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Safety Risk Management Against Threat to Mission: The Business of the Operational Level

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The Business of the Operational Level**

Lieutenant-Commander Patrick Fournier

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SAFETY RISK MANAGEMENT AGAINST THREAT TO MISSION: THE BUSINESS OF THE OPERATIONAL LEVEL

AIM

1. The digitization trends observed throughout the Canadian Armed Forces (CAF) will inevitably lead to faster and more optimal decisions in support of mission objectives. On the other hand, these faster operational, or even strategic, decisions implemented in haste could lead to limited understanding of new risks to be accepted and managed at the tactical level once operations have commenced. Said new risk could potentially lead to unexpected unfavorable operational conditions requiring operational level intervention in a multi-domain environment of competing priorities if risks are not weighed commensurately to alternate options. The aim of this service paper is to identify an existing operational risk management gap that will become more prevalent and gain importance as the Forces' technological integration evolution occurs and speeds up the need for granular information and decisions. Recommendations to the Director of Diving Safety (D Dive S) will be provided concerning this specialty on how to standardise this risk management issue for future operation in a pan-domain environment, and a consideration to the Canadian Joint Operations Command (CJOC) regarding the management of safety risk vs mission threat information will be offered.

INTRODUCTION

2. The CAF has been implementing and continues to evolve its risk management system to always remain ahead of any known challenge. The Department of National Defence (DND) and many other agencies work together to ensure the utmost safest work environment possible for our personnel. It is a known fact that risk management has been operationalised to a very extensive level and has been proven quite efficient over the years. When it comes to Force Employment (FE), CJOC also implemented several procedures that ensure compliance with the National Defence Security Order and Directives (NDSOD). Through their Integrated Safety Risk Management teams, joint doctrine risk management has been fully developed for domestic and expeditionary situations tailored to missions. But what happens when risk ensuring Force Posturing & Readiness (FP&R), or new unplanned safety risk is assumed in response to a mission threat at the operational level?

3. The discussion will present the existence of an operational level risk management blind spot that will become increasingly prevalent as the CAF implements digitization for use in pan-domain operations. The demonstration will exploit CAF diving policy and best practices. Despite significant managed inherent and residual diving risk being accepted and layed out in CAF diving manuals and procedures, there exists a lack of standardised process in how risk and mission needs to be managed when carried out. With the impending CAF digitisations, aggregating risk and clear communication of these realities will need to be managed by the Operational Level in FE scenarios to optimise outcomes. This will ensure better-informed decisions in a digitally enabled pan-domain

environment, for all risks and threats decisions to be considered by the appropriate authorities and planning teams.

DISCUSSION

4. CAF policy clearly states intent to invest in digitization and pan-domain efficiency as found in strategic capstone documentation such as Strong Secure Engaged (SSE) and the Pan-Domain Force Employment Concept (PFEC). “Integration – across capabilities, domains, instruments of national power, and partners – is at the heart of how the CAF must operate;”¹ This also means an operational level requirement for an increased “temporal awareness” for an “increasing rate of change in the operating environment with immediate effects that lead to events that occur suddenly, develop rapidly, and progress in a non-linear manner.”² As experienced in the domestic operation of OP LASER 20-01, public affairs controls were kept at the highest levels of government in order to ensure the messaging received by the Canadian population, despite some being transmitted by the CAF, did not step out-of-line with the Government of Canada’s chosen narrative. This was a perfect display of a pan-domain prioritisation requirement that required the operational level (i.e., CJOC) keep the strategic institutions updated with near real time information on operations (OP LASER, OP VECTOR, and all other domestic employment in 2020). This goes without mention that many strategic decisions resulted in very quick tactical requirements such as increased personnel deployments, equipment distribution, air asset prioritisation, and the list goes on.

Operational level risk awareness

5. “Due to the nature of current pan-domain threats – which can manifest almost instantaneously, across multiple domains, in an environment of ambiguity – identifying a process for the rapid reallocation of force elements is required, as is the maintenance of a strategic reserve.”³ This statement alone should suffice to make the point that near real time information about assets is critical. This includes safety risk assumed by all apportioned assets commensurately to mission threats and acceptable thresholds. Without an accurate knowledge of existing risks and potential ability to assume new risks, an operational level decision which needs to be made in haste may very well push past an acceptable risk/danger threshold if competing priorities are not evaluated correctly. For example, a public affairs development requiring an operational 12-hour delay (e.g., a VIP tour during a domestic operation). The impact on a diving operation might just have nullified the dive team’s ability to carry out the mission due to a night dive requirement they have not trained for. However, if the operational decision maker had had this information available during his decision space timeframe, perhaps a competing task and risks would have changed, and a demonstration dive put on for the

¹Department of National Defence, *Pan-Domain Force Employment Concept: Prevailing in an Uncertain World* (Ottawa: Canadian Joint Operations Command, 2022), p 24.

²Ibid p 21.

³Ibid p 43.

delayed VIP. In the current design and risk report management structures, knowledge of those diving risks is kept at the lowest levels of the tactical spectrum and would only be communicated through Critical Information Requirements (CIR) or Commander's CIR – providing the dive supervisor doesn't take it upon himself to simply accept the risk to ensure mission success. An argument could be made that a liaison officer should augment a staff somewhere in the reporting chain, but the CAF simply does not have the necessary resources available to meet all requirements without deconfliction.

6. CJOC leaned forward and operationalised a portion of the vision statement from the DND/CAF data tools and environment future state. "Team members to create, collect, use, and manage data. In the future state: Intuitive, easy-to-use tools for data discovery, analysis, visualization, and management are provided to all Defence Team members to increase self-service capabilities;"⁴ This initiative digitized CJOC operation reporting in a Combined Operational Picture (COP) which manages and displays real time information on updates. This new tool proved to be critical during the COVID-19 pandemic where all levels (tactical to strategic and other) involved consumed the information at their discretion from the exact same source information. This facilitated layered reporting, ensured granularity of information, quality of information, and created significantly more decision space as the domestic picture evolved. The entire COP development project is still in its infancy, but the intended is to expand well beyond simple reporting of domestic operations updates. The COP has been in use as the official CJOC domestic information source since the summer of 2020.⁵ Realtime information is possible now, making this risk management gap even more important to resolve promptly. Especially as the Government of Canada becomes more agile and increases below the threshold of war shaping through the typical hard power fields: diplomacy, information/cyber, military and economy to achieve Canadian interests.

CAF diving risk

7. CAF diving is laced with colossal amounts of inherent risks from both the physiological and environmental perspectives due to the mediums in which this activity takes place. Once CAF diving mitigations had been reduced to an acceptable residual risk, diving was operationalise in CAF diving manuals⁶⁷ where the "Commanding Officer will have to weigh these risks against the consequence of failure to the complete task...

⁴Department of National Defence, *Data Strategy* (Ottawa: Minister of National Defence and Canadian Armed Forces, 2019), p 13.

⁵Note: CJOC Domestic COP can be viewed on DWAN at the following link: <https://geo-dw.defgeo.ottawa-hull.mil.ca/arcgis/apps/opsdashboard/index.html#/c24d0e8dbe0347b4a50b4ccabd0758fb>

⁶Department of National Defence, DAOD 8009-0, *Canadian Forces Diving*, (Ottawa: Chief of the Defence Staff, 2006).

⁷Department of National Defence, DAOD 8009-01, *Canadian Forces Diving – Organization and Operating Principles*, (Ottawa: Chief of the Defence Staff, 2006).

to ensure that only justifiable deviations from these regulations are permitted.”⁸ This statement potentially allows a CO – whom may not have any depth of dive knowledge – to accept safety risk – which they do not fully understand – to ensure mission success rather than to consider alternate options. Too often, the CO will receive the recommendation from their most experienced/senior Subject Matter Expert available whom is also seeking mission success and possibly not in full comprehension of the risks involved. Fortunately, diving manuals that allows for this discretionary flexibility have proven quite safe to date, but without any doubt, there have been some un-delegated miss-guided risk acceptance that have put people in heighten risk situations than was warranted for the overall mission. CAF diving manuals quite explicitly identify the appropriate authorities (Medical, Material, D Dive S, etc.) whom need to assume the risk based on the necessary deviations if advice is sought. Despite this fact, risk management remains ambiguity from the planning stage until mission completion due to the absence of a promulgated standardised format.

8. From mission acceptance until the end of diving, there is not official risk accounting method, standardised risk identification mechanism, or consistent management tool that allows for a Commanding Officer, or delegated risk authority to clearly communicate a dive’s aggregated risk in a comprehensive way which could afford a superior or operational level decision-maker ease in deconfliction priority for a decision. CAF diving instructs its supervisors in great detail on how to manage said risks individually in accordance to their respective qualifications, but does not teach how to quantify and aggregate threat of mission with safety risk acceptance. Thus, in essence, once a dive team has departed their unit, the CO officially accepted the risk under his authority managed for the operation but is typically left in the blind once the team answers to a theater commander based on the senior diver’s professional judgement. This risk acknowledgement is even more nebulous for any superior commands or operational decision makers, as they are typically not even made aware of the original risks involved to know new risk has been assumed.

Solutions for all

9. Pan-domain operations will not only have mutual potential interference between the military stake-holding elements which could jeopardise respective contributions to a common mission, but we may even need to accept risks and threats to military missions which will come from other civilian government agency objectives directly unrelated to our own. Second-order effects from one domain will inevitably have impact on another. Which is why, as we evolve into this digitized force, we need to ensure we can comprehensively and in a measured way rapidly make necessary arguments understood up to chains of commands to discussion table if necessary. Legal Aids, Political Aids,

⁸Department of National Defence, B-GG-380-000/FP-002, *Canadian Armed Forces Diving Manual volume 2 Organization, Regulations, Rules and Compressed Air Breathing Apparatus Diving* (Ottawa: DND Canada, 2021), p. 1-1.

Public Affairs, Intelligence, Cyber, Information Operations, targeting, etc., all contribute to the same operational level as any other multidomain stakeholders (i.e., traditional services). They also all have their own respective limitations and rigid guidelines that need to be respected. Real time pan-domain digitization will come with a slew of competing priorities to be managed at the operational level by CJOC that are currently not readily available with the necessary detail.

10. "...the supported commander will determine the priority, timing, and effects of operations conducted within the assigned area of responsibility (AOR)."⁹ Supporting commanders will "advise on the capabilities and limitations of the resource and the associated risks to the mission;"¹⁰ In short, doctrine already requires us to keep the operational levels fully appraised of risks.

11. It is understood that delegation of authorities is clearly defined in mission orders and standing orders such as the SOODO through the promulgation of command relationships. What can be done with those assigned units is also technically defined through those orders. Yet, the Royal Canadian Air Force repeatedly found itself in such a predicament with regards to aircraft employment that they developed Mission Acceptance Launch Authority (MALA) and Fatigue Assessment Report (FAR) to assist Air Crew as much as commands decipher risk and decision authority lines for when mission threats require more safety risk to be achieved. In addition, "nothing in these documents is intended to delay operational responsiveness or replace the Aircraft Commander's requirement to exercise sound judgement in the execution of a mission."¹¹

12. The MALA series are a prime example of a granular and robust risk management tools which should be closely observed for emulation through adaptations by all services to quantify, help manage, and render communicable the risks encountered when conducting operations. The ATP-6 Vol. II - NATO Mine Warfare publication also has a Risk Directive Matrix to guide commanders through risk acceptance worth considering. In turn, if all mission stakeholders burdened with a duty, task, standing mandate or mission to uphold, were to produce a similar comprehensive risk package, commonality would significantly improve decision-making in a multi-domain environment as decisions space accelerates with digitization.

CONCLUSION

13. Despite risk management and threats to missions being significantly well operationalized for the way which the CAF currently conducts operations, a common failure point was identified above: that lack of a standardized means to manage safety

⁹Department of National Defence, JDN 02-2014, *Command & Control of Joint Operations* (Ottawa: Canadian Joint Operations Command, 2014), p 6/21.

¹⁰Ibid.

¹¹Department of National Defence, *SARSET FIXED-WING Mission Acceptance Launch Authority (MALA) and Fatigue Assessment Report (FAR)* (Ottawa: 1 Canadian Air Division, 2018), p 4.

risks against mission threats in a comprehensive and communicable means to any specialists. As the CAF leans into the future of a digitization for pan-domain efficiency, reporting speeds will need to increase to remain interoperable. The strategic levels want/need immediate and extremely granular information with a high level of confidence to tailor their decision. This creates the need for the Operational Commander to always have a clear picture of his aggregated safety risks vs his mission threats to ensure optimal decisions and actions can be achieved through acceptable actions in multi-domain environments.

14. Although the Royal Canadian Air Force (RCAF) has already shown a solid example for a proper safety risk to mission success decision matrix (i.e., MALA series), the concept needs to be further evolved and standardized across all elements, domains, and stakeholders to better aggregate and understand the risk vs reward decisions which need to be made. CAF diving served as an example to expose a risk management gap that will gain significance as speed of decision-making increases.

RECOMMENDATION

15. The following recommendations to D Dive S are made with respect to standardising risk to safety management in CAF diving:

- a. Develop a standardised identification and management tool for CAF diving which will ensure quantifiable, comprehensive and communicable risk awareness to the superior and operational levels;
- b. Generate and operationalise the baseline risk evaluations for all CAF diving routine diving operations (VOL II), standing mandates (SOODO, CFCO 129, etc.) to include risks inherent to underwater skills and tasks similarly as the Australian Diving has done;
- c. Initiate discussion of standardising risk management with other CAF Diving risks EOD/IEDD, small boat operation, underwater construction, etc.

16. A consideration for CJOC's digitised COP development and implementation team. Current risks to mission are typically reported as CIRs and CCIRs serving as trip-wires for important threshold conditions are met. Perhaps the tool [COP] needs to lean forward and include a comprehensive digitised safety risk management awareness mechanism. Competing priorities for multi-domain operations will demand rapid responses – for which we have experienced with OP LASER 20-01. Safety risk or threat to the mission threshold continue to be our key indicators in judging action efficacy, but they will rapidly also become peripheral boundaries for automation.

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