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MANAGING RISK ON THE DECK PLATES : IMPLEMENTING ENTERPRISE RISK MANAGEMENT AT THE TACTICAL LEVEL IN THE ROYAL CANADIAN NAVAL RESERVE

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JCSP 44

Exercise Solo Flight

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By Commander Matthew Dalzell

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INTRODUCTION

Systematic approaches to managing and mitigating risk are a hallmark of modern business practises. While they originated in the private sector, risk management processes have been increasingly adopted by Western governments and public sector institutions over the last 20 years, starting at the enterprise-wide, strategic level and trickling down within institutions. Enterprise risk management policies are part of strategic governance within the Department of National Defence and the Canadian Armed Forces. However, applying enterprise risk management policies at the operational and tactical level, such as in the Royal Canadian Naval Reserve, is inconsistent. Implementing enterprise risk management policy at the tactical level ensures the consistent application of policy objectives in a manner that minimizes misinterpretation and promotes the adoption of a risk culture. Using the policy analysis model proposed by Walt and Gilson, it can be demonstrated that the development of bottom-up integrated risk policy is necessary for the meaningful implementation of top-down strategic enterprise risk management in the Naval Reserve.

BACKGROUND

Enterprise and Integrated Risk Management

Risk is the uncertainty that surrounds future events based on the likelihood of a particular event occurring and its potential impact.¹ Enterprise risk management (ERM) – considered here to be a term interchangeable with integrated risk management – first came to prominence in the

¹ Canada, Treasury Board Secretariat, *Framework for the Management of Risk* (Ottawa: Treasury Board Secretariat, 2010) <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=19422>. Accessed 24 March 2019.

1990s with its origins in the financial sector with systematic approaches to identify, assess and manage risks that cut across an organization.² Prior to this, risks were most frequently managed in silos by separate units with little or no coordination or proactive appreciation of how decisions to deal with risk might interact with each other or their potential strategic effects.³ By the turn of the century, standards and practices began to be codified by national and international organizations, most notably by the Committee of Sponsoring Organizations of the Treadway Commission in the United States and by standards organizations in Australia, New Zealand and Canada,⁴ with adoption of ERM advocated by regulators and rating agencies, among others.⁵

The Government of Canada first adopted ERM in 2001 with the publication of the *Integrated Risk Management Framework* by the Treasury Board Secretariat.⁶ This policy provided guidance for the identification and management of risk on “an aggregate basis”⁷ and its incorporation into decision-making processes within organizations across government. It included common definitions for risk, risk management and integrated risk management. A companion document, the *Integrated Risk Management Implementation Guide*, was published in 2004 to assist organizations with the adoption of risk management processes such as the development of risk registers. The policy was refreshed and updated in 2010 with the issuance of

² P. Bromiley, M. McShane, A. Nair, E. Rustambekov, “Enterprise Risk Management: Review, Critique and Research Directions,” *Long Range Planning* 48 (2015): 266-267.

³ W. Ben-Amar, A. Boujenou and D. Zeghal, “The Relationship between Corporate Strategy and Enterprise Risk Management: Evidence from Canada,” *Journal of Management and Strategy* 5, no. 1 (2014): 3.

⁴ J. Fraser and B. Simkins, “The challenges of and solutions for implementing enterprise risk management,” *Business Horizons*, 59 (2016): 689-690.

⁵ Bromiley et al. 2015, 265.

⁶ K. Hardy, *Enterprise Risk Management: A Guide for Government Professionals* (San Francisco: John Wiley and Sons, 2014), 42, O’Reilly Learning/Safari Books, <https://learning.oreilly.com/library/view/enterprise-risk-management/9781118911037/?ar>

⁷ Canada, Treasury Board Secretariat, *ARCHIVED – Integrated Risk Management Implementation Guide*. Ottawa: Treasury Board Secretariat, no date. http://www.tbs-sct.gc.ca/pubs_pol/dcgpubs/riskmanagement/guidepr-eng.asp?format=print. Accessed 24 March 2019.

the Treasury Board Secretariat's *Framework for the Management of Risk*⁸ and *Guide to Integrated Risk Management*.⁹

This policy framework provides consistent direction and standards for ERM throughout the Government of Canada with central agency oversight. This includes the Department of National Defence (DND), the Canadian Armed Forces (CAF)¹⁰ and its component 'Level 0' and 'Level 1' elements. The Royal Canadian Navy (RCN) first set out an integrated risk management policy in 2012, which was amplified with a Naval Order in 2016.¹¹ A new RCN ERM Policy was issued in 2018 aligned with Canada's 2017 defence policy and the RCN's five-year strategic plan.¹² The RCN ERM policy is intended to

“provide a continuous, proactive and systematic process to understand, manage and communicate risk from an organization-wide perspective in relation to the achievement of overall organization objectives....to foster a risk smart culture by ensuring personnel at all levels have regard for the management of risks in all decisions.”¹³

The organization of the RCN ERM governance framework is similar to corporate ERM systems found in industry, with the Navy's strategic governing bodies, the Naval Board and Naval Strategic Management Board, executing the ERM oversight function that is found in a corporate board of directors. The Deputy Commander of the RCN is mandated to act as “Champion for Enterprise Risk Management”¹⁴ supported by the Director of Naval Strategic Management who manages Navy ERM functions. Subordinate Formation Commanders are expected to implement and promote ERM within their 'Level 2' operational organizations.

⁸ Treasury Board Secretariat, *Framework for the Management of Risk*.

⁹ Canada, Treasury Board Secretariat, *Guide to Integrated Risk Management* (Ottawa: Treasury Board Secretariat, 2010) <https://www.canada.ca/en/treasury-board-secretariat/corporate/risk-management/guide-integrated-risk-management.html>. Accessed 23 April 2019.

¹⁰ Department of National Defence, *Defence Enterprise Risk Management Policy* (Ottawa: DND, June 2018).

¹¹ Royal Canadian Navy, Naval Order (NAVORD) 1950-1, “Integrated Risk Management”, 25 February 2016.

¹² Royal Canadian Navy, *Enterprise Risk Management Policy* (August 2018): 2.

¹³ *Ibid.*

¹⁴ *Ibid.*, 6

Finally, subordinate commanders and individual commanding officers are expected to “Adhere with (*sic*) orders, directives and policies related to [ERM]...and build a risk aware culture by promoting ERM practices within their respective areas of operations.”¹⁵

ERM’s limitations on the deck plates

While the RCN’s ERM framework is robust at the strategic level, its reach into the organization through policy to the tactical level – to units and individual sailors - is limited, despite its stated intent to “foster a smart risk culture [in] personnel at all levels.” This challenge is due principally to the limitations inherent in any top-down approach, particularly where there is limited knowledge of policy content and context, and where responsibilities and tools to manage risk are fragmented into silos the further down one moves in an organization. It is these silos that are regarded as the most significant impediment to implementing a successful ERM framework.¹⁶

APPLYING POLICY ANALYSIS TO NAVAL RESERVE ERM IMPLEMENTATION

In their 1994 review of policy analysis approaches and why health reform initiatives fail, Gil Walt and Lucy Gilson¹⁷ proposed that policy initiatives often focus too heavily on the *content* of policy while giving insufficient consideration to the *actors* involved (e.g. policy makers, stakeholders, concerned publics), the *context* into which the policy is implemented (e.g. broader economic, cultural and political environments, previous policy initiatives and other historical factors), and finally the *process* through which the policy is arrived and implemented.

¹⁵ *Ibid.*, 7

¹⁶ J. Seago, “Governing Government Risk,” *Internal Auditor*, (December 2015): 48.

¹⁷ G. Walt and L. Gilson, “Reforming the health sector in developing countries: the central role of policy analysis,” *Policy and Planning* 9, no. 4 (1994): 353-370.

Their policy analysis model (Figure 1) places actors in the centre of a conceptual triangle with policy context, content and process at each vertex. By doing so, the model encourages consideration of these three policy elements as they mutually influence, and are influenced by, the perspectives, motivations and choices of actors.

Actors

The central actors in this analysis are the members of the Naval Reserve, consisting of approximately 3,800 predominantly part-time sailors and officers who are members of 24 Naval

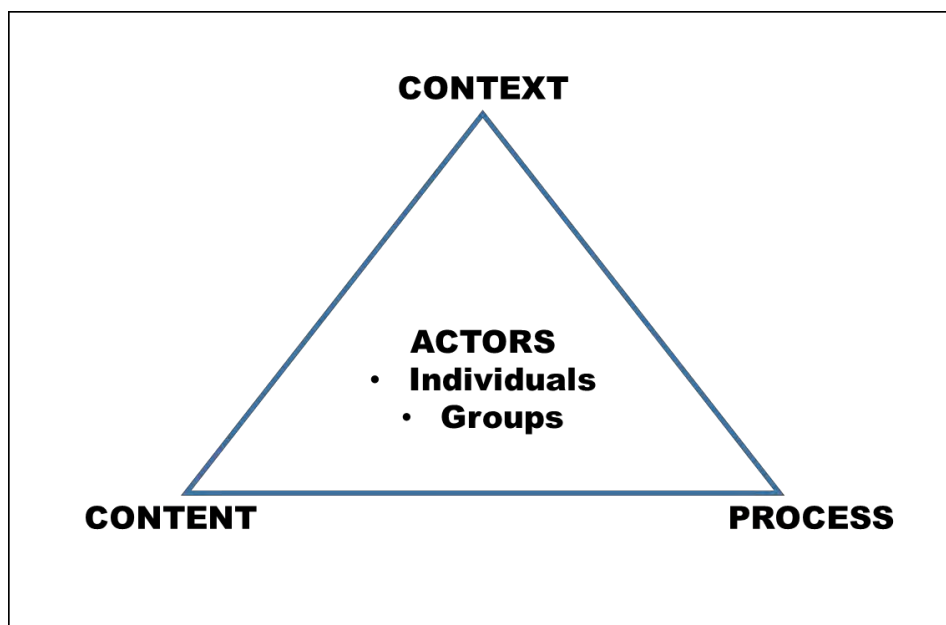


Figure 1. The Walt and Gilson policy analysis triangle

Reserve Divisions (NRDs) located in major cities across Canada. Each NRD recruits and conducts basic military training and supports individual on the job and readiness training to prepare personnel to augment the RCN in standing and contingency roles. This includes training and contingency operations involving operating minor war vessels and small boats, diving, small

arms, and administering public and non-public resources. The Naval Reserve is organized geographically into four regions and is administered by Naval Reserve Headquarters in Quebec City. With the transformation of the primary reserves in 2014, the Naval Reserve ceased to be its own formation (a Level 2 organization) and is now officially part of Maritime Forces Pacific with the Commander Naval Reserve reporting to the Commander of Maritime Forces Pacific in his role as Assistant Chief of Naval Staff (Training). Known as the “One Navy” construct,¹⁸ this reorganization aligns the Naval Reserve and Naval Reservists more squarely with the policy requirements, expectations and accountabilities of the Regular Force Navy. Gaining and maintaining credibility with the Regular Force Navy as a partner within One Navy is an important reputational risk for the Naval Reserve. Naval Reservists themselves come from a wide variety of backgrounds. Many Naval Reservists are post-secondary students or graduates who completed the bulk of their military occupational training during periods of full-time employment during summer breaks and now contribute on a predominantly part-time basis on weekday evenings and occasionally weekends. The Naval Reserve is also a young organization with a high proportion of millennials.¹⁹

Context for a Naval Reserve ERM framework

Although the Naval Reserve is subject to the strategic policy framework set in place by the higher authorities of Defence and the RCN, it is acknowledged that a “single management methodology applied at all levels and across all functions in Defence is not practicable.”²⁰ Both the Defence and RCN ERM policies are aimed primarily at the ‘Level 0’ and ‘Level 1’ organizations, with direction that ERM policy also be applied further down within the

¹⁸ Royal Canadian Navy, *RCN Executive Plan – 2013 to 2017* (Ottawa: DND, 2013): 6.

¹⁹ Based on an informal survey of the demographics of the seven NRDs in the Naval Reserve’s Western Region.

²⁰ *Defence ERM Policy*, 2018, 4.

organization – primarily to Level 2 organizations. While risk management is considered as a part of operational planning doctrine²¹ and in warship command development training,²² it is still largely confined to silos and is unknown to most Naval Reservists. More widely known, but still isolated, are risk management policies and processes related to financial controllership, administration, material accountability, and safety and environmental management. Many of these are subject to rigorous oversight through mandated requirements inspections by a dedicated staff in headquarters – including a Senior Staff Officer of Inspections and Integrated Risk Management - or oversight by other CAF authorities. However, any overall sense of risk management being inconsistent and ad hoc.²³

The motivation to establish a formal, comprehensive ERM policy approach focused at the tactical (NRD) level began in 2016 in response to ongoing issues with accidents during small boat operations and related mechanical and technical issues. It was observed that lessons learned were not being shared or understood, and the mounting costs and danger to personnel had reached the risk tolerance threshold of the Naval Reserve’s leadership.²⁴ In October 2016, the Naval Reserve Risk Management Working Group was established. Its mandate was to identify areas of risk and develop processes to promote a risk management culture, with simple tools that could be used by personnel at the tactical level to improve risk awareness and meet the

²¹ National Defence, B-GJ-005-502/FP-000 *Risk Management for CF Operations* (Ottawa: NDHQ, Joint Doctrine Branch, 2007).

²² RCN Command Development Course, EO 001.03 “Risk Management: Applying risk calculus to operational decisions (Victoria, BC: Venture, Naval Officer Training Centre, undated).

²³ M.P. Davies, K. Penney, J. Lang, R.C. Campbell, J.I. Crangle, A. Grinchteine, D. Garnon, “Naval Reserve Risk Management Working Group Report, NAVRES Risk Management – Changing the Culture” (Quebec City: Naval Reserve Headquarters, 18 December 2017): 3-4. RDIMS 418322

²⁴ Capt(N) M.P. Davies, pers. comm.

requirements of higher policy. An important restraint on the working group was that the policy tools and processes that they developed could not create additional administrative workload.²⁵

The composition of the working group leveraged risk management expertise of Naval Reserve personnel who practice ERM in their civilian careers. This included the working group chair who is a vice-president with a major insurance underwriter and working group members with backgrounds in auditing, project management, law, health policy, environmental health and safety, and performance management.²⁶ Representation was sought from NRDs across the country and at different rank levels and military occupations.

Content – Findings and recommendations

The working group conducted reviews of overarching policy, current risk management processes, and lessons learned. Consultations and briefings were also held with senior leadership at the national and regional level, and through visits at NRDs. The working group's report provided findings and recommendations in the areas of governance, risk management processes, training and awareness, performance measurement and communications. Key findings included:

- Governance:
 - Strong governance mechanisms are present, along with established inspections and audits, oversight and safety management for a variety of high-risk functions. However, there was no overall risk management structure in the Naval Reserve aligned with the organization's mission and tasks, no process to formally identify

²⁵ Commander Naval Reserve, Terms of Reference: Naval Reserve Risk Management Working Group, 6 October 2016. RDIMS 393335.

²⁶ Davies, pers. comm.

risks and reduce their impacts, and a lack of consideration of risks and opportunities from the tactical to the strategic;²⁷

- Risk Management Process:
 - The Naval Reserve maintained the risk management tools required by higher authority such as a risk register and upward reporting. However, these mechanisms did not support the development of strong accountability throughout the organization – especially awareness and ownership of risk at the tactical and operational level where much of the risk actually exists.²⁸ Risk management was very much siloed, with the most robust risk management processes focused primarily managing financial risk;²⁹
- Training and Awareness:
 - The process of risk management is not clearly understood, with no formal training in risk awareness or its incorporation into NRD-level planning and operations. The result is that there is no risk culture;³⁰ and
- There was no system for performance measurement in place, or communications related to risk management.

The working group’s ultimate conclusion, endorsed by the Commander Naval Reserve, was that the organization needed “to encourage a culture shift...that is risk aware, and incorporates principles of risk management across the entire organization.”³¹

²⁷ Davies et al., *NAVRES Risk Management*, 2017, 4-6.

²⁸ *Ibid.*, 8-9.

²⁹ Davies, pers. comm.

³⁰ Davies et al., *NAVRES Risk Management*, 2017: 10.

³¹ Commander Naval Reserve, “Naval Reserve Risk Management Working Group Implementation Directive,” 19 June 2018. RDIMS 422231.

Process – Towards implementation

Canadian ERM expert John Fraser identifies two key processes for the successful implementation of an ERM policy framework supported by a robust risk culture: *conversation* and *prioritization*.³² Conversation involves engaging actors to build a common understanding of the key risks to be addressed and the approach to be taken by the ERM policy. These conversations, which include both context and content, build understanding among the actors and establish agreed principles and accountabilities.³³ Prioritization involves the development of processes for actors to use risk criteria and tolerances to rank risks based on their likelihood and severity, decide how those risks will be addressed, and apportion resources accordingly.³⁴

Authors agree that adopting ERM is ultimately a cultural change.³⁵ Implementation of ERM requires that both conversation and prioritization processes be deliberate and support the development of an organizational risk culture that fosters awareness of risk, including what the level of risk tolerance is within the organization, and accountability and ownership of risk and its management by actors at all levels of the organization. The conversation process is crucial to facilitating this cultural change. Fraser asserts that conversation processes need to engage employee actors to build awareness of risk policies without removing accountability for the managing of risks.³⁶ Building awareness of risk and clearly communicating the levels of risk that the organization is willing to tolerate must also not discourage appropriate risk taking.³⁷ In a

³² J.R.S. Fraser, “Building Enterprise Risk Management into Agency Processes and Culture,” in *Managing Risk Performance: A guide for government decision makers*, ed. T.H. Stanton and D.W. Weber (Hoboken, NJ: John Wiley and Sons, 2014): 175.

³³ Fraser and Simkins, 2016, 692.

³⁴ T.H. Stanton, “The growing movement for enterprise risk management in government: The United States begin to catch up,” *Asia Pacific Journal of Public Administration*, 37, 3 (2015): 185.

³⁵ Fraser and Simkins, 2016, 692; D. Brooks, “Creating a Risk-Aware Culture,” in *Enterprise Risk Management* ed. J. Fraser and B. Simkins (Safari Books, 2010), e-book, 6-2.

³⁶ Fraser 2014, 179.

³⁷ Brooks 2010, 6-5.

military setting, this “dynamic risk management”³⁸ must be calibrated through Commander’s Intent and supervisors for levels of risk that are considered acceptable for the mission being undertaken – from introductory training, to regenerative training, to contingency operations.

The working group’s recommendations, summarized in Table 1, emphasized incorporating a strong risk management framework in the organization to promote a robust risk culture into the Naval Reserve’s operating culture.

A significant development by the working group was the creation of a Naval Reserve Risk Management Tool – a Microsoft Excel workbook for the use of NRD personnel and regional staff in the planning of exercises and activities. Tabbed worksheets guide users through the risk management, from brainstorming to identify potential risks in a number of categories (Figure 2), to ranking those risks based on their likelihood and impact (degree of severity) (Figure 3). The resulting heat map provides a visual appreciation of the assessed risks. Action plans are then prompted for risks over the tolerance threshold, including four standard risk management strategies: avoid, accept, mitigate/control or transfer. The resulting aggregate action plan is then briefed and approved by Command. The signed action plan is appended to administrative or operations orders as well as being uploaded to a SharePoint site for collection and potentially for audit and performance measurement. A survey and links to the RCN Lessons Learned Database and the Naval Reserve Risk Management SharePoint site. The RM Tool satisfies several key functions. It requires actors to engage in the conversation and prioritization processes, building awareness of potential risks and how they influence and are influenced by policy content and context, with that knowledge contributing to risk prioritization and the development of management and mitigation strategies.

³⁸ Turner, N. and Tennant, S.J. “As far as Reasonably Practicable: Socially Constructing Risk, Safety, and Accidents in Military Operations,” *Journal of Business Ethics*, Vol. 91, (2009): 26.

Table 1. Summary of the Naval Reserve Risk Management Working Group’s recommendations³⁹

1. **Governance**
 - a. Engrain the risk management framework within the organization
 - b. Formally link risks to the NAVRES vision, mission and tasks
 - c. Clarify the Risk Management organizational structure from tactical to strategic
 - d. Ensure consistent control and oversight external to NAVRES
2. **Risk Management Process**
 - a. Strengthen accountability for risks and risk treatment throughout the NAVRES
 - b. Enforce clear lines of responsibility throughout NAVRES for risk analysis, accountability and reporting
 - c. Enhance the NAVRES risk ledger
 - d. Manage risks on an organizational basis
 - e. Integrate tactical and operational levels into the risk management process
3. **Training and Awareness**
 - a. Clarify the risk management process through education and training
 - b. Promote risk smart culture
4. **Performance Measurement**
 - a. Continually track and measure the performance of NAVRES risk management efforts
5. **Communications**
 - a. Provide frequent updates using the established communication tools of the organization

A	B	C	D	E	F	G	H	I	J	K
RISK ANALYSIS – Risk Management Factors	Risk to Pilot	Operations	Risk to Pilot	Financial	Risk to Pilot	Safety	Risk to Pilot	Regulations	Risk to Pilot	Reputation
People / Training	<input checked="" type="checkbox"/>	Lack of personnel / trained personnel for Enough qualified comms team Enough qualified logistics team Forget to pick up people / left behind RISK A	<input type="checkbox"/>	Availability of funds in pay budget Availability of funds in TD budget	<input type="checkbox"/>	Life-saving equipment Injury from repairs RISK B	<input type="checkbox"/>	Qualifications up-to-date (medical, Environmental considerations (regs) Fuel spills on water	<input checked="" type="checkbox"/>	Environmental considerations (reputation) Community awareness OGD awareness Drinking issues
Location / environment	<input checked="" type="checkbox"/>	Navigational hazards (ops) Night navigation / weather / tides Ecosystem No real time GDP data capability RISK C	<input type="checkbox"/>		<input type="checkbox"/>	Navigational hazards (safety) Too long a drive Weather RISK D	<input type="checkbox"/>	Interfere with harbour activities (regs)	<input type="checkbox"/>	Interfere with harbour activities (reputation)
Equipment	<input type="checkbox"/>	Trailer or truck break-down Forget/lose parts or equipment Truck damage from launch Spill from bilge or from grounding (ops)	<input type="checkbox"/>	Pay to tow broken trailer or truck Pay to use launch if community launch not	<input type="checkbox"/>	Trailer inspected on time Enough trucks with proper hitches Injury from trailer backing Trailer accident RISK E	<input type="checkbox"/>	Spill from bilge or from grounding (regs)	<input type="checkbox"/>	Spill from bilge or from grounding
Logistics	<input type="checkbox"/>	Increased waste generated (ops) Extra parts to be purchased from vendors	<input type="checkbox"/>	Increase in requirements Not enough lead time to procure Approved OPGD/EXOPD Equipment costs	<input type="checkbox"/>		<input type="checkbox"/>	Increased waste generated (regs)	<input type="checkbox"/>	Increased waste generated (reputation) purchases on local economy Damage to hotels Leaving on coasts
Communications	<input type="checkbox"/>	Line of sight only Loose comm gear onboard Secondary comms not available Only old tech available / incompat radios	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	Too many lectures / not exciting because Long delay between serials
[Unit-specific]	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	

DEFINITIONS

What are the 5 categories of Risk?
There are five categories of risk - Operations, Financial, Safety, Regulations, and Reputation. Hover mouse cursor over each risk category for additional factors / examples to consider.

1. Operations - ability to conduct commitments
2. Financial - monetary impact / liability of the event on the RCN
3. Safety - breach of RCN's security and safety measures
4. Regulations - contravention of Federal or Provincial law, regulations, policies and any legal liability that would affect RCN's ability to achieve its objectives
5. Reputation - events that undermine the image of the RCN

What are the Risk Management Factors?
There are five risk management factors - People, Location/Environment, Equipment, Logistics, Communications, and Training. Hover mouse cursor over each risk management factor for additional information / examples to consider.

1. People/training - how each risk category impacts the members of the RCN during the event and if there is adequate training, and vice versa
2. Location/environment - how each risk category impacts the location/environment where the event is taking place, and vice versa
3. Equipment - how each risk category impacts the equipment at RCN's disposal, and vice versa
4. Logistics - how each risk category impacts the logistics involved in planning the event, and vice versa
5. Communications - how each risk category impacts lines of communication during the event, and vice versa

Figure 2. The Naval Reserve Risk Management Tool’s risk identification sheet, including preset risks for a multi-NRD small boat exercise at a third location.

³⁹ Davies, M.P. et al., *NAVRES Risk Management – Changing the Culture*, 2.

Issues

The Risk Management Tool brings the ERM framework and its guiding principles to the tactical level. It provides an opportunity for NRD commanding officers and their personnel to consider risks in the tasks they perform, prioritize, and gain appreciations of risk tolerance and management. Its use incorporates many of the recommended techniques for ERM implementation,⁴⁰ including:

- Structured conversation;
- Integration with planning;
- Scenario analysis; and
- Sign-off by line management.

Its use, however, must be complemented by a robust, open communications effort that encourages the raising of issues by personnel at all rank levels.⁴¹ Active, ongoing oversight by leaders at the NRD, regional and national levels must also be exercised, enabled by relevant key risk indicators and metrics that are not onerous to collect. Most importantly, education in risk management must be incorporated into training in a way that encourages conversation along the

⁴⁰ Fraser and Simkins, 2016, 692-695.

⁴¹ Brooks 2010, 6-8.

lines of Fraser’s risk workshop model and avoiding “death by PowerPoint.”

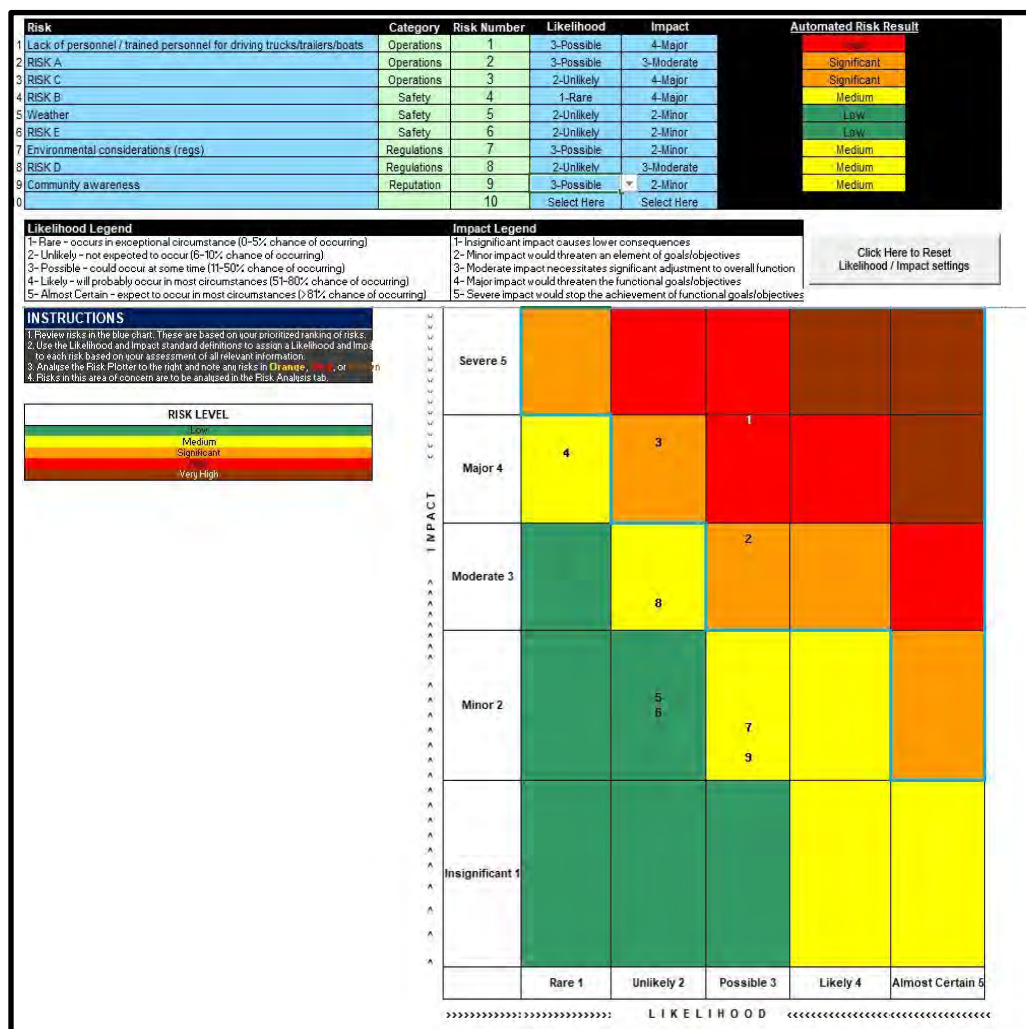


Figure 3. The Naval Reserve Risk Management Tool’s risk plotter and heat map.

Next Steps

Implementation of the Naval Reserve ERM framework is ongoing, following a plan endorsed by the Commander Naval Reserves. Significant next steps include the publication of a distinct tactical-level Naval Reserve ERM policy that is aligned with the strategic policy framework, making consideration of risks part of deliberations and decision-making at levels of the institution, ongoing oversight and leadership, and the launch of a concerted communications

effort. Since adopting an ERM is a cultural change, continuous effort, ongoing conversations and patience will be required.

CONCLUSION

Enterprise Risk Management is a systematic, holistic approach to assessing, managing and mitigating risk across an organization. The Naval Reserve is at the early stages of implementing an ERM policy at the tactical level that is aligned with the strategic risk management principles of the RCN, CAF and ultimately the Government of Canada. Through the application of a policy analysis lens that considers the actors, context, content and process of the development and implementation to date of the Naval Reserve ERM policy, this bottom-up approach complements and enables top-down strategic policy while engraining a cultural change in how Naval Reservists assess and manage risk.

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