAR, Josef, KOLKUS, Jaroslav, PROCHÁZKA, Josef. Military Technology Evolution Assessment under Growing Uncertainty and Complexity: Methodological Framework for Alternative Futures. In: *Proceedings of the 2017 International Conference on Military Technologies*. Piscataway, NJ 08854-4141 USA: Institute of Electrical and Electronics Engineers Inc., 2017, s. 682-689. ISBN 978-1-5386-1988-9. doi:10.1109/MILTECHS.2017.7988844

<sup>22</sup> FRANK, Libor, FUČÍK, Jakub, BAXA, Fabian, PROCHÁZKA, Josef. *Technological Development: Implications for the Capabilities of the Czech Armed Forces 2020*. [studie]. Brno: University of Defence, 2021, 26 p. ISBN 978-80-7582-377-9.

<sup>23</sup> Doctrine, Organization, Training, Material, Leadership, Personnel, Facilities and Interoperability.

<sup>24</sup> BAXA, Fabian, MELICHAR, Josef, PETRÁŠ, Zdeněk, PROCHÁZKA, Josef, PROCHÁZKA, Dalibor, MIČÁNEK, František. *Obranné plánování - plánování za nejistoty*. Praha: Ministerstvo obrany ČR, 2018. 139 s. ISBN 978-80-7278-710-4.

### 3.2.4 Defence Management Analysis

The defence management analysis is focused on completeness and sufficiency of responsibilities of ministries and state organisations to cover all present and possible future threats menacing contemporary and expected future state interests as well as common interests within international organisations, which is CZE a member state. Subject of the defence management analysis, i.a.w. the theory of systems, are also links and relations among elements of the state defence system at all levels. Therefore, distribution of responsibilities and if the responsibilities cover all defence related duties based in legislation, as well as conduct of the duties is a matter of the defence management analysis.

In addition to legislation, international and national laws and obligations with internal contracts are also subject to content analysis. The validity of obtained analytical results should be tested by other analytical methods, one of which might be a specific wargame. This method is possible to use to test the degree of preparation of the defence system of the entire country, including the preparation of related personnel together with existing documentation. Wargame is also suitable to test the validity of defence-oriented concepts and strategies, as well as suitability of selected concurrencies of scenarios.

### 3.2.5 Executive Elements Analysis

Necessarily, the strategic analysis of the state defence systems has also to be focused on the executive elements of this system. In the CZE, the defence system includes Armed Forces, central state bodies with ministries, and regional and local bodies responsible for carrying out defence-oriented measures. There are also selected commercial organisations, national or international, having legal obligations within the state defence system. There are as well companies from the defence industry and companies oriented on transport, logistics, medical services, Communication Information Systems, e.t.c.

Concerning the preparation of the Armed Forces, they are regularly tested via a series of a variety of exercises conducted at all levels, national and international. Analysis of the preparation of state bodies together with their regional and local partners to fulfil their defence-oriented responsibilities explores results from specific exercises. Concerning commercial organisations, the analysis of their preparation to satisfy their obligations is focused on the substantiality of signed contracts and the analysis of their economic and technological viability.

### 3.2.6 Resources Analysis

Important part of the strategic analysis of the state defence system is aimed at the availability of necessary resources in peace and during crises as experimentally tested

in<sup>25</sup> and<sup>26</sup>. The demographics of the Czech population and its part that is mentally and physically suitable for military service are analyzed. The specific subject to the analysis is the CZE Armed Forces in their peacetime size, which should be able to perform their peacetime tasks and can be supported by a budget with target of 2 % of GDP. From a long-term perspective, the CZE Armed Forces should be able to meet the distribution ratio of the defence budget as follows: 50 % mandatory costs, 30 % operational costs, and 20 % investments. Concerning the crisis-time size of the CZE Armed Forces, the numbers and availability of trained active reserves and the ability to build the CZE Armed Forces into their full size on time, with the necessary quality and quantity required by current and potential future armed conflicts, have also been analyzed.

Similarly, the ability of the Czech population to generate enough suitable personnel for the CZE Armed Forces to replace possible losses together with the ability of the CZE Armed Forces to prepare these personnel on time has also been analyzed.

The material resources necessary for the state defence system to create conditions for functioning during times of crisis are also subject to the strategic analysis. This analysis includes the sufficiency of resources together with the necessary raw materials and infrastructure for the required activities of the CZE Armed Forces, minimal functionality of the state bodies at all levels, the protection of population, and the necessary functionality of the economy including industry, mainly a defence-oriented sector.

## 4 COMPARATIVE ANALYSIS – FINDINGS

A comparison of selected parameters is presented in Table 1 to bring a comparative picture of possible approaches to SDA and DFDC in context of the Alliance Defence architecture and principle of Collective defence.

**Table 1:** Comparison of selected parameters

Source: CSMSS

Comparison	Norway	Czech Republic
Major geo-political data		
Land total	385 155 km <sup>2</sup>	78 866 km <sup>2</sup>
Population	5 488 984 <sup>[2]</sup> (2022)	10 526 937 (2022) <sup>[2]</sup>

<sup>25</sup> HODICKÝ, Jan, PROCHÁZKA, Dalibor, BAXA, Fabian, MELICHAR, Josef, KŘÍŽEK, Petr, KREJČÍK, Milan, MAREK, Milan. *Analytická válečná hra - experimentální ověření konceptu*. [studie]. Brno, Univerzita obrany: 2019, 54 s.

<sup>26</sup> HODICKÝ, Jan, PROCHÁZKA, Dalibor, BAXA, Fabian, MELICHAR, Josef, KREJČÍK, Milan, KŘÍŽEK, Petr, STODOLA, Petr, DROZD, Jan. Computer Assisted Wargame for Military Capability-Based Planning. *Entropy*, 2020, 22(8), 861. ISSN 1099-4300. IF 2,524. doi:10.3390/e22080861

Geopolitical status	Alliance member state with outer border of the Alliance.	Alliance member bordering other Alliance member states.
Drivers of defence planning and decisions		
Threat and vulnerability perceptions	Based on geo-political position (threat next door)	Geo-political position perceived as guarantee of <i>collective</i> security (surrounded by member countries)
Competition	Challenge for national interests	Challenge for economic sustainability (EU policy vs. National interests)
Economy	Supports defence planning and decisions	Economy drives defence planning and decisions
Defence concepts		
Focus of Defence planning	Capabilities for own Defence	Capability Targets for NATO
Defence orientation (Collective defence, National defence)	National defence has priority	National defence is based strongly on Collective defence
Defence concepts	Number of own defence concepts linked to Collective defence concept and strategy	Collective defence concept prevailing
Prioritised defence concepts	Operational Deterrence	Collective Defence
Force development concepts		
Force development planning	Capability based	In majority driven by available defence budget
Major driver of force development planning	National interests	Collective defence (Capability targets)
Application of the Armed forces		
Operational tasks	Armed Forces applied to operational tasks	Armed Forces applied to operational tasks
Non-operational tasks	No application of the armed forces (designed for war)	Armed forces applied to non-operational tasks, support of the Armed forces to the Integrated Rescue System based in Legal architecture
Analytical support to defence planning and decisions		
Concept of analytical support	Analytical support provided by FFI	Analytical support provided by ad-hoc built teams on demand (personnel from CSMSS, General staff of the Armed forces and the MoD)
Exploiting scenarios	Routine	Not as a principal basis for strategic analyses and defence planning
Situations and tasks covered by scenarios	Operational situations and tasks	Non-Military Crises, Operational situations and tasks related to Collective Defence
Ownership of scenarios	FFI (fully developed scenarios)	MoD (outlined draft scenarios)
Exploiting wargaming	Routine, variety of wargames, long tradition of wargaming	No routine established, random use of seminar wargames with free rules
Exploiting software support	J-Darts	No SW models designed for defence planning

**Table 1:** presents a comparison of the two selected countries and indicates some major differences.

The CZE approach is predominantly driven by the collective defence as a mechanism to ensure protection of national interests. The elevated emphasis on Collective defence brings along as well other characteristics of CZE SDA and DFDC, steering defence planning onto Capability targets for NATO Collective defence, leaving behind building own defence concepts. Although the CZE Armed forces are designed for employment in operational situations, they have been so far employed regularly only during non-military crises (e.g., Disaster Relief Operations) in support of IRS<sup>27</sup> which is enshrined in CZE law.

Analytical support for CZE Defence planning and decision making is merely in its infancy. There are analytics exploited during defence planning, however, it lacks systemic approach, and there is no organization dedicated to long-term and comprehensive analytical support to defence planning and defence related decisions. CZE deals with this issue on ad hoc built expert teams consisting of the CSMSS researchers and the experts from respective sections of the CZE MoD. One of the shortcomings of the CZE approach is the high turnover of mostly military experts in the sections of the General Staff from which the experts are delegated. NOR exercises a long tradition in solid and well established analytical support to the NOR defence planning and decision making.

‘Operational Deterrence’ has been prioritized as NOR defence concept. NOR defence concepts are designed to defend national interests with Collective defence as a secondary customer for building capabilities. Collective defence and deterrence is prioritized CZE defence concept. NOR prioritizes national defence, CZE supports nearly solely Collective defence concept, building capabilities to meet Capability targets requirements.

NOR uses a NATO-developed software tool (J-Darts) for the defence planning purposes that can work with scenarios, mission types, Level of Ambition, force elements, generate requirements, generate/optimize force structure, while CZE during the time of conducting the study and drafting the article was not using any comprehensive analytical tool or specialised SW tools to support defence planning in a long term.

## 5 DISCUSSION AND RECOMMENDATIONS

The defence of the country and related tasks are predominantly dedicated to the Armed Forces that are designed to deal with operational issues and with the Armed Forces of potential opponents. In preparation for possible future developments and security crises that require use of military instrument of power to defend national interests, analyses, scenarios, and wargaming have proven to be valuable and indispensable elements.

Analytical support to defence planning has a long history in NOR and has been provided by a dedicated organisation (FFI). In CZE CSMSS owns limited analytical capability and stands on three pillars: education, research, and expert advice. In CZE there is no comprehensive analytical architecture to support defence planning, while in NOR this has been provided by FFI. FFI’s analytical support includes providing analyses, using

<sup>27</sup> IRS – Integrated Rescue System

analytical software tools, exploiting scenarios, and wargaming. CSMSS's analytical support represents providing security environment and operational environment analyses on an annual basis, strategic document analyses, participation in Armed forces analyses, on Armed forces development concept, Future warfighting concept, Capability planning concept, and other conceptual documents. Based on the three pillar architecture of CSMSS, the defence planning support efforts are fragmented and do not ensure comprehensive lasting and personnel - backed analytical capability.

Scenarios used in support of development of the NOR Armed Forces are based on security environment analysis and defence tasks that are supposed to be executed by the Armed Forces. These scenarios describe situations that are related to the defence of the country, FFI as the owner of scenarios does not exploit non-military crises (e.g. natural disasters, migration crisis etc.) for developing scenarios. Scenarios for expected employment of Armed forces used within the CZE MoD cover also non-military crises, and the CZE Armed Forces are employed in support of the CZE Ministry of Interior (Mol) during these crises. This means that elements of combat units and Military Police generally contribute to executing specific tasks during non-military crises that impact the level of combat training and combat readiness of units. CZE Scenarios are non-elaborated outline scenarios.

Wargaming as a tool for analysing potential military crises, generating capability requirements, enabling discovery of own weaknesses, saving resources (human, materiel, and financial), and preventing mistakes and failures in real conflicts has been firmly incorporated in the FFI's analytical toolbox. Wargaming in CZE is in its infancy and requires a strong and sustained effort to bring it to the comprehensive level that will bring benefits to CZE defence planning and to the Armed Forces.

The comparison of the two approaches leads to the following recommendations:

- Create or dedicate an organization or part of it solely to providing full-scale analytical support to the MoD (e.g., Analytical department within CSMSS);
- Build a Wargaming capability within the General Staff and the CZE CSMSS as a part of its analytical capability;
- Build up and exploit the force and cost modelling and simulation capabilities of the CZE MoD and General Staff, supported by Training Command – Military Academy (TC-MA) for building comprehensive analytical capability to include analyses, wargaming, and modelling&simulation, all that within the overall defence planning system;
- Consider acquiring J-Darts as an option to enhance TC-MA's modelling&simulation capability;
- Design wargaming courses for strategic and operational levels and incorporate wargaming into career courses.

## CONCLUSION

The comparison was carried out using five broad criteria (drivers of defence planning and decisions, defence concepts, force development concepts, application of the Armed

forces, and analytical support to defence planning and decisions) pointing out following most significant differences.

NOR places at first place national defence that is nested in context of collective defence while CZE designs national defence primarily by the concept of collective defence and deterrence, which indicates that it may lead to over-relying on collective defence and weakening own national defence.

The NOR force development concept is capability – based and related to national defence, while the CZE force development concept is centred around capability targets for NATO's collective defence being significantly budget-driven.

NOR uses for non-military crises their Home Guard that is available through the mobilization process, combat force is designed and applied only to operational. NOR combat forces can, however, provide capabilities during non-military crises if they are suitable and available. CZE applies the Armed forces to non-military crises as a support to CZE IRS.

NOR exploits FFI as an institution dedicated to analytical support to the MoD with long – standing and comprehensive analytical capabilities. CZE has CSMSS as part of CZE Defence university that stands on three pillars: education, research and expert advice. CSMSS contributes on demand to ad-hoc designed working groups, providing analytical capability and expert advice. CSMSS support to the MoD is required in most cases during updating conceptual documents (Armed forces development concept, Capability planning concept etc.).

Improving and consolidating comprehensive analytical capability within CSMSS to include wargaming capability, and modelling&simulation capability appears to be one of the essential imperatives for improvement of defence planning effectiveness and efficiency.

The objective of the article was two-fold, to present the differences between NOR and CZE approach to SDA and DFDS, identify room for improvement for CZE, and to provoke a discussion about presented topics. If the discussions take place, the objective has been achieved.

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**Authors:** ***Josef Melichar, PhD**, born 1962. A graduate of the Military Academy Brno (1980–1985). He is also a graduate of Logistic Executive Development Course (LEDC) - Fort Lee (USA) and several courses related to Operations planning, Psychological Operations, Information Operations and CIMIC in Oberammergau (Germany). He worked in commanding, management and staff positions. He has participated in military operations in Bosnia and Herzegovina, Kosovo, Afghanistan, the Republic of Chad and the Central African Republic, and Iraq. He worked as a national representative at AFNORTH (Brunssum, the Netherlands) from 2002 to 2005 and from 2009 to 2012 as a specialist for psychological operations and operations assessment at JFC Brunssum. He currently works at the CSMSS – Defence University as a researcher focusing on wargaming, prognostics and risk management.*

***Fabian Baxa, PhD**, born 1955. A graduate of Military Technical University in Liptovský Mikuláš (1979), postgraduate studies at Military academy in Brno (1990) and a State defence management course at the Defence University (2009). He worked on national and international positions in the area*

*of Armed Forces development and EW management. At CSMSS he was working in the area of strategic management, defence planning and capability planning. He is a co-author of three publications and author of a number of professional articles in national and international periodicals.*

**COL Vladimír Vyklický**, born 1965. Graduate of Military Academy (Brno). He was working in staff positions at General Staff of the Armed forces, throughout the Armed forces and at NATO positions. He was a Gestor of the Air traffic management and Radiotechnical forces. He was participating in drafting of several conceptual documents such as the White Book or the Army Development Concept 2030. Currently COL Vyklický works as a senior researcher at CSMSS.

**Assoc. prof. Josef Procházka, PhD**, born 1966. He is graduate of the Military Academy Brno (VAAZ), 1990–1996 he served with the troops in the field of technological and automobile support; 1996–1999 staff functions at the General Staff and the Ministry of Defence, line of work logistics and acquisition; 2000–2007 Institute for Strategic Studies (ISS) Brno; 2007–2011 Department of Defence Policy and Strategy, Ministry of Defence. From the year 2011, defence advisor to the Czech Permanent Delegation to NATO – sources and armaments. His military career was finished in 2007. Doctoral study programme management of state defence, he graduated from the University of Defence Brno in 2005. From 1999 till a 2004 he served in SFOR and EUFOR missions, at the region of Bosnia and Herzegovina; in 1995, 2002 and 2008 he was abroad, on short-term attachments on logistics, management sources, security policy. In 2005, General Staff Course, Brno. He is an author of publications and articles dealing with managements sources, defence planning, logistics and armaments. Josef procházka currently works as a Director of the Centre for Security and military strategic studies.

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