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PROGRAM EVALUATION: THE DND/CF GENERAL SAFETY PROGRAM

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Canada 

SYNOPSIS

The Vice-Chief of the Defence Staff (VCDS) requested an evaluation of the General Safety Program to assist future Program planning; the Program had not been formally evaluated since its inception some thirty years ago. Other rationale for the timing of this evaluation included changes made to the Canada Labour Code, in 2000, as well as relatively recent changes in the Program's management cadre.

The stated objective of the General Safety Program is to prevent accidental death or injury, as well as damage to property. Quite appropriately, we found that, with respect to this particular program, the prevention of damage to property was only incidental to the prevention of harm to people. The Program aims to: minimize personal suffering and financial losses; to enhance the effectiveness of the CF and the efficiency of the DND; and, to contribute to the morale and well-being of all personnel. The Program is separate and distinct from the other DND/CF specialized fields of safety, such as Flight Safety, Nuclear Safety, and Fire Protection Safety.

The scope of the evaluation is broad, addressing fourteen issues pertaining to the following subject areas:

- *clarity and understanding of the Program mandate;*
- *understanding and acceptance of the Functional Authority Framework;*
- *sufficiency of interaction between the Program and other specialized DND/CF safety programs;*
- *Program contribution and effectiveness;*
- *adequacy of human resource strategies for the General Safety Officer community;*
- *definition and utilization of risk management strategies; and*
- *possible improvements to Program design and delivery.*

Central elements of the evaluation study were a survey of 102 General Safety Officers, as well as approximately 130 interviews with key stakeholders, including a number of executives and members of DND unions. In addition, 20 large organizations having occupational health and safety programs were studied for benchmarking purposes. An analysis was also conducted of reported injury statistics for the DND/CF, all of Canada, and for a number of foreign military organizations.

The evaluation found that the mandate for the General Safety Program is well understood and accepted by most stakeholders. The current leadership of the Program has ensured stronger direction, a pro-active and consultative approach to safety management, and a revitalization of the thirty-year-old Program. The evaluation noted that the General Safety Program and the other eleven specialized safety programs are targeted at separate and discrete types of risk and are integral components of technical programs.



However, it was further concluded that there is considerable opportunity for better horizontal exchange and synergy among these programs. This is particularly so with respect to such areas as corporate reporting, the promotion of safety culture, training, risk management and lessons learned.

Our analysis of available statistics indicates a downward trend in the rate of injuries experienced by civilian personnel. Trends for military personnel are less discernible. We conclude, in this regard, that more complete and accurate databases need to be maintained and routinely monitored/analyzed to support the identification of trends as well as opportunities for necessary Program interventions to achieve further reductions in injury rates. We have also recommended the preparation of an annual corporate report on safety within the DND/CF describing the overall state of safety within the organization. In our view, this would best be accomplished through secretariat resources reporting to the VCDS.

The evaluation has also cited certain resourcing issues, including a forecasted retirement of experienced General Safety Officers. Increased use of recruitment from college and university programs will help address this issue. Other resource constraints, particularly those that may affect the performance of key safety activities (e.g., safety audits; data entry; reporting), should be addressed through the normal business planning process. The significance of resource constraints can be better articulated with the benefit of improved definition and use of risk management strategies.

Finally, benchmarking performed by the evaluation supported many of the DND/CF practices, but also indicated a shift away from traditional accident prevention to addressing health and safety as a lifestyle issue. This suggests that the DND//CF should explore the advantages of more closely linking its health and wellness program with the General Safety Program.

The evaluation conclusions and recommendations are summarized at pages 3 through 8 of this report.



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RESULTS IN BRIEF

INTRODUCTION

The General Safety Program has the objective of preventing accidental death or injury, as well as accidental damage to or loss/destruction of equipment, buildings and materiel. The Program aims to minimize personal suffering and financial losses, to enhance operational effectiveness of the Canadian Forces (CF) and the efficiency of the Department of National Defence (DND), as well as to contribute to the morale and well-being of all personnel. The Program is the DND/CF response to the Canada Labor Code, Part II, 2000, and to the DND/CF policy on General Safety, which applies to the military. Regulations of the Canada Labor Code, Part II, cover seventeen specific subjects pertaining to hazards in the workplace. The General Safety Program is comprised of civilian and military occupational safety, civilian occupational health, and the civilian Return to Work Program.

The Vice-Chief of the Defence Staff (VCDS) is the designated Level 1 with responsibility for the General Safety Program. The Directorate of General Safety (D Safe G) is responsible to the VCDS for overall Program policy, planning and administration (functional direction). The implementation of the Program is a line responsibility. General Safety Officers (GSOs) across the DND/CF provide staff advice to commanders, managers, commanding officers, and supervisors on all aspects of the Program.

This evaluation study has been conducted at the request of the VCDS and in recognition of the fact that the General Safety Program has not been evaluated formally since its inception thirty years ago. Moreover, the Canada Labor Code, Part II, was revised in 2000 and the senior management of the General Safety Program changed recently. In addition, an environmental scan revealed that there has been a renewed emphasis on occupational health and safety in both the private and the public sectors.

The evaluation is expected to provide information of value to management for future Program planning.

SCOPE AND METHODOLOGIES

The evaluation study addresses fourteen key evaluation issues with sub-issues spanning the categories: Program Rationale, Program Success, Program Design, and Program Alternatives. The issues were identified in close consultation with the VCDS and senior program management, and through a review of documents and the literature on occupational health and safety. The evaluation issues pertain to the following subject areas:



- clarity, comprehension and strength of the program mandate;
- understanding and acceptance of the Functional Authority Framework;
- potential for changes in the interrelations between the Program and the eleven other safety-related programs of the DND/CF;
- nature of the Program’s impact on preventing accidents, injuries and property damage;
- adequacy of human resources strategies for the General Safety Officer community;
- adequacy of performance measurement, monitoring and reporting;
- extent of use of risk assessment and risk management; and
- possible improvements to the Program design and delivery, and lessons learned from other organizations.

The reporting deck presents findings/conclusions and where applicable, recommendations, for each specific evaluation issue of the study.

An evaluation framework was developed to guide the conduct of the study. The evaluation used a multiple-lines-of-enquiry approach whereby information and data for each evaluation issue were obtained from a number of different sources. This approach has the advantage of enabling information and data to be compared and weighed, so that conclusions could be drawn on a sound basis.

The methodologies applied for the study included: key stakeholder interviews; a questionnaire survey of the GSO community; benchmarking with public and private sector organizations; interviews with associations, educational institutions, the regulating department (Human Resources Development Canada), and Treasury Board Secretariat; a review of documents and the literature, including wide Web searches; and, a cost estimation of accidents, injuries, and illness in the DND and the CF. Databases were established for the survey results and for comparative statistics from other organizations.



SUMMARY OF MAIN FINDINGS AND CONCLUSIONS FOR ISSUE CATEGORIES

Program Rationale

Does the Program continue to make sense in today's environment?

- D Safe G's mandate is clear, understood, and accepted by most stakeholders. Potential exists to further raise the level of understanding through training and program promotion.
- The eleven other functional safety authorities in the DND/CF are separate, targeted at discrete types of risk, and are integral components of technical programs. As such, each of the functional safety authorities, together with its corresponding technical program, constitutes a knowledge community and should therefore remain intact as a separate organization. However, better interaction and exchange among all safety functional authorities at the corporate level would be advantageous for areas of common interest such as corporate reporting, risk assessment/management, training and promotion of the safety culture.
- A DND/CF Safety Support Secretariat reporting to a senior corporate manager should be established to provide the staff work to ensure better coordination and exchange of information among the DND/CF safety functions.
- The General Safety Program policy and standards are maintained up-to-date and promulgated to all GSOs through the Chain of command.

Program Success

What impacts/outcomes does the Program appear to have realized?

- The DND civilian injury rates, time-loss injury rates, and injury severity rates have trended downward for the period 1993-2001/02. The civilian rates tend to compare favorably with those for Canada and with other defence organizations.
- The Canadian Forces injury rates, time-loss injury rates, and injury severity rates have no discernible trend – they are quite stable for the period 1993-2001/02. The rates are also stable for other military organizations, but their rates tend to be lower than for the CF.
- A more complete and accurate DND/CF database for injuries and injury severities will need to be established. Once this has been done, the injury rates and injury severity rates for the CF in particular, and for the DND should be further investigated to determine the potential for future reductions in the rates.



- The evaluation report notes that “attribution”, the estimation of the extent of impact of occupational health and safety programs on accident and injuries, is difficult and explains the reasons for this. (Reference: page 28.)
- The change in leadership of D Safe G has resulted in stronger Program direction, a more pro-active approach to safety management, increased consultation with the safety community, and an overall revitalization of the thirty-year-old Program.
- There is a lack of time to take Program-related safety courses, and therefore, there is a need for more on-line and training at-a-distance.
- Safety promotional and motivational material is reaching its target audiences; there are opportunities for enhancement of the impact of these materials.
- The legislation and consultation services of the D Safe G are highly valued by the users.
- Health Canada’s Occupational Health and Safety Program is providing a satisfactory service to the DND in the locations where the service has been requested.
- The Return to Work Program, which is new in the Department of National Defence, is strongly supported by managers and the unions at those locations where it has been implemented. Senior managers will need to continue to demonstrate strong support to managers and supervisors to ensure acceptance and wider implementation of the Program in the Department.

Program Design and Delivery

Are the design and delivery components of the Program appropriate and do they appear to perform as planned?

- The Functional Authority Framework is understood and accepted by the stakeholders interviewed for the evaluation. However, new initiatives under the Functional Authority Framework such as the Return to Work Program are difficult to fully implement due to competing priorities. (Refer to page 36 for a description of the Functional Authority Framework.)
- GSOs would like more opportunities to provide input to D Safe G and to exchange lessons learned through the General Safety Program Consultative Framework.



- While certain General Safety Program activities such as trend analysis and accident reporting require additional attention due to competing priorities, Commanders state that they are able to adequately exercise “due diligence.” This assertion is corroborated by senior officials of Human Resources Development Canada and the Treasury Board Secretariat. Future resource requirements for the General Safety Program should be determined on the basis of assessed health and safety risk at each location.
- The General Safety Officer community is aging and there is no internal pool of sufficiently trained individuals to replace full-time GSOs who will retire within 5-10 years. Increased use will need to be made of external recruitment from university and college programs in occupational health and safety. In this regard, the study indicates that DND salaries for safety officers are competitive with private and public sector organizations.
- Risk assessment and risk management for occupational health and safety will need to be conducted on a more systematic basis and at a more macro-level in the DND/CF organizations. Corporate guidance and training on risk assessment and management approaches will be needed.
- About 70 per cent of GSOs provide regular safety management reports to their commanders/managers. Commanders and senior managers are satisfied with the safety performance information they receive for decision-making, but they require more analysis of accident and injury trends as well as comparative information and lessons learned from other locations.
- GSOs have ample access to, and are able to significantly influence, their Commanders and managers.
- There are variations in the rates of reporting accidents, injuries and incidents across the Department of National Defence and the Canadian Forces (similar to other organizations examined).
- Level 1s require an integrated, annual management report on all DND/CF safety programs that would identify key trends, legislative and regulatory changes, and actions that may be required (the “State of Safety in the DND/CF”).
- DND union executives and members have a positive view of the contribution of the General Safety Program and of union-management relations on safety matters.

Program Alternatives

In summary, from the findings of the evaluation study, what key changes should be made to the Program to enhance achievement of objectives? What are the lessons learned from other organizations that could be applied advantageously to the General Safety Program?



- There is opportunity to increase the sharing of information, lessons learned and management practices across the GSO community.
- The D Safe G Web site should be further used for horizontal sharing of information on accidents and injuries and on lessons learned.
- Data and information from the General Safety Program and other safety programs should be provided to the Human Performance Integration cell (ADM(S&T)) to help develop more proactive approaches to improving safety.
- Application of the Canada Labor Code, Part II, to the Canadian Forces in circumstances pertaining to “operational requirements” needs to be made clearer through communications and training activities. Some clarification is also required of the legal obligations of DND to visitors and contractors on the DND/CF workplaces.
- Competency profiles being developed by D Safe G for the various levels of GSOs recognize the “more professionalized” nature of the discipline and support the Competency-Based Management initiative of the Department.
- Core safety training which is provided by D Safe G should address subject matter knowledge and skills, DND/CF content, and additionally, management skills needed to direct a safety program.
- The governance framework for the occupational health and safety function of other organizations corresponds to the General Safety Program’s Functional Authority Framework.
- Corporate functional direction and guidance for safety programs ensures consistency in the application of policies and standards while allowing business lines to tailor the program to meet individual needs.
- Specialized safety programs in other organizations are normally aligned with their appropriate business operations to ensure applicability and technical competence, as is the case in the DND/CF.
- Other safety organizations, including that of the DND/CF, have recognized the need for a comprehensive risk management approach.
- There is a shift in the benchmarked organizations away from traditional accident prevention to addressing health and safety as a lifestyle issue. Health and safety are seen as being integral to continuous improvement.



Key Recommendations of the Evaluation

(Refer to the Summary of Recommendations of the Evaluation Study, page 54, for a full listing.) The recommendations are addressed to the VCDS as the OPI for the General Safety Program.

Program Rationale

- The General Safety Program's mandate should remain distinct from other DND/CF safety programs to continue to meet the Canada Labor Code requirements and to preserve the unique policy and technical expertise.
- The DND/CF functional safety authorities should remain as separate organizations.
- A DND/CF Safety Support Secretariat should be established to provide:
 - o staff work needed to better coordinate activities/exchange of information among the DND/CF safety programs; and
 - o an integrated corporate picture, and central point of contact and referral for safety in DND/CF.

Program Success

- The injury rate, time-loss rate, and injury severity rate for the CF in particular, and for the DND should be further investigated to determine the potential for future reductions in rates once a complete and accurate database has been established.
- The core safety courses should be offered on-line or at-a-distance to the extent possible.
- An analysis of the impacts of specific approaches to program promotion and motivation should be conducted as a basis for reviewing and renewing the strategy on promotion and motivation.
- There should be greater sharing of information on safety strategies and materials across the DND/CF safety functions.
- Senior management should continue to demonstrate strong support to managers and supervisors for the Return to Work Program to ensure widespread acceptance and full implementation in the DND.



Program Design and Delivery

- New initiatives promulgated under the Functional Authority Framework should be costed and their resource implications should be considered before being issued to the field.
- The General Safety Program Consultative Framework should be strengthened to provide further opportunity for horizontal exchange of ideas in the GSO community and for influencing decision-making on the Program:
 - o The Consultative Group and the Working Groups should be strengthened and not disbanded, and should involve more GSOs in the meetings.
- The resource requirements/allocations for the General Safety Program should be determined on the basis of assessed health and safety risk at each location.
 - o Risk assessments should be conducted prior to making resource level decisions.
- Use should be made of external recruitment from university and college programs in safety.
- D Safe G should provide guidelines and case studies on the conduct of risk assessments and implementing a risk management strategy.
- Closer linkages should be forged between DND/CF safety programs and Human Systems Integration (ADM(S&T)) to facilitate its contribution to risk assessment/risk management strategies.
- An annual integrated report on safety should be developed in the DND/CF for the Defence Management Committee (DMC).
- D Safe G should develop guidelines for Command and Group GSOs on performance measurement and reporting requirements.

Program Alternatives

- Consideration should be given to a closer linkage of the DND/CF health and wellness programs and the General Safety Program through promotion and motivation activities and inter-program exchange of information.



PROGRAM PROFILE: THE GENERAL SAFETY PROGRAM

- **Mandate:** The Program is the DND/CF response to the Canada Labor Code, Part II, 2000, and to the DND/CF policy on General Safety which applies to the military (DOAD 2007-1). The Canada Occupational Health and Safety Regulations issued under the Canada Labor Code, Part II, cover seventeen specific subjects: permanent structures, temporary structures and excavations, elevating devices, boilers and pressure vessels, lighting, levels of sound, electrical safety, sanitation, hazardous substances, confined spaces, safety materials, equipment, devices and clothing, tools and machinery, materials handling, hazardous occurrence investigation, first aid, safe occupancy of the work place, and diving operations.
- The General Safety Program does not include and is distinct from other DND/CF specialized fields of safety and health that operate in functional areas of responsibility such as Flight Safety, Nuclear Safety, Fire Protection Safety, and Submarine Safety. (Annex A provides a complete listing.)
- The General Safety Program comprises DND and CF occupational safety, civilian occupational health, and the civilian Return to Work Program.
- **Program Objective:** “The General Safety Program has the objective of preventing accidental death or injury as well as accidental damage to, or destruction or loss of equipment, materiel, works and buildings. In accomplishing this aim, the Program helps to minimize personal suffering and financial losses, adds to the operational effectiveness of the CF and the efficiency of DND, meets legislative requirements, and contributes to the morale and well-being of all departmental personnel.”
- The Vice-Chief of the Defense Staff (VCDS) is the designated Level 1 with responsibility for the General Safety Program.
- The Directorate of General Safety (D Safe G) is responsible to the VCDS for overall Program policy, planning and administration (functional direction). D Safe G provides services and support in the following areas:
 - policy, legislation and regulatory framework;
 - training and education;
 - promotion and motivation;
 - occupational health;
 - civilian Return to Work Program;
 - legislative and regulatory interpretation and consultation service; and
 - maintenance of the accident information system and conduct of analysis.



- General Safety implementation in the DND/CF is a line responsibility:

Commanders, senior managers, commanding officers, leaders, managers and supervisors at all levels are responsible, accountable and liable for the safety of their personnel.

D Safe G web site: <http://vcds.mil.ca/dsafeg/org>

- **Resources** for the Directorate of General Safety are: \$1.422 M of which \$654 K is salary, \$569 K is for non-Directorate training, and \$199 K is for operations. There are about 105 General Safety Officers across the DND/CF who spend at least 10 per cent of their time on General Safety matters in their capacity as staff advisors.
- The **logic model** for the DND/CF General Safety Program depicts the relationship among the Program's activities, outputs, and expected short/medium-term and longer-term outcomes. (Refer to Annex B.)
- The interim **Functional Authority Framework** issued by the VCDS in November 2001 describes the roles, responsibilities, and accountabilities for occupational safety and health in the DND/CF in considerable detail.



WHY WAS THE EVALUATION CONDUCTED?

- The study was requested by the VCDS to address a number of salient evaluation issues pertaining to the interim Functional Authority Framework for the General Safety Program, interrelationships with the other DND/CF functional safety-related programs, as well as specific human resources matters.
- The Program has existed in the DND/CF for about thirty years and has not been formally evaluated. Moreover, the legal mandate for the Program, the Canada Labor Code, Part II, was revised in 2000 necessitating Program changes which have management and human resources implications.
- An environmental scan indicated that there has been a renewed emphasis on and new approaches to occupational health and safety in both the private and the public sectors.
- There has been a recent change in the senior management of the General Safety Program.
- The evaluation is expected to provide valuable information to management for future Program planning.



SCOPE OF THE EVALUATION STUDY

Letter of Notification issued by the Chief Review Services on 25-02-02 identifies the aim and scope of the evaluation (Annex C):

- To provide senior management with information to support decision-making on program mandate, organization, design and delivery.
- To document, to the extent possible, the main contributions made by the Program to prevention of accidents, injuries and damage to property.

EVALUATION ISSUES

Fourteen key evaluation issues were identified with sub-issues covering the categories: Program Rationale, Program Success, Program Design and Delivery, and Program Alternatives. The issues were identified through consultation with the VCDS and the Director of the General Safety Program, as well as through a review of documents and literature.

- The evaluation issues address the following subject areas:
 - clarity, comprehension and strength of the program mandate;
 - understanding and acceptance of the Functional Authority Framework;
 - potential for changes in the interrelations between the program and the 11 other safety programs of DND/CF;
 - nature of the program's impact on preventing accidents, injuries and property damage;
 - adequacy of human resources strategies for the General Safety Officer community;
 - adequacy of performance measurement, monitoring and reporting;
 - extent of use of risk assessment and risk management; and
 - possible improvements to the program and lessons learned from other organizations.
- This reporting deck presents findings/conclusions and where applicable, recommendations, for each evaluation issue of the study. All recommendations are addressed to the VCDS as the OPI for the General Safety Program.



HOW WAS THE STUDY DESIGNED? THE EVALUATION FRAMEWORK

- An evaluation framework was developed to guide the conduct of the study. The framework for two sample issues, which is shown below, clarifies the evaluation issues, identifies indicators for each issue, and outlines the methodologies for collection of information and data.
- The full evaluation framework appears at Annex D.

ISSUE	INDICATORS	METHODOLOGIES FOR INFORMATION AND DATA COLLECTION
<p>Is there need for changes in the interrelationships between the General Safety Programs of DND/CF? If so, through what institutional and informal means could this be realized?</p>	<ul style="list-style-type: none"> – Frequency and intensity of views on the benefits and costs of more/less coordination, integration and communication. – Analysis of suggestions for change. 	<ul style="list-style-type: none"> – Interviews: Program management of all safety program, Command staff; union representatives. – Questionnaire survey of the General Safety Officer (GSO) community.
<p>To what extent are risk management approaches being applied to occupational health and safety in the DND/CF? Where risk assessment is being applied, is risk management being practiced?</p>	<ul style="list-style-type: none"> – Identification of the extent and nature of the use of risk assessment and risk management. – Analysis of gaps. – Nature of practices in other organizations. 	<ul style="list-style-type: none"> – Interviews: Program management and staff, Command staff, unions. – Questionnaire Survey: GSOs. – Benchmarking: practices in other organizations.



HOW WERE INFORMATION AND DATA GATHERED? METHODOLOGIES

MULTIPLE-LINES-OF-ENQUIRY APPROACH

Information and data pertaining to each of the evaluation issues were obtained from a number of different sources to permit a comparison and weighing of evidence. As a result, conclusions are based on more than a single line of evidence using quantitative and qualitative approaches. The following are the methodologies that were applied:

Key Informant Personal Interviews

- About 130 interviews were conducted as follows:
 - management and staff of D Safe G and the 11 other functional safety programs at NDHQ and across all environments;
 - Commanding Officers, senior officers and supervisors within Groups and Commands;
 - senior General Safety Officers across all Environments;
 - members of Safety Committees; and
 - executives and members of DND Unions.

Questionnaire Survey of the DND/CF Safety Community

- All General Safety Officers (GSOs) spending 10 per cent or more time performing safety functions were surveyed (population size: 102). A response rate of 67.6 per cent was attained. A database was established.

Benchmarking

- Large organizations with well-established occupational health and safety organizations were surveyed on specific safety issues. Full comparative information is documented in a matrix at Annex E.
 - three federal departments and one crown Corporation;
 - three large private sector organizations;
 - three allied Defence organizations; and
 - ten documented case studies reviewed by the Canadian Labor and Business Center and meta-benchmarking by the Conference Board of Canada.



Other External Interviews

- Face-to-face and telephone interviews were conducted with senior officials of safety associations, educational institutions having occupational health and safety program, Human Resources Development Canada (as the regulator), and Treasury Board Secretariat.

Document and Literature Review

- This included: General Safety Program documentation, federal and provincial legislation and regulations, broad Web-based searches, documentation on other safety programs in Canada and internationally, text books, as well as technical studies. Comparative data on accident and injury rates from other organizations was assembled in a database.

Cost Calculation

- The Evaluation team undertook an order of magnitude estimate of the cost of occupational accidents, injuries and illness to the DND and the CF. The costing methodology which is in a nascent state of development is described in Annex F.



SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS BY ISSUE

PROGRAM RATIONALE

Does the Program continue to make sense in today's environment?

- **To what extent is the mandate of the Directorate of General Safety clear, understood and accepted by DND/CF occupational health and safety stakeholders? To what extent is the Program visible?**
 - From the survey of the General Safety Officer community, 70 per cent of the respondents indicated that managers/supervisors, commanding officers and workers understand and adhere to DND/CF General Safety policies and standards; 30 per cent responded that they do not fully understand the policies and standards. (Note that many military GSO positions are secondary-duty postings.)
 - The rationale for and functional mandate of D Safe G are widely accepted and relied upon by Commanders/managers to fulfill legislated obligations. (Canada Labour Code, Part II, Treasury Board Standards, National Defence Act, and provincial labour legislation.)
 - The Chain of Command reports that the General Safety Program has high visibility and utilization; moreover, there is reliance on support of D Safe G to meet their responsibilities and accountabilities.
 - TBS Public Service Employee Survey 2002: For DND, 83 per cent of respondents indicated that they know who to contact and they view managers as being committed to occupational health and safety. Across the Public Service, 80 per cent of the respondents indicated this response.
 - About one-third of the GSO respondents stated that the name “General Safety Program” conveys an unclear understanding of the nature of the Program, in particular outside DND. This concern was not raised by Commanders, managers, or supervisors interviewed for the evaluation. Other organizations surveyed use the phrase “occupational health and safety”, however, respondents cautioned that this would not be accurate terminology for the DND/CF since the mandate of the General Safety Program does not include CF health.
 - **Conclusion:** D Safe G's mandate is clear, understood and accepted by most stakeholders. Potential exists to further raise the level of understanding through training and program promotion.



- **Is the mandate of the Directorate sufficiently strong for the Program to achieve its objectives? What changes, if any, might be needed to help strengthen the mandate?**
 - The mandate of the D Safe G supports the strategic priority of the Chief of Defence Staff “putting people first”.
 - The mandate helps support organizational effectiveness by preserving resources through safe work practices.
 - A number of gaps relating to the mandate have been identified as follows:
 - o Program activities do not appear to address damage to/loss of property and physical assets as stated. (Note that the other organizations interviewed do not include this subject in their objective statements.)
 - o There is no integrated reporting at the corporate level on information from all DND/CF safety-related programs.
 - o There is insufficient central coordination and synergy among all safety programs of DND/CF.
 - The Program’s expertise and provision of support are highly valued by stakeholders.
 - The mandate should remain as is; adjustments in program activities could improve effectiveness. (These are discussed in other sections of the report.)

- **Is there need for change in the interrelationship between the General Safety Program and the eleven-specialized/functional safety programs in DND/CF? If so, through what institutional and informal means could this be realized?**
 - The functional safety authorities are separate, targeted at discrete types of risks, and are integral parts of technical programs. As such, each functional safety authority together with its corresponding technical program constitutes a knowledge community. The safety-related policies and procedures derive from and are linked to these technical programs. The functional safety authorities report to various Level 1s.
 - Some Base operational safety-related programs are organizationally linked, but the nature of the linkages varies considerably.



- Functional safety authorities should remain intact as separate organizations due to:
 - o legislative requirements and delegated authorities, e.g., Nuclear Safety delegated to DM/CDS, Flight Safety delegated to CAS through the Aeronautics Act;
 - o the uniqueness of training, skills and educational requirements in each function;
 - o the organizational proximity needed to relevant policy, licensing and regulatory groups e.g., Mobile Support Equipment Safety and Nuclear Safety; and
 - o safety specialty functions being integral components of technical programs.
- Better program interaction and exchange at the corporate level would be an advantage in the following areas:
 - o corporate reporting;
 - o promotion of the safety culture;
 - o training;
 - o risk assessment and risk management; and
 - o lessons learned/migration of ideas.

Recommendations:

- The DND/CF functional safety authorities should remain as separate organizations.
- A DND/CF Safety Support Secretariat should be established to:
 - o Provide the staff work needed to better coordinate activities/exchange information among the DND/CF safety programs for common functions such as corporate reporting, promotion and motivation, training, risk assessment/risk management, and documentation of lessons learned.
 - o Provide an integrated corporate picture and central point of contact for safety in the DND/CF.



- **Notes on the Proposed DND/CF Safety Support Secretariat:**
 - o To report to a senior corporate manager such as the VCDS to ensure that the interests of all safety functions are given adequate attention.
 - o To be responsive to the Chair of the DND Health and Safety Council which is a rotating position. (The Council is a forum for inter-program exchange.)
 - o Should be staffed on a matrix management basis from all the DND/CF safety programs; the staffing level would vary depending upon the projects undertaken at a given time. This will require the commitment and cooperation of the safety programs.
- **What review mechanisms does the Program have in place to ensure that its policy and procedures reflect the Canada Labor Code, Part II, the Canada Occupational Health and Safety Regulations and TBS directives and standards?**
 - D Safe G participates in meetings of TBS Safety, Health and Employee Services Group.
 - The General Safety Program has ongoing contact with Human Resources Development Canada.
 - D Safe G publishes Commanders'/managers' interpretation handbooks for clarification purposes.
 - Establishment of the National Health and Safety Policy Committee under the Canada Labour Code, Part II, provides a forum for discussion of policy changes by DND/CF management and unions.
 - **Conclusion:** The DND policy and standards are maintained up-to-date and promulgated to all GSOs through the Chain of Command.

PROGRAM SUCCESS

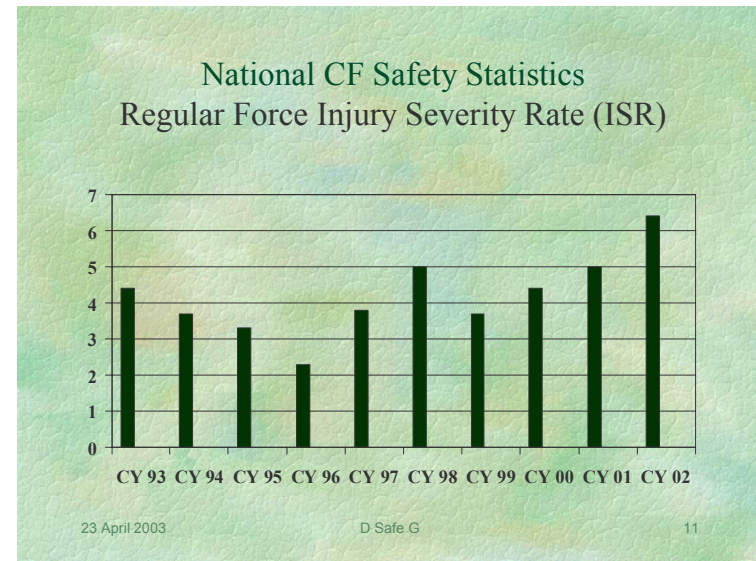
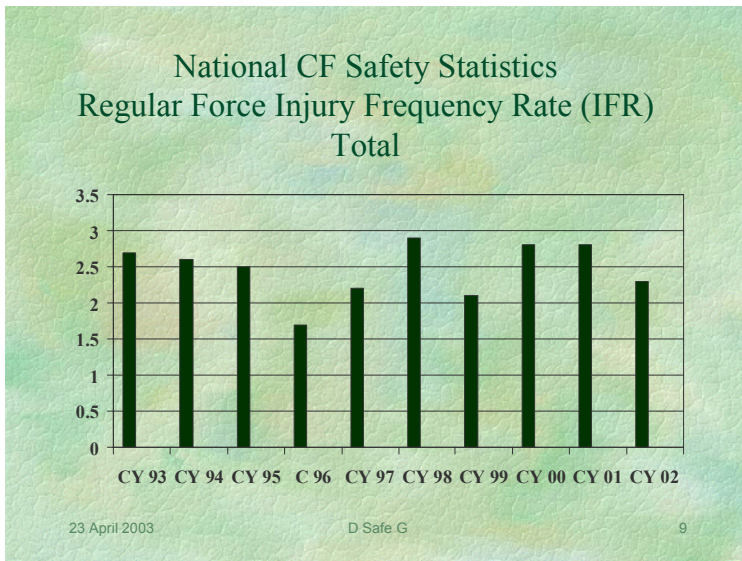
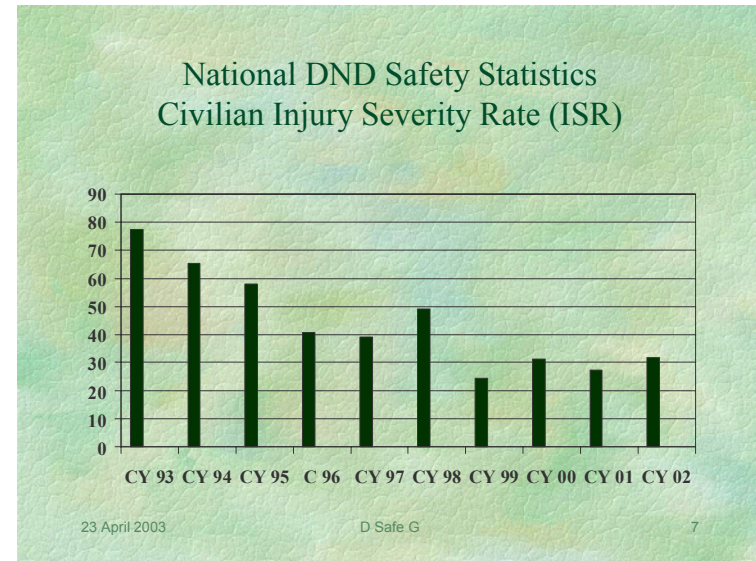
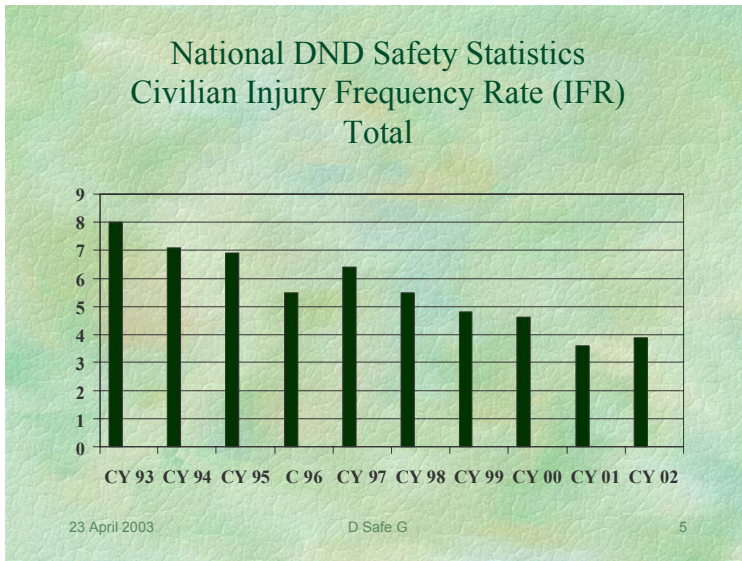
What impacts/outcomes does the Program appear to have realized?

- **How has the General Safety Program contributed to preventing accidental deaths or injury, as well as accidental damage to or destruction/loss of materiel, works and buildings?**



- What are the trends in the national DND/CF safety statistics for accidents, injury frequency rates, and injury severity rates? What are plausible explanations for the observed trends, and if possible, what are the estimates for the extent to which changes in the statistics can be attributed to the General Safety Program?
 - DND **reported** statistics for the period 1993-2002 are displayed on the attached graphs. The following trends are observed:
 - o Civilian Injury Frequency Rate: Downward trend from 8.1 in 1993 to 3.9 in 2002.
 - o Civilian Injury Severity Rate: Downward trend from 78.0 in 1993 to 32.0 in 2002.
 - o Regular Force Injury Frequency Rate: No discernable trend. About 2.5 on average.
 - o Regular Force Injury Severity Rate: No discernable trend. About 4.2 on average.
 - **Note:** Injury frequency rate: number of non-disabling and disabling injuries per 100 personnel. Injury severity rate: number of days off duty per 100 personnel. D Safe G staff indicate that all injuries are not being formally reported.
 - **Order of magnitude costs** of occupational injuries and illnesses in DND/CF as compared with other organizations indicates that DND/CF is lower. Information on the methodology developed and applied for the DND/CF estimates is provided in Annex F.
 - o DND/CF: 1.23 per cent of payroll*
 - o Large Canadian Corporation: 4.0 per cent of payroll**
 - o Conference Board Study: 7.1 per cent of payroll**
 - The D Safe G does not at present collect data or information on property damage/loss.
- * Also includes reported cost of damage to mobile support equipment, and (to the extent possible) occupational-related illnesses.
- ** Also includes costs of occupational-related illnesses (to the extent possible).

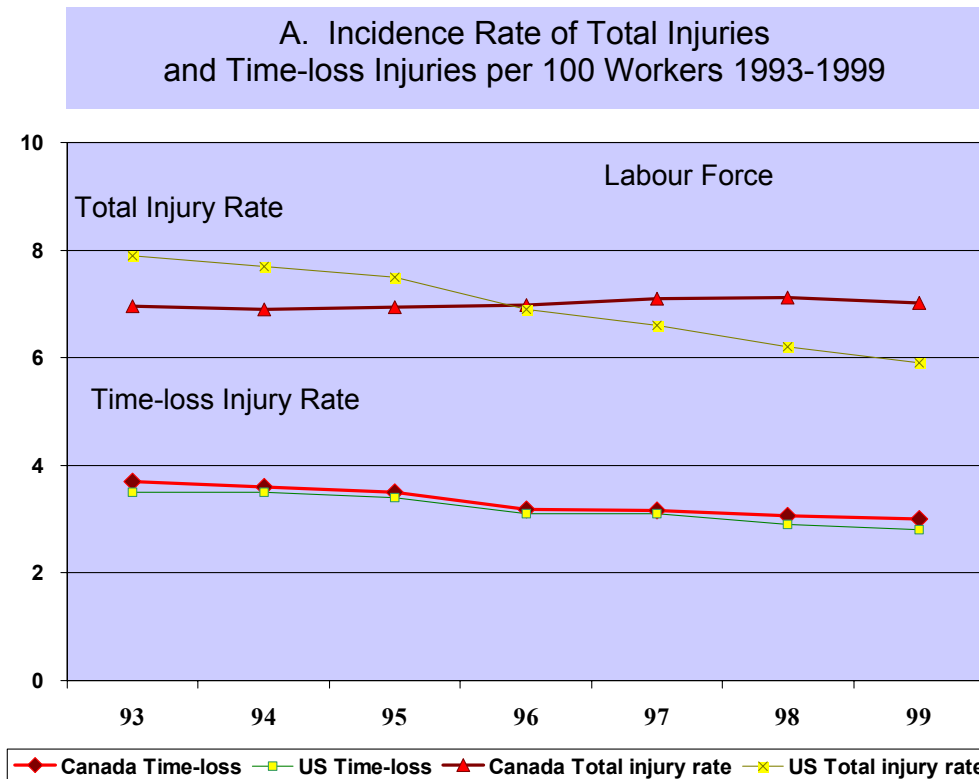




- **Comparative Data:** National Total Injury Rates and Time-Loss Injury Rates (refer to Graph A which follows), (Source: Human Resources Development Canada).
 - **Note that all comparative data on injuries must be treated with caution due to differences in definitions used and differences in the completeness of reporting.**
 - For the 1993-1999 period for all of Canada, the total annual injury rate has been stable – about 6.95 injuries per 100 workers.
 - For DND, the civilian total annual injury rate has been declining steadily (from 8.1 to 4.3 injuries per 100), and has been lower than the national rate since 1995.
 - For the 1993-1999 period for all of Canada, the time-loss injury rate has declined slightly from 3.65 time-loss injuries per 100 to 3.01.
 - The DND civilian time-loss injury rate has declined sharply from 4.84 time-loss injuries per 100 to 1.96; it has been lower than all of Canada since 1996.
 - (**Note:** For the 1993 – 1999 period, the US total annual injury rate declined slightly and has been lower than Canada’s since 1996. The US time-loss injury rate mirrors that of Canada for this period.)
- **Comparative Data:**
 - **Other Military Organizations:** UK, France, and US Navy - *Total Injury Rates Per 100 Personnel* (refer to Graph B which follows).
 - o **1993-2002:** Civilian total injury rates for all countries have been declining similar to DND. Total injury rates per 100 workers are close to DND civilian rates since 1996. Prior to 1996, the DND civilian injury rate was higher than the other countries. UK civilian injuries are available only for 1998-2001, and for this limited period of time, are somewhat lower than the other countries.
 - o **1993-2002:** Comparative military total injury rates are available only for the UK and only for 1998 – 2001. Rates for the UK are close to Canada’s military rates of injury.



- **Other Military Organizations:** France, US Army, US Navy, and US Air Force – *Time-Loss Injury Rates Per 100 Personnel* (refer to Graphs C and D which follow).
 - o **1993-2002:** The DND civilian time-loss injury rate has declined sharply from 4.84 time-loss injuries in 1993 to 1.47 time-loss injuries per 100 personnel in 2002. The other countries’ civilian time-loss injury rates have also declined for this period, but at a relatively gradual rate. The DND civilian time-loss rate was the highest of four military organizations for 1993, 1994 and 1995, but has shown the lowest rate for 1999, 2000, 2001 and 2002.
 - o **1993-2002:** The DND military time-loss injury rate has been quite stable for this period averaging 1.28 time-loss injuries per 100 personnel annually. The other countries’ rates also have been reasonably stable, but lower at between .3 and .6 time-loss injuries per 100 personnel.

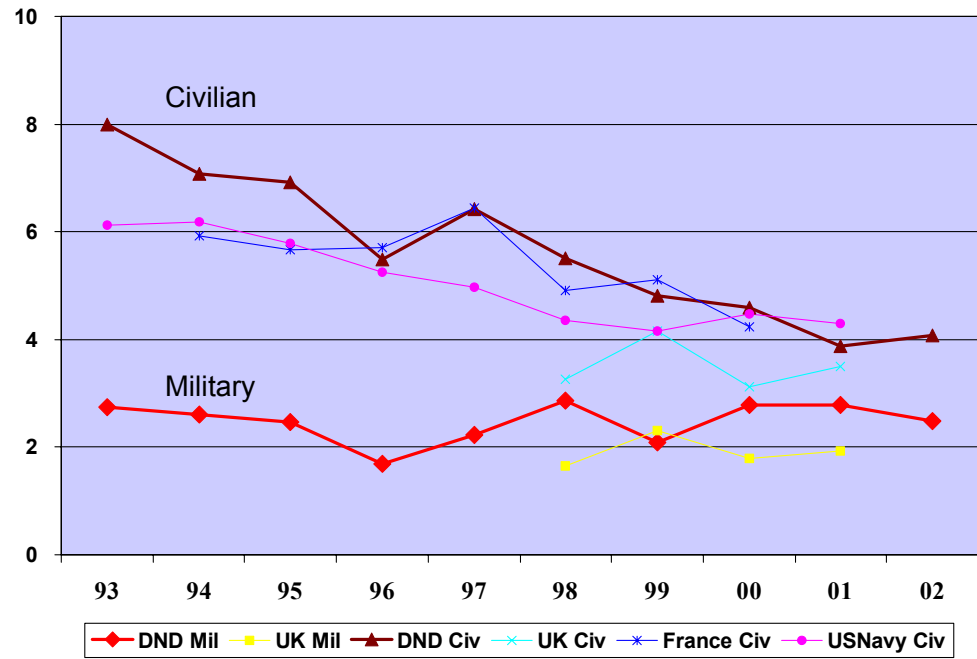


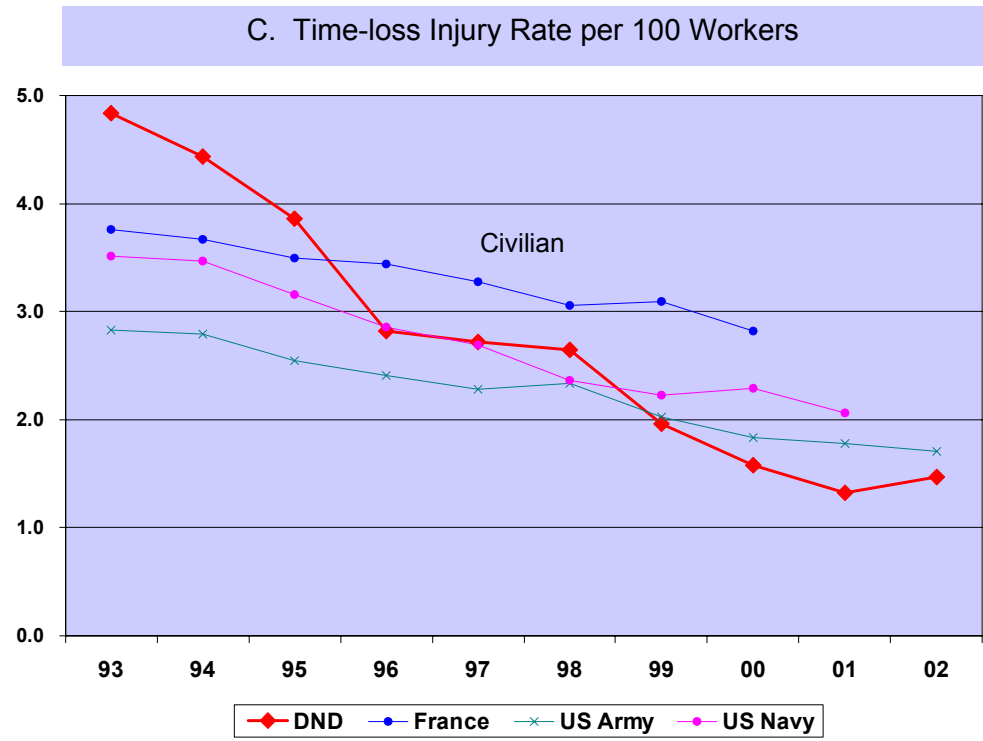
Canada: Human Resources Development Canada

U.S.: Occupational Health and Safety Administration

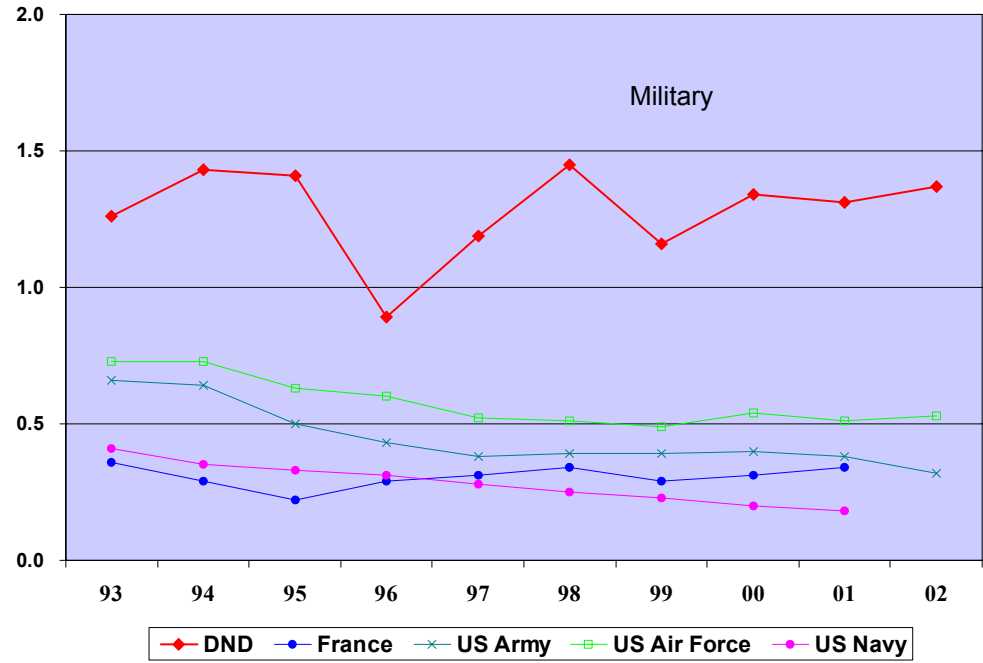


B. Total Injury Rate per 100 Workers





D. Time-loss Injury Rate per 100 Workers



– **Summary/Conclusions from Statistical Analysis**

- DND *civilian* injury rates, time-loss injury rates, and injury severity rates were trending downward for the period 1993-2001/02.
 - o Total civilian injury rate was lower than for all of Canada since 1996; similar to other militaries' rates since 1996.
 - o Total civilian time-loss injury rate was lower than for all Canada since 1996, and the lowest of other militaries for 1999-2002.
- DND *military* injury rates, time-loss injury rates and injury severity rates have no discernable trend – quite stable for 1993-2001/2002.
 - o DND total military injury rates are close to UK military (only other data available).
 - o DND military time-loss injury rates are stable as is the case for other militaries, but the other military rates are lower.
- **Injury rates** for the CF in particular should be further investigated to determine the potential for future reductions.
 - o Initial step – establishment of a complete and accurate database.
 - o Then, analysis of injuries by type/cause.

Recommendation:

- The injury rate, time-loss rate, and injury severity rate for the CF in particular, and for the DND should be further investigated to determine the potential for future reductions once a complete and accurate database has been established.



– **Note on Attribution of Program Impacts**

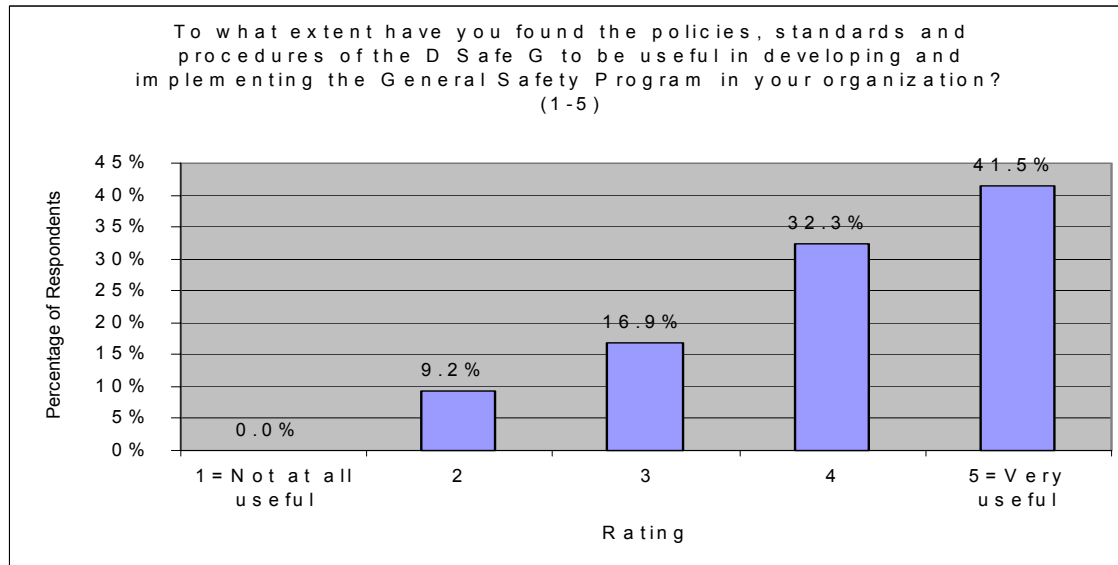
- Attribution, the estimation of the extent of impact of occupational health and safety programs on accident and injury rates, is difficult.
 - o Other factors are at play such as: variations in reporting rates, improvements in technology, changing demographics, and changes in societal values.
 - o The programs are required by legislation, and therefore there are not non-participating regions or Bases that can serve as “comparison groups”. Furthermore, the programs cannot be discontinued for a period of time in order to determine the extent to which they make a difference.
- Stakeholders and outside experts interviewed for the evaluation stated that:
 - o If there were no safety program, there would be no immediate impact on the accident and injury rate; however, over time the safety culture would erode and accidents would increase. The following is representative of the statements made.

“Safety is a continuous improvement program. In the absence of the Program, no new improvements to work practices would be introduced. Safety needs constant nurturing and this would not occur without the Program”.

- Sixty-eight per cent of GSOs rate the Program as making a great difference to reducing accidents and injuries in the DND/CF; an additional 30 per cent indicate the Program is making a difference.
- The most important Program components identified by interviewees for their impact on reducing accidents and injuries are:
 - o training and education;
 - o policies and standards as well as interpretation/consultation services; and
 - o promotion and motivation.

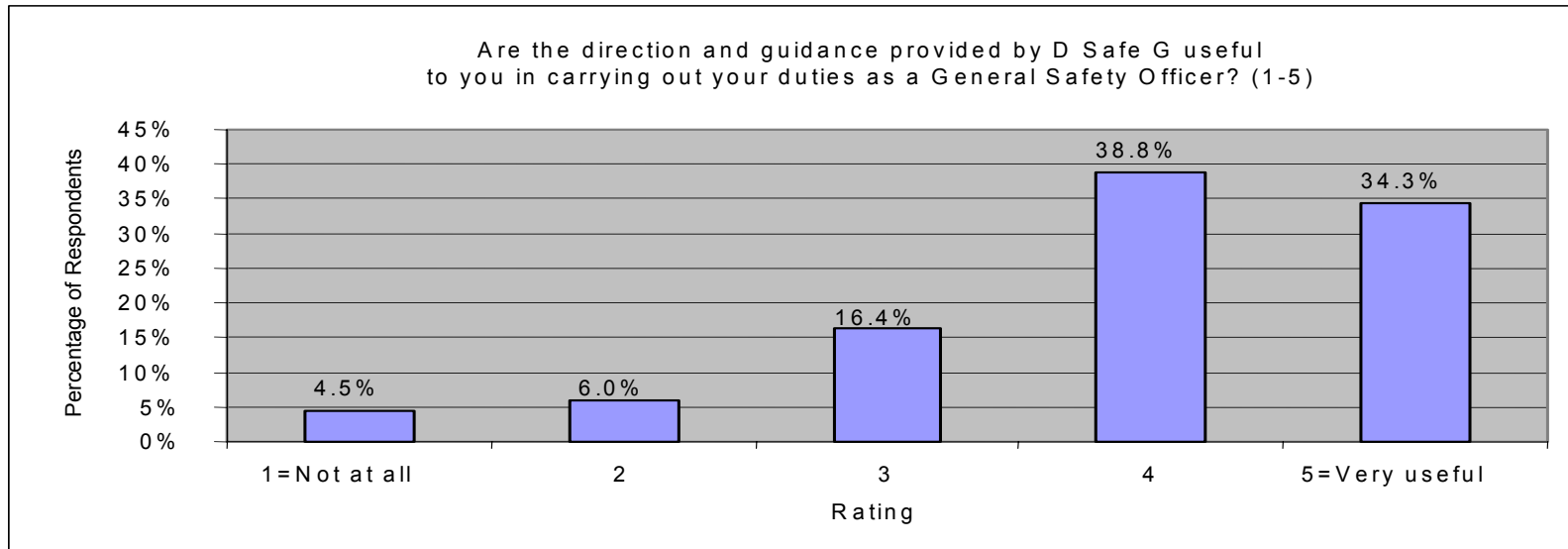


- To what extent have the policy and procedures of Directorate of General Safety provided leadership and direction to NDHQ Groups and CF Commands/areas for the development and implementation of their occupational health and safety programs?
 - **GSO Survey:** About 74 per cent rated the policy, procedures and the direction as useful to very useful.



- The DND/CF stakeholders state that the change in leadership of the D Safe G has resulted in:
 - o stronger direction for the Program;
 - o a more proactive approach to safety management;
 - o increased consultation with the safety community on policies and strategies; and
 - o revitalization of a 30 year-old program.

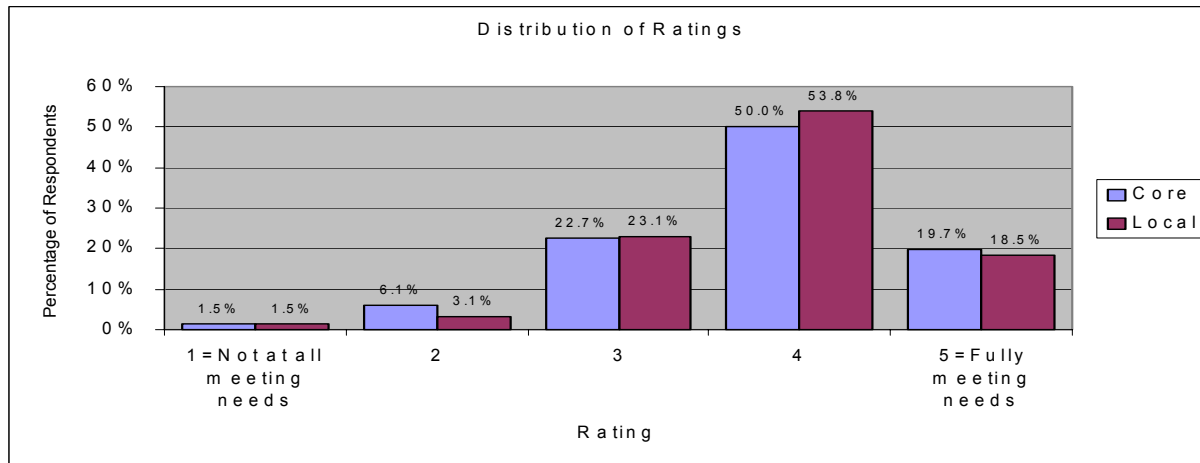




- **Are the centralized/core training courses meeting the needs of the target groups? Similarly, to what extent is the local training within the General Safety Program meeting the needs of the client group at that level? Are there any significant gaps in the training that is being offered on either a centralized or local basis?**
 - Seventy per cent of GSOs rate the core and local courses as clearly meeting the needs of the target groups; a further 20 per cent indicate that the courses reasonably meet training needs.
 - About 60 per cent rate the courses as definitely providing adequate preparation for their responsibilities as GSOs; an additional 25 per cent rate the courses as providing reasonably satisfactory preparation.



- Frequently mentioned gaps identified by interviewees and the GSO community are the following:
 - o ergonomics training;
 - o the supervision of construction contractors;
 - o establishment/management of the General Safety function;
 - o lack of time available to take courses, and therefore a need for more on-line and training at-a-distance courses; and
 - o training to maintain currency of knowledge.

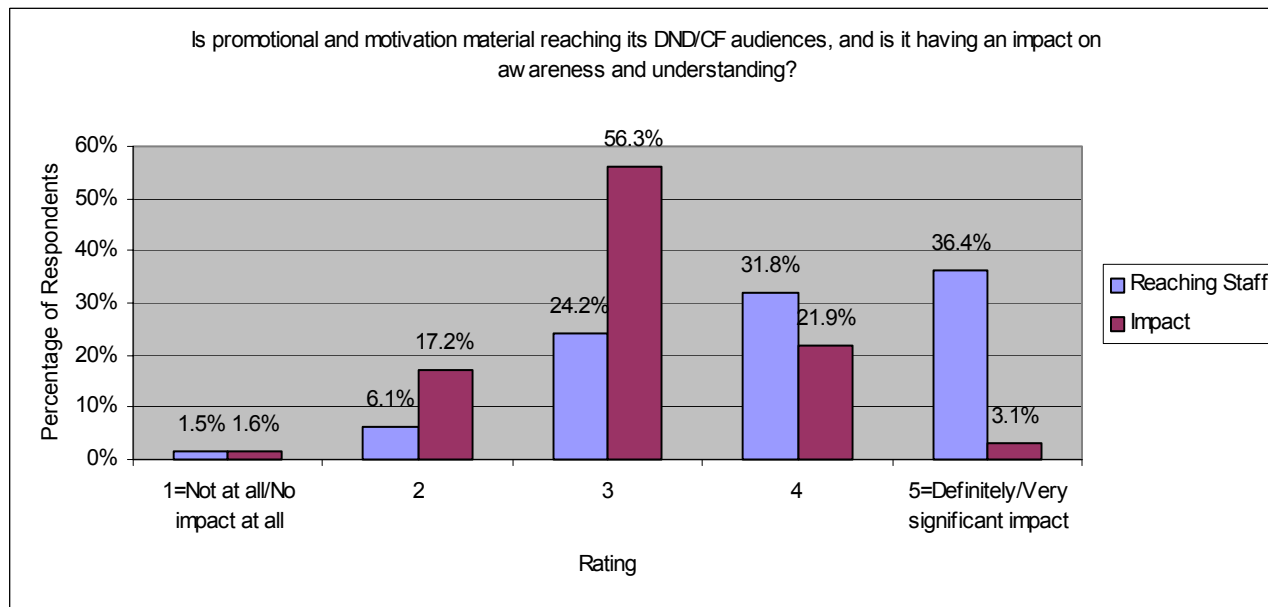


Recommendation:

- D Safe G should offer courses in ergonomics, supervision of construction contractors, establishment/management of the General Safety Program, and refresher training.
- The core safety courses should be offered also on-line or at-a-distance to the extent possible.

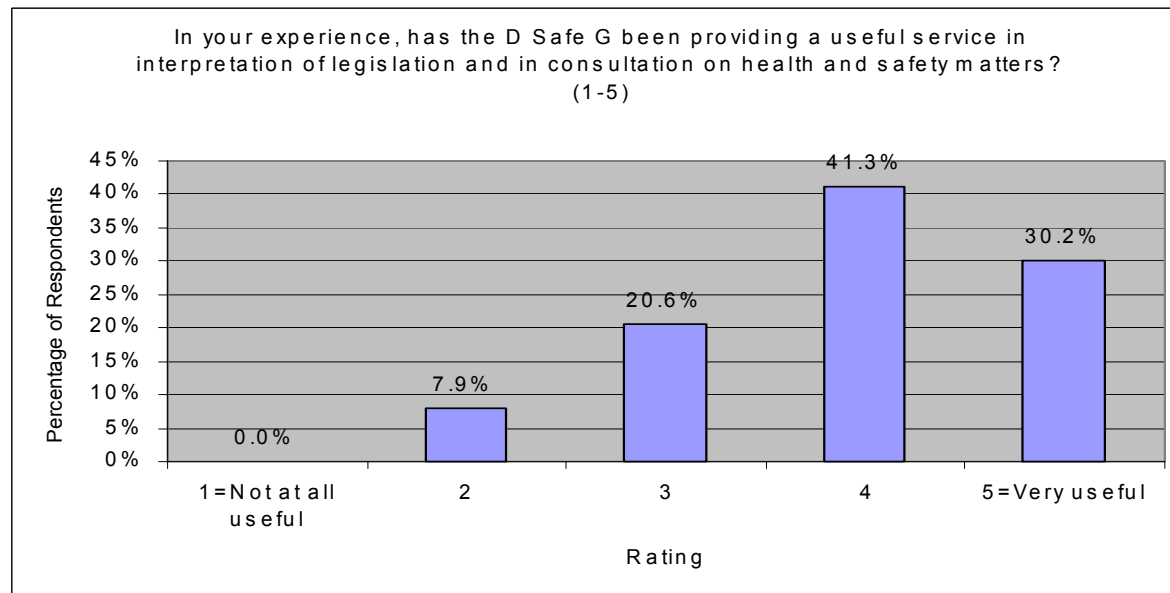


- **Is the occupational health and safety promotional and motivational material reaching its intended audiences? What has been the general impact of this material?**
 - There is strong anecdotal evidence from interviewee groups that material is reaching intended audiences.
 - D Safe G’s Commanders’/Managers’ Guides (“pocketbook editions”) have enhanced the awareness and relevance of the Program for managers and supervisors.
 - DND is one of a few organizations that has a publication dedicated to occupational safety, the “Safety Digest.”
 - There are opportunities for enhancement of the impact of promotional/motivational materials for the targeted audiences.



Recommendation:

- An analysis of the impacts of specific approaches to program promotion and motivation should be conducted as a basis for reviewing and renewing the strategy on promotion and motivation.
 - There should be a greater sharing of information on safety strategies and materials across the DND/CF safety functions.
 - A review of promotional materials should be conducted on a regular basis to ensure that they are relevant to current risks in the workplace.
 - A review the effectiveness of the Safety Digest as an insert to the Maple Leaf should be undertaken.
 - There should be greater use made of Web sites and E-Mail to disseminate safety promotional and motivational material.
- **To what extent are the legislation, interpretation and occupational health and safety consulting services of the Directorate of General Safety considered to be helpful by users in DND and in the CF?**



- User stakeholders indicate that the interpretation and consulting support services are clearly a highly valued, useful service of the D Safe G.

The credibility of functional authorities with line management is greatly dependent on the ability to provide value-added advice and expertise.

Dr. Walter Baker
Former Professor of Management
University of Ottawa

- **Conclusion:** The following quotation from the interviews conducted reflects a consensus on the conclusion. “The legislation and consultation service provided by D Safe G is excellent and necessary as there is the requirement to have available an expert to interpret the extensive body of legislative information which guides and directs the Program.”
- **To what extent do the DND users of the Occupational Health and Safety Program (OHSP) of Health Canada find the services to be satisfactory?**
- Services of Health Canada are used in locations where DND/CF expertise is lacking or unavailable. The services used have included: ergonomics, assessments of noise, toxic substances, air and water quality, and assessment for worker fitness certificates.
 - The responsiveness of Health Canada in a number of locations has been an issue, and this is attributed to insufficient resources on the part of Health Canada.
 - General Safety Officers rate the services as satisfactory to very satisfactory.
 - **Conclusion:** Health Canada is providing a satisfactory service to the DND users in most locations where the service has been used.
- **What have been the preliminary impacts of the Return to Work Program with respect to assisting injured or ill workers return to work more quickly than is likely to have occurred in the absence of the Program?**
- The Return to Work Program encourages injured or ill civilian employees of DND to return to the workplace by enabling them to undertake modified work schedules and/or duties that are consistent with their reduced capacity.



- The Program is new in the DND, and consequently experience-based information and performance data are limited.
- It has not been implemented at all locations to date due to lack of resources and command priorities.
- Where the Return to Work Program has been implemented, it is strongly supported by managers and the unions.
- There is resistance on the part of some managers to the Program because of the difficulty of accommodating returning workers who require modified or part-time responsibilities. This can be addressed through awareness training and more demonstration of senior level support. Interviewee opinion on the value of the Program is expressed in the following quotation:

“This Program has above all prevented the unintentional abandonment of injured employees.”

Recommendation:

- Senior management should continue to demonstrate strong support to managers and supervisors for the Return to Work Program to ensure widespread acceptance and full implementation in the DND.

PROGRAM DESIGN AND DELIVERY

Are the design and delivery components of the Program appropriate and do they appear to perform as planned?

The Functional Authority Framework

- **Are the accountabilities for the General Safety Program for DND/CF clear, and are the responsibilities as described in the Functional Authority Framework understood and acceptable to the stakeholders?**

The Functional Authority Framework is D Safe G’s authority to implement the General Safety Program and defines the linkages to the General Safety Officers and Commanders. It is intended to reinforce Commanders’ and managers’ responsibility for ensuring safety in the workplace. The Functional Authority Framework was issued by the VCDS in November 2001 on an interim basis; the VCDS is seeking confirmation of the content of the Framework document.

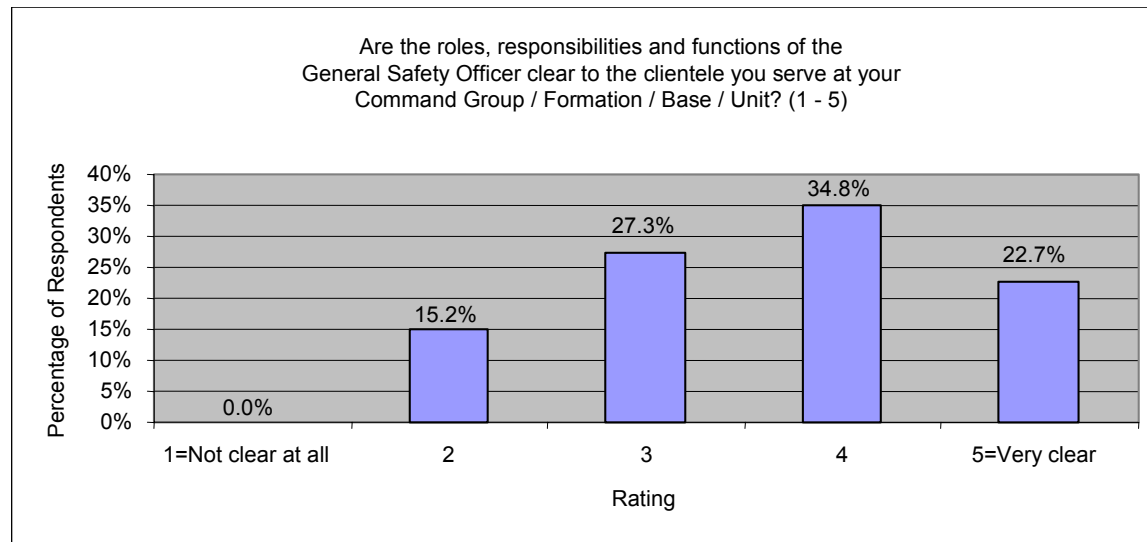
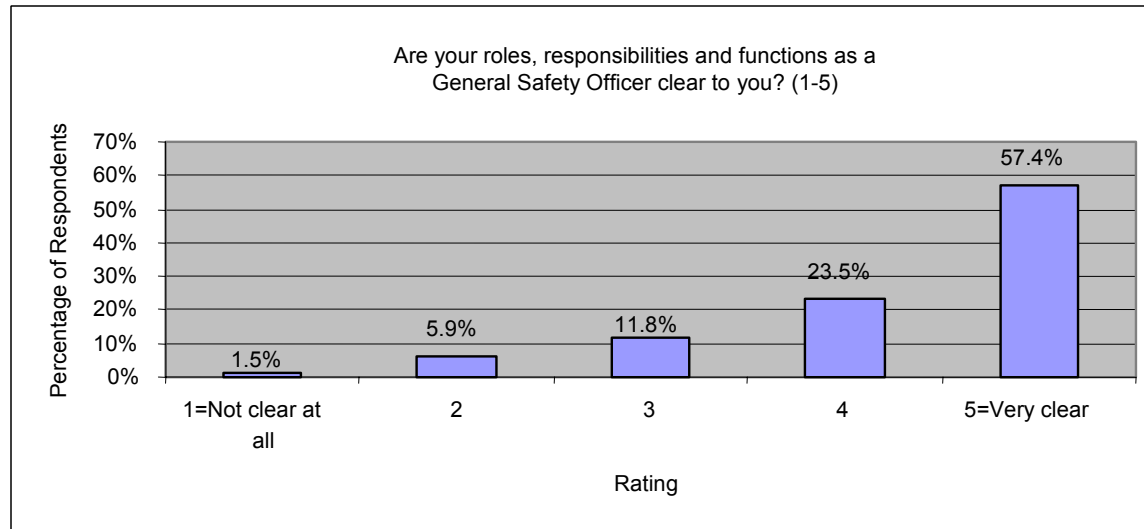


- GSOs, Commanders and senior managers are generally familiar with the Functional Authority Framework.
- There is overall acceptability of the Framework to all stakeholders interviewed for the evaluation.
- GSOs stated that they are very clear about their own responsibilities as described in the Framework; furthermore, they indicated that their roles are reasonably clear to their clients.
- The Functional Authority Framework has proven to be particularly useful due to turnover among members of the GSO community and due to the secondary duty nature of many GSO positions.
- New initiatives under the Functional Authority Framework such as the Return to Work Program are difficult to fully implement due to competing priorities in the field.

Recommendation:

- New initiatives promulgated under the Functional Authority Framework should be costed and their resource implications should be considered before being issued to the field.





- **Is the General Safety Program Consultative Framework performing satisfactorily in terms of coordinating the resolution of problems and development of policy positions pertaining to the General Safety Program?**
 - The Consultative Framework that is described in the Functional Authority Framework is intended to provide a core advisory body to the D Safe G on matters affecting the General Safety Program. The D Safe G considers the Consultative Framework as being essential for soliciting input to D Safe G on issues of current concern.
 - The Consultative Framework consists of a Steering Group (recently abolished), a Consultative Group, and Working Groups that may be convened as required. Members of the Groups are GSOs, a legal advisor, and officers of the D Safe G.
 - The survey of the GSO community indicates that only 34 per cent of GSOs have participated in the consultative framework and that the participation was valued.

“This new process is working great! In the past, most direction came from the D Safe G with little if any input from the field.”

- o There is inconsistent participation from across the GSO community.
- o GSOs would like more opportunities to provide input through the consultative framework.
- o Input and influence through consultative framework should be reflected in program decisions.
- o The Consultative Framework should be utilized as an opportunity for more horizontal exchange of ideas.

Recommendation:

- The General Safety Program Consultative Framework should be strengthened to provide further opportunity for horizontal exchange of ideas in the GSO community and for influencing decision-making on the Program.
- The Consultative Group and the Working Groups should be strengthened and not disbanded, and should involve more GSOs in the meetings.



Human Resources

- **To what extent is there a need for developing competency profiles and career progression criteria for General Safety Officers?**
 - The D Safe G has developed draft competency profiles for each level of General Safety Officer as part of a GSO career and professional development program (Human Resources Framework, September 2001).
 - **Survey of the GSO Community:** 72 per cent of the respondents rated the profiles as very useful and 13 per cent considered these to be reasonably useful.
 - o The profiles support professionalism and consistency across the GSO community.
 - o They are useful in identifying training needs.

“We need to have clear professional goals and targets to allow for career planning.”

- Competency profiles are in use in other occupational health and safety organizations, but this is not universal.

Recommendation:

- The competency profiles for the GSO community should be finalized and promulgated, and should include managerial/supervisory skills in addition to the technical skills.
- **What would be the relative benefits of requiring certification of General Safety Officers?**
 - GSO Survey results:
 - o Ten per cent of GSO respondents have certification – the Canadian Registered Safety Professional (CRSP) certification.
 - o Sixty-four per cent indicate they would be more credible or effective if they held a professional designation or the equivalent.



- Commanders/managers favour DND/CF experience, knowledge, as well as communication and management skills over formal certification.
- The benefits of formal certification include knowledge currency, credibility for the exercise of due diligence, acceptance of advice provided, and a reduction in the in-house training requirements.
- Benchmarking: Certification in Canadian industrial organizations:
 - o About 30 per cent of safety staff hold professional safety designations. CRSP is the most common.
 - o Corporate health and safety managers and specialized professional staff are often certified. Operational safety officers require knowledge of and experience in field operations, complemented by internal training.

"Due to the complexity of managing health and safety programs, knowledge and interpretation of legislation, complexity of hazards in the workplace, increased legislated obligations, due diligence responsibilities on behalf of management and significant cost to the organization of occupational accidents and injuries, there is an increased level of competence required."

Recommendation:

- There should be encouragement for the acquisition of certification or equivalencies for the senior General Safety Officers as identified in the competency profiles.
 - D Safe G should continue to support sponsorship of GSOs for the CRSP designation.
- **What indications are there at the present time that there are sufficient numbers of General Safety Officers in DND/CF to adequately perform the required responsibilities?**
- Results from the Survey of the GSO Community:
 - o Seventy-seven per cent of respondents report that they are unable to perform some Program responsibilities at various times due to lack of time or resources.



- o Examples frequently cited: Safety Program Development and Evaluation Technique (SPDETs), audits, training, reporting and statistical analysis, hazard inspections.
- o Seventy-five per cent are responsible for at least one other safety program in addition to General Safety; the most commonly mentioned programs are: nuclear and ionizing radiation safety, environmental protection program, laser safety, and radio frequency radiation safety.
- Commanders identified areas requiring additional attention due to competing priorities:
 - o on-site contractor supervision;
 - o maintaining training records;
 - o accident reporting;
 - o trend analysis and reporting; and
 - o maintaining hazardous materials inventories.
- However, it should be noted the Commanders interviewed stated that they are able to adequately exercise “due diligence”. This assertion is corroborated by senior officials of Human Resources Development Canada (Labour Program) and the Treasury Board Secretariat.

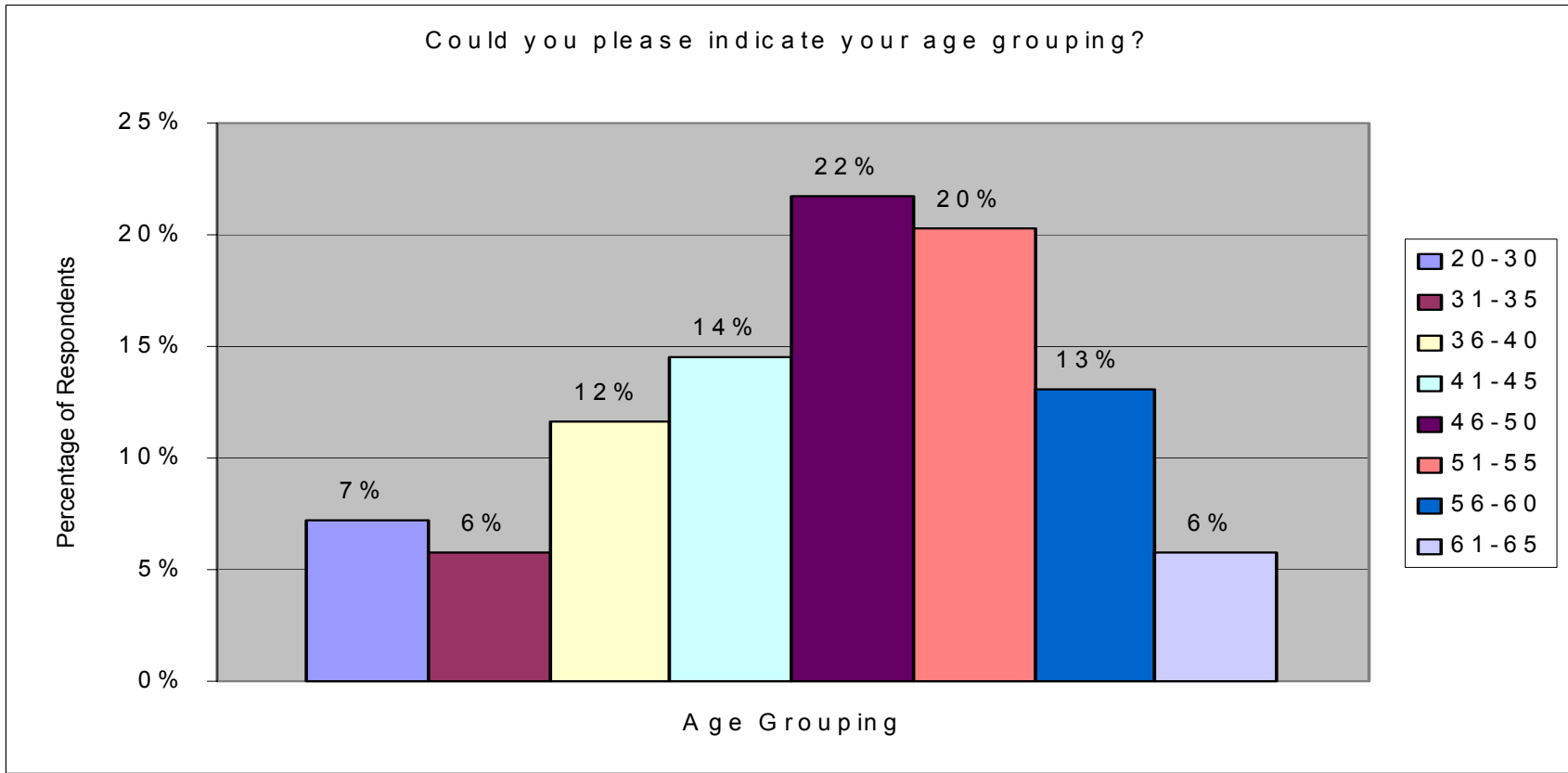
“In the field of safety, there is always more that can be done and innovative ideas or programs that can be put in place. There can never be enough education or communication – this is limited by time and people. More resources may not be essential to carry out a safety program, but there is a limit to the initiatives the program can take on and how thorough the program can be carried out. Expectations of clientele and demands of senior officers can exceed what a safety officer can accomplish. This problem is exacerbated by the fact that GSOs are often responsible for several programs and often accountable to different OPIs for each one – there is no single focus for the workload and it may not be obvious to one program manager that the GSO is overly tasked. As a result, GSOs’ efforts can be diffused over several initiatives in several programs.”



Recommendation:

- The resource requirements/allocations for the General Safety Program should be determined on the basis of the level of assessed health and safety risk at each location.
 - Risk assessments should be conducted prior to making resource level decisions.
- **Are there recruitment, retention and succession issues for the General Safety community in DND/CF, and if so, how could these issues be addressed/resolved?**
- The GSO survey reported that 39 per cent of all GSOs in DND/CF are greater than 51 years of age. Across the Public Service, 29 per cent of safety officers are over 51 years of age.
 - Sixty-one percent are greater than 46 years of age with the majority located at the Formation/Base/Wing level where there is little/no back-up.
 - There is no pool of individuals with sufficient safety training available to replace full time GSOs about to retire.
 - An aging workforce in the safety community is a common problem across industry and government.
 - While the practice of safety management is becoming more complex due to legislation, regulations, work environments and liabilities, the availability of skilled and knowledgeable personnel internal to the organization is restricted. Significant replacement of personnel will be required due to retirements within 5 – 10 years.





Recommendation:

- Use should be made of external recruitment from university and college programs in safety (Our interviews with other organizations and universities and colleges indicate that DND starting salaries are competitive).
- CF personnel should continue to be assigned to Unit GSO positions (these are secondary duty positions).
- There should be assurance that there is adequate program documentation to reduce learning time for new recruits.
- Potential attrition could be reduced by ensuring that there is a continuous supportive working environment. For example, professional and career development opportunities, input through use of the consultative framework, and horizontal exchange of ideas.

– To what extent do General Safety Officers have access to their Commanders?

- From the survey of GSOs, 82 per cent of respondents stated they have very good to excellent access to their Commanding Officers.
- Eighty-one per cent stated they are able to greatly influence commanders and managers who are accountable for making safety-related decisions.
- Seventy-three per cent of GSOs report that they receive appropriate direction and guidance from their chain of command to carry out their safety program.
- Commanding officers acknowledged that providing access to their General Safety Officers is essential for ensuring that “due diligence” is exercised and to be proactive in reducing the potential for accidents or unsafe practices.
- Organizations that have risk management cells that include safety disciplines may have non-safety specialists reporting to Commanders. In these cases, the impact of the safety message can be reduced.
- **Conclusion:** Ample opportunities for access and interaction between the GSOs and responsible Commanders and managers are available across DND and the CF.



Risk Assessment and Risk Management

- **To what extent are risk management and risk assessment approaches being applied to occupational health and safety in the DND/CF? Where risk assessment is being applied, is risk management being practiced?**
 - Risk management refers to measures and systems put into place that are intended to reduce the likelihood aspect of risk, reduce the severity aspect of risk, or to reduce both the likelihood and the severity aspects of risk. Occupational health and safety risk is defined as the likelihood of a hazard occurring \times the severity of the loss Health and Safety Risk Management, Dr. Tony Boyle.
 - The GSO survey reports that 63 per cent of the respondents are applying risk management and risk assessment to occupational health and safety activities at their location.
 - However, safety risk assessment/management activity is equated with the conduct of audits, SPDETs, and specific ‘job hazard assessments’.
 - Absence of systematic risk management/assessment in DND is attributed to a lack of corporate guidance, training in risk management techniques, and resource constraints.
 - Benchmarking with industry indicates that safety risk management and assessment is limited to identifying, limiting and managing risks and hazards for specific tasks and contributing to continuous improvements in work processes. Safety risk management/assessment is not being carried out at a “macro level” in organizations.
 - Implementation of a safety risk management regime will require a comprehensive database of hazards, accidents and work practices. Safety risk management contributes to a ‘preventative’ safety culture and moves away from a ‘reactive’ safety culture.

Recommendation:

- D Safe G should provide guidance and case studies on the conduct of risk assessments and implementing a risk management strategy (drawing on the experiences of other programs such as Flight Safety and Nuclear Safety).
- Closer linkages should be forged between DND/CF safety programs and Human Systems Integration (ADM(S&T)) to facilitate its contribution to risk assessment/risk management strategies.



- **Note:** Human Systems Integration is the integration of human factors engineering, training, system safety, and health hazard assessment in the acquisition of materiel systems.

Performance Measurement and Reporting

- **Are the DND/CF summary reports on accidents, injuries and property damage/loss being distributed to key decision-makers on occupational health and safety? To what extent is the information contained in the reports useful and being used in decision-making? Are there changes in content and presentation of the information that would enhance the impact of the reports?**
 - Performance measurement means the collection of data for the purpose of the conduct of analyses. Performance monitoring refers to the ongoing monitoring of trends and compliance with standards so that corrective action can be taken where necessary. Health and Safety: Risk Management, Dr. Tony Boyle.
 - The GSO survey indicates that 70 per cent of respondents provide a regular, formal safety management report to their local commanders/managers.
 - Common report contents include: accident and injury statistics, safety audit results, training activities, information on safety inspections and suggestions for improvements.
 - Analysis and reporting of safety trend information is inconsistent and varies depending on the location.
 - Variations in the information reported are attributed to differences in Commander/senior management expectations and resource constraints across the GSO community.
 - Variation in the rates of reporting accidents, injuries and incidents across DND and the CF are attributed to:
 - absence of feedback to those inputting information on how it is being used;
 - unfamiliarity with the Health and Safety Module of the Human Resource Management Information System;
 - paper burden and resource constraints; and
 - low reporting rates from operational units, reserves, cadets, rangers, contractors and NPF employees.



- Commanding Officers and senior departmental managers stated that they were satisfied with the safety performance information they received for decision-making purposes, but required the following additional information:
 - o more analyses of trends on types of accidents, injuries and incidents for individual locations and across DND/CF;
 - o comparative information from other locations, suggestions for improvement and lessons learned; and
 - o inclusion of additional performance indicators such as percentage of target audience receiving safety training, percentage of target population receiving promotional materials, actions taken on SPDETs and safety audits.
- Level 1s state that they require an “integrated”, annual management report from all DND/CF safety programs that would include:
 - o key trends in statistics and their implications for actions required;
 - o update on legislative and regulatory changes and their implications for DND/CF; and
 - o “Overview of the “State of Safety in DND/CF”.

“We want a report on the current state of each safety program in the Department which would go to the DM and the CDS because it is important that the top people have clarity and understanding about information on safety.”

Recommendations:

- An annual integrated report on safety should be developed in DND/CF for DMC (responsibility could be assigned to the proposed Safety Support Secretariat referred to under Issue 2).
- D Safe G should develop guidelines for Command and Group GSOs on performance measurement and reporting requirements.
- The proposed Safety Secretariat should assemble safety information of horizontal interest across Bases and Commands; use web site and e-mail communication to disseminate the information.



- Information should be communicated to those responsible for inputting data on accidents/injuries on its utilization to encourage better reporting.

PROGRAM ALTERNATIVES

In summary, from the findings of the evaluation study, what key changes should be made to the Program to enhance achievement of its objectives?

- **From the findings of the evaluation study, are there changes that could be made to the design, organizational structure and delivery of the General Safety Program that might better achieve the Program’s objectives, and are there any cost implications of these?**
- **What are the lessons learned from other organizations in the public and private sectors that could be applied advantageously to the DND/CF General Safety Program?**

Summary of Possible Changes to the Design and Delivery of the Program

- *Rejuvenation of the Consultative Framework of the General Safety Program*
 - There is increased opportunity and expectation to enhance the sharing of information, lessons learned and management practices within the GSO community (small cost).
 - There is increased potential to further use the D Safe G web site for sharing information on accidents, incidents and lessons learned (small cost).



- ***Strengthening the Synergy among all DND/CF Safety-Related Programs in Areas of Common Interest***
 - Implementation of a matrix-managed DND/CF Safety Secretariat, which reports to a Level 1 executive such as the VCDS, would provide coordination and staff support for common interests such as:
 - o Safety program promotion and motivation, training, management practices (such as risk management).
 - o Integrated corporate reporting on the DND/CF safety programs.
- ***Enhancing the Contribution of Human Performance Integration (ADM(S&T)) to the Safety Program***
 - Data and trend information from the General Safety Program and other safety programs should be shared with the Human Performance Integration cell to link the analysis of human systems integration to the development of proactive approaches to improving safety.

There is a limit to the health and safety performance an organization can achieve without addressing the contribution which human factors have to play eliminating occupational accidents and ill health.

Health and Safety: Risk Management, Dr. Tony Boyle

- ***Clarification of the Legal Framework and Application of the Canada Labour Code to the CF***
 - Commanders at all levels indicated there is an inconsistent understanding of “operational requirements” where the Code applies and where circumstances exempt the CF from applications of the Code.
 - The Code, Part II, also applies to visitors and contractors granted access to DND/CF workplaces. Obligations of the Department to these persons are not clear.
 - Clarification of these issues needs to be addressed through communication activities, training and orientation, and publication and discussion of case precedents (small cost).



The Canada Labor Code, Part II, applies to all DND civilian employees and to CF members who supervise civilian employees. DND policy and regulations state that the CF must comply with the Code *except where it limits operational effectiveness*.

– ***Assessment of Workload of GSOs***

- Program activities such as safety audits, SPDETs, data entry, and management reporting receive insufficient attention at various times as the demands of Commanders and clientele often exceed the capacity of the GSO community. GSO responsibilities for several safety programs reporting to various OPIs, reduces visibility of workload.
- It is difficult to link program outcomes directly to resource levels. Resource levels should be based therefore on the risk assessed at each location.

– ***Enhancement of Training***

- Occupational health and safety management is becoming a “more professional” discipline due to legislated requirements and complexity of the work environment.
- Competency profiles identifying essential training requirements for GSO positions are integral to the Competency-Based Management process being implemented in the Department.
- Training programs provided by D Safe G should address both organization-specific content and subject matter knowledge as well as the general management skills required to direct a safety program. Advantage should be taken of safety management training courses offered through universities and colleges as well as other formal training venues such as professional associations.
- Availability of training opportunities should be enhanced by using e-training, distance learning, and development of abbreviated refresher training courses (cost implication).

Competency-Based Management is the application of a set of competencies to manage human resources so as to achieve results that are relevant to an organization’s business strategies.



– *Building on the DND/CF Safety Culture*

- Interviewees state that the D Safe G is currently raising the awareness of the DND/CF safety culture.
- The DND/CF safety culture was viewed positively in the 2002 PSC survey of employees.
- DND Union executives have a positive view of the General Safety Program and of union-management relations on safety matters.
- The General Safety Program needs to move more in the direction of a risk management safety culture and away from an enforcement/reactive culture.

The prevailing health and safety culture within an organization is a major influence on the health and safety-related behaviour of people at work. Developing a positive health and safety culture is important if high standards of health and safety are to be achieved and maintained.
Health and Safety Executive (UK), 1994

Summary of Benchmarking Information (Refer to Annex E for a complete summary.)

– *Organization and Governance*

- The governance framework for health and safety organizations in other government departments and industry corresponds to the DND/CF functional accountability framework.
- Functional direction and guidance provided by a corporate occupational health and safety management organization ensures that policies, standards and practices are consistently applied across the organization while allowing flexibility in tailoring program implementation by business lines.
- Existence of a strong safety culture is attributed to senior management commitment to the program and affirmation that health and safety is a core value of the organization.



– *Human Resource Management*

- Professional safety designations are not commonly mandated by organizations, but are preferred for external recruits.
- The most common professional designation is the CRSP (Canadian Registered Safety Professional). D Safe G's encouragement to members of the GSO community to acquire the CRSP follows the industry practice.
- Recruitment and succession planning for safety professionals is a priority in safety organizations since the workforce is aging.

– *Performance Measurement*

- Data most commonly collected is on accidents and injuries. Unreported accidents, injuries and incidents are a common and significant problem.

– *Risk Assessment/Risk Management*

- Risk assessment is commonly limited to hazard assessments for specific jobs and tasks. Risk assessment is used by industry to identify training needs for specific jobs. Risk management at the corporate-level has not yet been formalized.

– *Management of Specialty Safety Programs*

- Specialty safety programs are normally aligned with their appropriate business operations to ensure applicability and technical competence. The safety program component is integral to operations. The DND/CF is consistent with this alignment model.

– *Trends and Emerging Issues in Safety Management*

- Organizations are striving to inculcate a strong organization-wide safety culture.
- Safety management organizations have recognized the requirement for a comprehensive risk management approach to safety.



- There is a recognized need to improve the accuracy and completeness of reporting of accidents, injuries and incidents.
- Accountability and responsibility for the health and safety of third parties in the workplace is an emerging issue.
- There is increased attention being given to ergonomics and human systems integration.
- Health and safety programs are seen as integral to continuous improvement.
- There is a shift of emphasis from traditional issues of accident prevention to addressing health and safety as a lifestyle issue:
 - o Industry research has noted that only 15 per cent of lost-time from work is due to occupational accidents and injuries while 85 per cent of lost time is due to lifestyle factors.
 - o Health and wellness programs are commonly being incorporated into occupational health and safety responsibilities to address time lost issues.
- Extensive use is being made of web-based and e-training strategies to ensure timely and accessible safety training.

Recommendations:

- There should be clarification of the application of the Canada Labor Code, Part II, to the Canadian Forces, specifically with regard to “operational effectiveness” circumstances, and the application of the Code to visitors and contractors on DND/CF premises by developing case studies and including this subject in training and awareness activities.
- Consideration should be given to a closer linkage of DND/CF health and wellness programs with the General Safety Program through promotion and motivation activities, and inter-program exchange of information. (Potential role for the proposed Safety Support Secretariat.)



SUMMARY OF RECOMMENDATIONS OF THE EVALUATION STUDY

The recommendations are addressed to the Vice Chief of Defence Staff as the OPI for the Program.

– Program Rationale

- The General Safety Program's mandate should remain distinct from other DND/CF safety programs in order to continue to meet the Canada Labour Code requirements and to preserve the unique policy and technical expertise.
- D Safe G's objective statement should clarify its responsibilities for damage to/loss of property.
- The DND/CF functional safety authorities should remain as separate organizations.
- A DND/CF Safety Support Secretariat should be established to:
 - o provide the staff work needed to better coordinate activities/exchange of information among the DND/CF safety programs for common functions; and
 - o provide an integrated corporate picture and central point of contact for safety in DND/CF.

– Program Success

- The injury rate, time-loss rate, and injury severity rate for the CF in particular, and for DND should be further investigated to determine the potential for future reductions once a complete and accurate database has been established.
- D Safe G should offer courses in ergonomics, supervision of construction contractors, establishment/management of the General Safety Program, and refresher training.
- The core safety courses should be offered on-line or at-a-distance to the extent possible.
- An analysis of the impacts of specific approaches to program promotion and motivation should be conducted as a basis for reviewing and renewing the strategy on promotion and motivation.



- There should be a greater sharing of information on safety strategies and materials across the DND/CF safety functions.
 - A review of the promotional materials should be conducted on a regular basis to ensure that they are relevant to current risks in the workplace.
 - A review of the effectiveness of the safety digest as an insert to the Maple Leaf should be undertaken.
 - There should be greater use made of the Web and E-Mail to disseminate safety promotional and motivational material.
 - Senior management should continue to demonstrate strong support to managers and supervisors for the Return to Work Program to ensure widespread acceptance and full implementation in DND.
- **Program Design and Delivery: The Functional Authority Framework**
- New initiatives promulgated under the Functional Authority Framework should be costed and their resource implications should be considered before being issued to the field.
 - The General Safety Program Consultative Framework should be strengthened to provide further opportunity for horizontal exchange of ideas in the GSO community and for influencing decision-making on the Program.
 - o The Consultative Group and the Working Groups should be strengthened and not disbanded, and should involve more GSOs in the meetings.
- **Program Design and Delivery: Human Resources**
- The competency profiles for the GSO community should be finalized and promulgated, and should include managerial/supervisory skills in addition to technical skills.
 - There should be encouragement for the acquisition of certification or equivalencies for the senior General Safety Officers as identified in the competency profiles.
 - D Safe G should continue to support sponsorship for GSOs for the CRSP designation.



- The resource requirements/allocations for the General Safety Program should be determined on the basis of assessed health and safety risk at each location.
 - Risk assessments should be conducted prior to making resource level decisions.
 - Use should be made of external recruitment from university and college programs in safety.
 - CF personnel should continue to be assigned to Unit GSO positions (these are secondary duty positions).
 - There should be assurance that there is adequate program documentation to reduce learning time for new recruits.
 - Potential attrition could be reduced by ensuring that there is a continuous supportive working environment.
- **Program Design and Delivery: Risk Assessment/Risk Management**
- D Safe G should provide guidelines and case studies on the conduct of risk assessments and implementing a risk management strategy.
 - Closer linkages should be forged between the DND/CF safety programs and Human Systems Integration (ADM(S&T)) to facilitate its contribution to risk assessment/risk management strategies.
- **Program Design and Delivery: Performance Measurement and Reporting**
- An annual integrated report on safety should be developed in the DND/CF for DMC.
 - D Safe G should develop guidelines for Command and Group GSOs on performance measurement and reporting requirements.
 - The proposed Safety Support Secretariat should assemble information of horizontal interest across Bases and Commands: use web site and e-mail communication to disseminate the information.
 - Information should be communicated to those responsible for inputting data on accidents/injuries on its utilization to encourage better reporting.



– **Program Alternatives**

- There should be clarification of the application of the Canada Labor Code, Part II, to the Canadian Forces, specifically with regard to “operational effectiveness” circumstances, as well as clarification of the application of the Code to visitors and contractors on DND/CF premises, by developing case studies and including this subject in training and awareness activities.
- Consideration should be given to closer linkage of DND/CF health and wellness programs with the General Safety Program through promotion and motivation activities, and inter-program exchange of information.



INTERIM MANAGEMENT ACTION PLAN

PROGRAM RATIONALE

Recommendation 1: The General Safety Program's mandate should remain distinct from other DND/CF safety programs in order to meet the Canada Labour Code requirements and to preserve the unique policy and technical expertise.

Response: Agree. Occupational health and safety for civilian employees are mandated by the Canada Labour Code, Part II and regulated by a cascading framework of regulations, standards and directives that are captured in existing departmental General Safety Program policy.

The General Safety Program is the largest safety program in DND and impacts on every person and activity directly associated with the DND/CF. The Program is organised and documented to meet that challenge.

It is suggested that the scope of the General Safety Program and its pre-eminence within the departmental safety community be recognised by changing the status of the responsible NDHQ body from a Directorate to a Division within the VCDS Group. This would be consistent with the status afforded the much smaller Nuclear Safety Program and would provide the head of the organisation with increased influence when dealing with clients.

Recommendation 2: D Safe G's objective statement should clarify its responsibilities with respect to damage/loss of property.

Response: Prevention of damage/loss to property is included in the mandate of the General Safety Program and, therefore, into that of D Safe G. General Safety policy, procedures and practices are in place to satisfy that mandate. What are missing however, are well-defined criteria and processes for the capture and recording of damages/losses to materiel and property. With the recent introduction of the new HRMS Health and Safety module, it is expected that the means are available to improve this situation. It has, however, been given relatively low priority until the reporting of personnel accidents and injuries has been implemented at a fully satisfactory level. It is expected that initial steps to improve the situation respecting materiel and property losses will be taken.

Recommendation 3: The DND/CF functional safety authorities should remain as separate organizations.

Response: In principle, this recommendation is supported. By and large, each safety program represents a specific safety discipline, mandated either by legislation or by technical necessity. That being said, it must be remembered that the clients of these safety programs rarely consider, nor should they be required to consider, which safety program has failed to prevent their accidents. To the victims, safety is safety!



It is therefore, thought necessary to consider whether or not the existing plethora of discrete programs is necessary -can some amalgamation be carried out to facilitate overall synergy and to reduce confusion in the field?

Notwithstanding their technical differences, it is suggested that a Radiation Safety Program consisting of nuclear, laser and radio frequency radiation might be considered as a means of achieving greater efficiencies and more focus. The requirement for technical expertise in each area would remain, but could, perhaps be coordinated more economically through amalgamation. Certainly, such amalgamation might erase the "orphan" status currently enjoyed by laser and radio frequency safety.

Finally, it is suggested that the designation of the Respiratory Protection Program as a separate program might not be necessary and could be carried out with equal effectiveness as a sub-element of the Fire Safety Program.

The above does not question the necessity for any of the programs mentioned, but rather, seeks ways in which they could be delivered in a manner that is less confusing to the client.

Confirmation/rationalization of the Departmental safety structure should be undertaken in the medium term.

Recommendation 4: A DND Safety Secretariat should be established to:

- provide the staff work needed to better coordinate/exchange information among the DND/CF safety programs for common functions; and
- provide an integrated corporate picture and central point of contact for safety in DND/CF.

Response: D Safe G strongly supports this proposal in principle as being the key to increased safety synergy. However, D Safe G considers that the existing DND/CF Council provides the basis for the suggested Secretariat. Nevertheless, for it to function effectively in such a role, it must have appropriate accountability and oversight. Currently, the Council reports to no one and establishes its own agenda. As a result, its effectiveness as a forum for change and for safety synergy has been limited. D Safe G suggests that the DND/CF Safety Council should report to Defence Management Committee (DMC), or some other senior departmental executive body and respond to direction from that body.

The identification of an appropriately staffed and mandated Departmental Secretariat (or DND/CF Safety Council) is planned.



PROGRAM SUCCESS

Recommendation 5: The injury rate, time-loss rate and injury severity rate for the CF in particular, and for DND should be further investigated to determine the potential for future reductions once a complete and accurate database has been established.

Response: Agreed. The new HRMS Health and Safety Module and its associated Query Tool are in their early stages of introduction and have not yet demonstrated their full potential. Once familiarity and full usage of these tools have been achieved, D Safe G believes that this recommendation can bear fruit. It is expected that a significantly improved database will be in put into place. Availability of accident/injury data will then be of a continuing nature which, complemented by national and local abilities to analyse the data, will provide the basis for a more proactive approach to accident prevention.

Recommendation 6: D Safe G should offer courses in ergonomics, construction safety, establishment/management of the General Safety Program, and refresher training.

Response: The provision of appropriate safety training is a core D Safe G activity and one that is central to the overall success of the General Safety Program. That being said, the size and extent of the curriculum is constrained by budgetary restrictions and the resultant requirement to prioritize the training that makes up the curriculum.

Ergonomics was introduced as a major issue in the 2000 changes to the CLC, Part II. As yet, however, Treasury Board has not issued regulations and guidance on this issue. Once that has been done, D Safe G will issue departmental ergonomics safety related policy and guidance and will develop an appropriate training or information package on the subject.

Construction safety is considered to be outside the mandate and competence of D Safe G and no initiatives in this area are expected. Construction projects in DND are undertaken in accordance with industry standards and are overseen by competent construction engineering personnel. A role in this process for D Safe G, other than the provision of advice pertaining to certain occupational safety standards, would entail a substantial departure from the Directorate's current mandate and would necessitate a review of required resources.

Establishment/management of the General Safety Program is already contained in the D Safe G training curriculum. Efforts continue to ensure that appropriate General Safety elements are included into CF trades and classification training courses and into departmental and local orientation programs.

Refresher training is always possible, but is hampered by the availability of existing resources and the need to provide training for those who have not had prior instruction. Most safety refresher training is best gained through on-the-job experience.



Recommendation 7: Core safety courses should be offered on-line or at-a-distance if possible.

Response: Such on-line/distance learning might best meet the needs for refresher training, and will continue to be considered as an option. However, it must be borne in mind that there would be a significant “front-end” cost associated with the introduction of this that is beyond the means of the existing D Safe G budget. In the short term, D Safe G will seek an assessment of the requirement in this regard and of the associated costs. The results could form the basis for a request for future supplementary funding.

Recommendation 8: An analysis of the specific approaches to program promotion and motivation should be conducted as a basis for reviewing and renewing the strategy on promotion and motivation.

Response: Agree in principle, however this is beyond the capability of existing D Safe G resources and competencies and would require assistance from a competent agency (ADM (PA)?). Should this recommendation be supported by senior management, D Safe G will seek the resources necessary to conduct such an analysis as a future supplementary request.

Recommendation 9: There should be a greater sharing of information on safety strategies and materials across the DND/CF safety functions.

Response: Agree. The principal forum for such exchange is the DND/CF Safety Council (or, potentially, a Safety Secretariat) and some progress has been achieved in this area.

Recommendation 10: A review of the promotional materials should be conducted on a regular basis to ensure that they are relevant to current risks in the workplace.

Response: Agree in principle, although there is little evidence to suggest that the existing practice is not maintaining currency. Promotional material promulgated by D Safe G is based on a combination of information published in current safety publications; input from the field; and on responses to articles. Given the limited resources in D Safe G dedicated to promotional and motivational material (1 person), it is thought that the relevancy and currency of material is remarkably high. That being said, suggestions for improvement would be welcomed, and a request will be included in a future version of the Safety Digest and the subject will be tabled in the General Safety Consultative Group.

Recommendation 11: A review of the effectiveness of the Safety Digest as an insert to the Maple Leaf should be undertaken.

Response: A review of all Maple Leaf inserts was carried out in 2001 and it revealed that the Safety Digest was one of the most effective inserts – well read and well appreciated for its content.



Amid some controversy, the Digest was transformed from a glossy, stand-alone quarterly a few years ago into its current monthly insert. It is the opinion of D Safe G that the new format is a more effective promotional instrument than its predecessor. It is published more frequently; it reaches a much bigger readership; and it is a much better forum for reader feedback. However, despite the original rationale of saving money by making the change, the insert format, with its more frequent publication and wider distribution, is more costly than the old quarterly.

Recommendation 12: There should be greater use made of Web sites and E-mail to disseminate safety promotional and motivational material.

Response: It is thought that considerable use is already being made of these communications systems to disseminate promotional and motivational material. D safe G has a comprehensive Web Site that receives many complimentary comments, and most other safety programs have similar high-quality sites. Notwithstanding these electronic means, D Safe G remains of the opinion that “hard copy” promotional and motivational materials (Safety Digest, Posters, etc) are the most effective way of getting the safety message across. Nonetheless, D Safe G would welcome suggestions for improvement to its web site or in the use of e-mail as a promotional and motivational device. D Safe G will initiate requests for suggestions through the Safety Digest; through the addition of an introductory phrase on the title page of the Web Site soliciting ongoing suggestions for improvement; and, as a standing item on the Consultative Group agenda.

Recommendation 13: Senior management should continue to demonstrate strong support to managers and supervisors for the Return to Work Program to ensure widespread acceptance and full implementation in DND.

Response: Senior management support to this Program has been active, strong and visible. In general, this support has been translated throughout the chain of command. Most instances where there has been less than full support have been due to union reluctance and not that of management. However, the national union leadership has been very supportive- only at a few isolated locations have local unions refused to embrace the concept. Such cases continue to be dealt with through the National Return to Work Committee. Ongoing national support is offered by D Safe G to those units having difficulty in developing or maintaining a Program, through a program of visits, and a variety of training.



PROGRAM DESIGN AND DELIVERY

The Functional Authority Framework

Recommendation 14: New initiatives promulgated under the Functional Authority Framework should be costed and their resource implications considered before being issued to the field.

Response: Agree: The General Safety Program Consultative Framework element of the Functional Authority framework has been realigned to include a thorough consultative and review process of all major policy proposals and other programmatic issues by a Steering Committee of senior Command/Group GSOs before being submitted for final approval.

Recommendation 15: The General Safety Program Consultative Framework should be strengthened to provide further opportunity for horizontal exchange of ideas in the GSO community and for influencing decision-making in the Program.

Response: The Framework has undergone a number of experimental iterations and has now settled on the following that meets the requirements of this recommendation. The revised Framework includes a Steering Committee comprised of D Safe G and Command/Group GSOs that will consider policy options for final presentation to the National Health and Safety Policy Committee for approval.

A Consultative Group, chaired on a rotating basis by a Level 1/ECS GSO and comprised of senior GSOs from all Groups and Commands will consider, discuss and advise on the options available for new General Safety policies. It will provide recommended solutions to the Steering Group.

Finally, every 18 months the Treasury Board hosts a government-wide OHS Conference. DND has taken advantage of this opportunity to gather together all of its full-time GSOs for a day to discuss mutual problems and issues.

These formal occasions, supplemented by a variety of informal opportunities (e.g., D Safe G visits) should satisfy the desires expressed in this recommendation. Further widening of the consultative process has the potential to infringe upon the chain of command and is not recommended.

Informal opportunities for consultation and discussion are offered by the frequent visits made by D Safe G to units to provide compliance training; present “Well Done” awards; and, to meet new safety personnel.



Recommendation 16: The Consultative Group and the Working Groups should be strengthened and not disbanded, and should involve more GSOs in the meetings.

Response: This recommendation has been implemented through a restructuring of the Consultative Framework as described in the response to Recommendation 15.

Human Resources

Recommendation 17: The competency profiles for the GSO community should be finalized and promulgated, and should include managerial/supervisory skills in addition to technical skills.

Response: D Safe G is developing a General Safety Program Professional Development Profile that will specifically address this recommendation. It has been formulated in conjunction with HR-Civ staffs and consultations have been held with the UNDE Executive Council.

Recommendation 18: There should be encouragement for the acquisition of certification or equivalencies for the senior General Safety Officers as identified in the competency profiles.

Response: The concept of professional certification for GSOs was initiated by D Safe G, who has been sponsoring its acquisition for the past 3 years. In 1999, only 2 DND GSOs possessed the Canadian Registered Safety Professional (CRSP) Certification. As of September 2003, there are 12 with the certification, with a further 9 at various stages of acquisition. This important process of “professionalization” would perhaps have greater impetus if it received formal encouragement from senior management and commanders.

Recommendation 19: D Safe G should continue to support sponsorship for GSOs for the Canadian Registered Safety Professional (CRSP) designation.

Response: Agree. CRSP certification presents a more professional image for our safety officers. It is also an element of "due diligence" on the part of the Department in that it demonstrates recognition of the need to have "competent persons" as defined by the CLC, Part II as its safety officers.

This is a low cost activity that provides a valuable certification and self-esteem for its participants and which raises the overall level of safety professionalism in DND.



Mandatory attainment of this certification by all DND GSOs aspiring to be a Base/Wing GSO at the AS-05 level is a feature of the General Safety Program Professional Development Profile discussed above.

Recommendation 20: The resource requirements/allocations for the General Safety Program should be determined on the basis of assessed health and safety risk at each location.

Response: Agree. Such an assessment should be carried out at those locations identified by Command/Group GSOs as having perceived shortfalls. The assessment should be carried out by third party expertise to preclude any perception of self-interest. It is important that a factor for "program continuity" be considered in this process.

Recommendation 21: Risk assessments should be conducted prior to making resource level decisions.

Response: Agree. Such assessments should be carried out by Base/Wing management staffs with the technical input from GSOs. D Safe G recognizes the resource pressures on local commanders, but is concerned that the ability of existing safety staffs to meet the growing compliance demands of the Canada Labour Code, Part II, and other safety legislations is being eroded, thereby placing commanders in a state of increased risk and liability.

Recommendation 22: Use external recruitment from university and college occupational health and safety programs.

Agree. The Professional Development profile for General Safety Officers includes the recognition for a broader entry base, including increased reliance on direct entry candidates from appropriate post-secondary occupational health and safety curricula.

Recommendation 23: CF personnel should continue to be assigned to Unit GSO positions. (These are secondary duty positions.)

Response: Agree. This is the general practice at present and should not change. However, the use of CF members as full-time Assistant Base and Wing General Safety Officers is not encouraged. Although clearly better than not having anyone, the creation of CF positions for these duties has a negative effect on the continuity of the civil component of the Program. It is recommended that all full-time General Safety Officer positions be established as civilian positions.

Recommendation 24: There should be assurance that there is adequate program documentation to reduce learning time for new recruits.

Response: Agree, but think this is already the case.



Recommendation 25: Potential attrition could be reduced by ensuring that there is a continuous supportive working environment.

Response: The reclassification of GSO positions has removed a potential dissatisfier. Implementation of the Professional Development Framework should provide GSOs with a clearer vision of their career prospects and expectations, as well as with the potential for a more rounded career.

Risk Assessment/Risk Management

Recommendation 26: D Safe G should provide guidelines and case studies on the conduct of risk assessments and implementing a risk management strategy.

Response: Agree, but in an evolutionary way. The first step in this process is the production of guidance and policy on hazard identification (HAZID). A policy on HAZID will be introduced in FY 2003/04. Once this process is well imbedded into DND workplaces, the General Safety Program should continue to evolve into a more comprehensive risk management approach. However, this should be in the context of a wider Departmental risk management philosophy and not done unilaterally. Should involve all safety programs, not just General Safety. D Safe G will employ the DND/CF Safety Council and the National Health and Safety Policy Committee as fora for exchanging ideas and processes on risk management that could be employed throughout the departmental safety community.

Recommendation 27: Closer linkages should be forged between the DND/CF safety programs and Human Systems Integration (ADM S&T) to facilitate its contribution to risk assessment/management strategies.

Response: Agree to the extent that this is feasible and productive, but as part of a "safety in general" initiative through the DND/CF Safety Council. The Council will address this as an ongoing task.

Performance Measuring and Reporting

Recommendation 28: An annual integrated report on safety should be developed in the DND/CF for DMC.

Response: Strongly agree. This should be an annual tasking for the DND/CF Safety Council (or Secretariat). A format should be developed that includes overall departmental accident and illness statistics, major program initiatives and problems, etc.

Recommendation 29: D Safe G should develop guidelines for Command and Group GSOs on performance measuring and monitoring.



Response: Through the media of the HRMS Health & Safety module, the requirements of Program Evaluation (SPDET), training feedback, and hazard identification these measures are considered to be already in place. To the extent that guidelines need to be reinforced or developed, D Safe G will promulgate them.

Recommendation 30: The proposed Safety Support Secretariat should assemble information of horizontal interest across Bases and Commands; use Web site and e-mail communication to disseminate the information.

Response: Agree in principle, but details need to be considered, and a specific plan developed.

Recommendation 31: Information should be communicated to those responsible for inputting data on accidents/injuries on its utilization to encourage better reporting.

Response: This is a major D Safe G priority, but one that must be strongly embraced by all Commands/Groups.

PROGRAM ALTERNATIVES

Recommendation 32: There should be clarification of the application of the Canada Labour Code, Part II, to the Canadian Forces, specifically with regard to "operational effectiveness" circumstances, as well as clarification of the application of the Code to visitors and contractors on DND/CF premises, by developing case studies and including the subject in training and awareness activities.

Response: An ongoing activity. Policy has been amended, training revised, Contractor Guidance issued and included in compliance awareness briefings. D Safe G maintains close liaison with the DND/CFLA to ensure that guidance in this area and in all others pertaining to occupational health and safety are legally correct.

Recommendation 33: Consideration should be given to a closer linkage of DND/CF health and wellness programs with the General Safety Program through promotion and motivation activities, and inter-program exchange of information.

Response: This is an ongoing activity, although not yet subject to any formal arrangements. D Safe G will formalize its arrangements with DGHS and ADM (HR-Civ) in this regard to ensure that maximum benefit can be derived from such linkages.



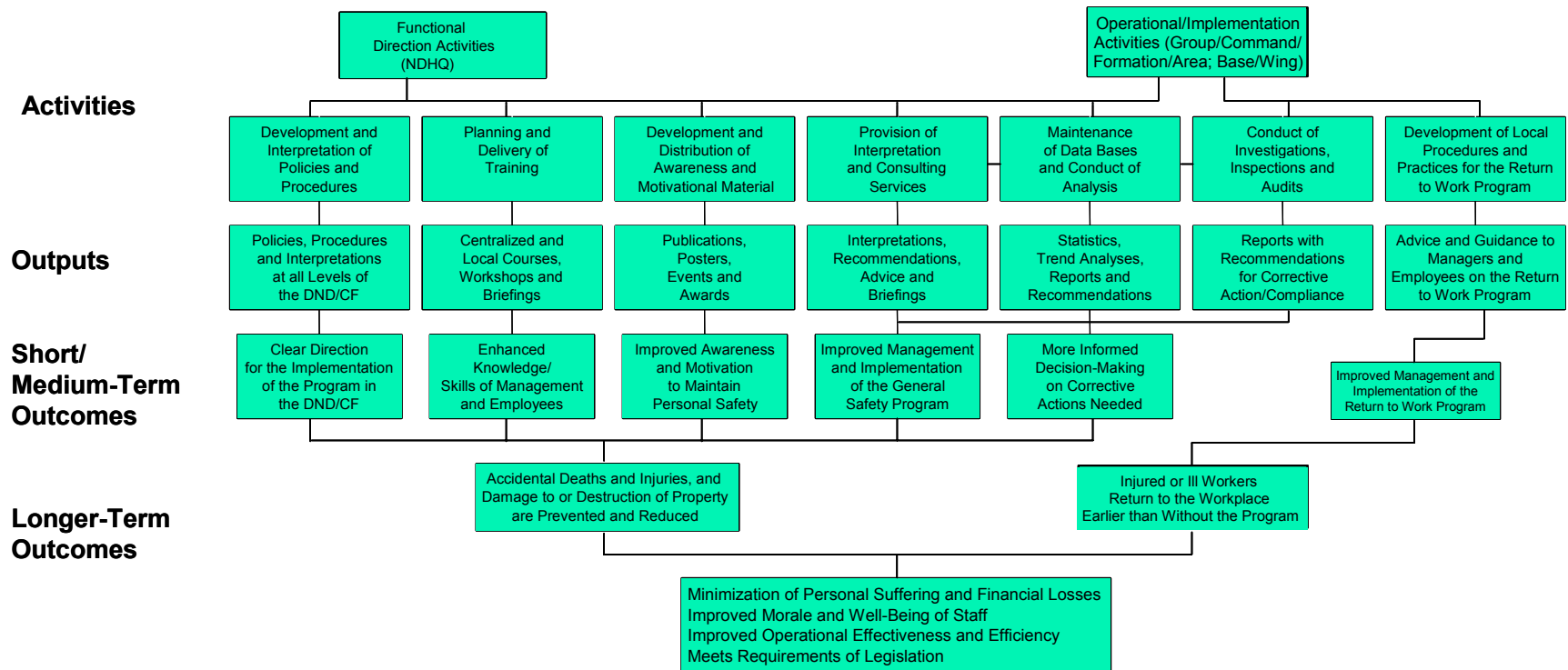
ANNEX A – DND/CF HEALTH AND SAFETY PROGRAMS

Functional OPI

General Safety Program	VCDS
Flight Safety	CAS
Nuclear and Radiation Safety	ADM(IE)
Fire Protection Safety	ADM(IE)
Mobile Support Equipment Safety (MSE)	ADM(Mat)
Explosives Safety	ADM(Mat)
Laser Safety	CAS
Environmental Protection	ADM(IE)
Radio Frequency Radiation Safety	ADM(Mat)
Diving Safety	CMS
Submarine Safety	CMS
Respiratory Protection Program	ADM(IE)



ANNEX B – LOGIC MODEL THE DND/CF GENERAL SAFETY PROGRAM



ANNEX C – LETTER OF NOTIFICATION

Memorandum

1258-76-2 (CRS)

25 Feb 02

Dist List

NOTIFICATION OF CRS REVIEW – PROGRAM
EVALUATION OF THE DND/CF GENERAL
SAFETY PROGRAM

Ref: Chief Review Services Work Plan – 2001/2002

BACKGROUND

1. Beginning in the early 1970s, the Department of National Defence has addressed the occupational health and safety concerns of its employees through the General Safety Program. The Program predated the obligatory federal workplace safety legislation. Over the years, the General Safety Program has faced considerable changes and challenges including the new requirements of the Canada Labour Code, the need to deliver a return to work initiative, and issues pertaining to human resources and organizational mandates and structures. However, there has been limited policy and program redefinition of the General Safety Program to respond in a systematic way to these changes. Similarly, the organization has not undergone a comprehensive review since its inception. Accordingly, Chief Review Services is undertaking a program evaluation study to address those factors which influence the effectiveness and efficiency of the General Safety Program, including the Program's relationship with the various specialized safety programs of the Department and the Canadian Forces.

Note de service

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AVIS D'EXAMEN DU CS EX – ÉVALUATION
DU PROGRAMME DE SÉCURITÉ GÉNÉRALE
DU MDN ET DES FC

Réf : Plan de travail 2001-2002 du Chef – Service d'examen

CONTEXTE

1. Depuis le début des années 70, le ministère de la Défense nationale s'occupe des préoccupations de ses employés relativement à la santé et à la sécurité au travail par l'entremise du Programme de sécurité générale. Ce programme a précédé la loi fédérale sur la sécurité obligatoire au travail. Au fil des ans, le Programme de sécurité générale a subi bien des changements et affronté de nombreux obstacles, y compris les nouvelles exigences du Code canadien du travail, le besoin d'offrir une initiative de retour au travail, ainsi que les questions relatives aux ressources humaines et aux structures et mandats organisationnels. Cependant, les politiques et programmes du Programme de sécurité générale n'ont guère été redéfinis en vue de les adapter systématiquement à ces changements. Parallèlement, l'organisation n'a pas subi d'examen complet depuis sa création. Le Chef – Service d'examen entreprend donc une évaluation de programme pour étudier les facteurs qui influencent l'efficacité et l'efficience du Programme de sécurité générale, y compris la relation entre ce dernier et les différents programmes de sécurité spécialisés du Ministère et des Forces canadiennes.



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AIM AND SCOPE

2. The overall aim of this evaluation is to provide senior departmental management and the Director of the General Safety Program with information and recommendations that will support decision-making on Program mandate, organization, design and delivery. The evaluation will also document to the extent possible the main contributions the Program has made to the prevention of accidental injury, death or damage to property. The following principal issues will be addressed by the study:

- a. the clarity, comprehension, and strength of the mandate of the General Safety Program;
- b. the clarity of the accountabilities for General Safety in the DND/CF, and the extent to which the responsibilities as described in the Functional Authority Framework for Occupational Safety and Health are understood and accepted by the stakeholders;
- c. the potential requirement for changes in the interrelationship between the General Safety Program and the ten specialized safety programs of the DND/CF, for example, Laser Safety, Fire Protection Safety and Explosives Safety;
- d. the nature of the General Safety Program's impact on preventing accidental deaths, injuries and damage to property, as well as client satisfaction with the Program and its services;

OBJET ET PORTÉE

2. Dans l'ensemble, cette évaluation a pour objet de fournir à la haute direction ministérielle et au directeur du Programme de sécurité générale des renseignements et des recommandations qui les aideront à prendre des décisions relatives au mandat, à l'organisation, au concept et à l'application du programme. Cette évaluation établira, autant que possible, les principales contributions que le Programme a apportées à la prévention de blessures, de décès et de dommages matériels accidentels. Voici les principales questions qu'abordera l'étude :

- a. la clarté, la compréhension et la force du mandat du Programme de sécurité générale;
- b. la clarté des responsabilités, au sein du MDN et des FC, en matière de sécurité générale, et le niveau de compréhension et de respect, par les personnes intéressées, des responsabilités telles que décrites dans le cadre d'autorité fonctionnelle en matière de santé et de sécurité au travail;
- c. le besoin potentiel de modifier la relation entre le Programme de sécurité générale et les dix programmes de sécurité spécialisés du MDN et des FC, par exemple Sécurité laser, Prévention des incendies et sécurité, ainsi que Sécurité des explosifs;
- d. la nature de l'impact du Programme de sécurité générale sur la prévention de décès, blessures et dommages matériels accidentels, ainsi que la satisfaction des clients relativement au Programme et à ses services;



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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>e. the adequacy of human resources strategies regarding planning, training, career progression, recruitment, retention and succession;</p> | <p>e. la pertinence des stratégies de ressources humaines en ce qui concerne la planification, la formation, l'avancement professionnel, le recrutement, le maintien du personnel et la relève;</p> |
| <p>f. the adequacy of the targeting, reporting and use of performance information on accidents, injuries and property damage/loss;</p> | <p>f. la pertinence du ciblage, de la communication et de l'utilisation de l'information sur le rendement qui touche les accidents, les blessures et les dommages/pertes matériels;</p> |
| <p>g. the extent to which risk assessment and risk management approaches are being used in the DND/CF for occupational health and safety; and</p> | <p>g. l'utilisation des méthodes de gestion et d'évaluation du risque, au sein du MDN et des FC, aux fins de la santé et de la sécurité au travail;</p> |
| <p>h. possible changes to the General Safety Program that could improve achievement of objectives, in addition to lessons learned from other organizations' occupational health and safety programs which may apply to the DND/CF Program.</p> | <p>h. les modifications éventuelles du Programme de sécurité générale qui pourraient améliorer l'atteinte des objectifs, ainsi que les leçons apprises, grâce aux programmes de santé et sécurité au travail d'autres organisations, qui pourraient s'appliquer au programme du MDN et des FC.</p> |

METHODOLOGY

3. Treasury Board policy and standards on program evaluation will be applied in the conduct of this evaluation study. The evaluation approach to gathering information and data will include: personal interviews with key informants, questionnaire survey, solicitation of expert opinion, benchmarking with other government and private sector organizations, and a review of available documents, data and files.

PROJECT DELIVERABLES

4. The completed CRS evaluation study report on the General Safety Program will provide findings, conclusions and recommendations pertaining to the evaluation issues. A draft report will be issued to

MÉTHODOLOGIE

3. On appliquera à cet examen la politique et les normes du Conseil du Trésor régissant l'évaluation de programmes. La méthode employée dans le cadre de l'évaluation, afin de recueillir des données et de l'information, comprendra des entrevues personnelles avec des informateurs clés, un sondage sous forme de questionnaire, la sollicitation de l'opinion d'experts, une analyse comparative avec d'autres organisations du gouvernement et du secteur privé, ainsi qu'un examen des documents, données et dossiers disponibles.

RÉALISATIONS ATTENDUES DU PROJET

4. Une fois terminé, le rapport sur l'évaluation du Programme de sécurité générale par le CS Ex donnera des résultats, conclusions et recommandations au sujet des questions de l'évaluation. Un rapport provisoire



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request comments and, as necessary, an action plan from OPIs. This will be followed by the preparation of a final report.

TEAM COMPOSITION

5. The CRS Evaluation Team members will be the following:

Approval Authority: Jim Van Adel
Director General Review
Services

Team Leader: Jack Cramer
Review Principal

Team Member: Norm Black
Review Principal

6. Any queries concerning this review should be directed to CRS or to the Evaluation Team Leader, Jack Cramer, at 992-6385 (cramer.js@forces.ca).

Le Chef – Service d'examen
Mgén

K.G. Penney
MGen
CRS
995-8561

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sera publié afin d'obtenir des commentaires et, au besoin, un plan d'action des BPR. Après quoi, le rapport final sera préparé.

MEMBRES DE L'ÉQUIPE

5. L'équipe d'évaluation du CS Ex sera composée des membres suivants :

Autorité approbatrice : Jim Van Adel
Directeur général -
Service d'examen

Chef d'équipe : Jack Cramer
Gestionnaire d'examen

Membre de l'équipe : Norm Black
Gestionnaire d'examen

6. Toute question concernant cet examen doit être transmise au CS Ex ou à Jack Cramer, chef de l'équipe d'évaluation, au 992-6385 (cramer.js@forces.ca).

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DGPS
DGRC
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ANNEX D – FRAMEWORK FOR THE EVALUATION STUDY OF THE GENERAL SAFETY PROGRAM

EVALUATION STUDY OF GENERAL SAFETY PROGRAM: EVALUATION ISSUES, INDICATORS AND METHODOLOGIES

The General Safety program has the objective of preventing accidental deaths or injury as well as accidental damage to or destruction or loss of equipment, materiel, works and buildings. In accomplishing this aim, the Program helps to minimize personal suffering and financial losses, adds to the operational effectiveness of the CF and efficiency of DND, meets legislative requirements, and contributes to the morale and well-being of all departmental staff.

Program Rationale: Does the Program continue to make sense in today’s environment?

Issues	Indicators	Methodologies for Collection of Data and Information
1.(a) To what extent is the mandate of the Directorate of General Safety clear, understood and accepted by DND/CF occupational health and safety stakeholders? To what extent is the program visible?	Degree to which the views of stakeholders converge on clarity, understanding and acceptance. Identification and explanation of issues. Perception of the extent of program visibility.	Interviews: Program Management and Staff, Command Staff, Unions, Managers of Other Ten Safety-Related Programs. Questionnaire Survey: General Safety Officer Community.
1.(b) Is the mandate of the Directorate sufficiently strong for Program to address and achieve its objectives? What changes, if any, might be needed to help strengthen the mandate?	Extent to which mandate is viewed as sufficiently strong. Frequency of suggestions for change.	Same as for 1, above.
2. Is there need for changes in the interrelationship between the General Safety Program and the ten specialized safety programs of the DND/CF? If so, through what institutional and informal means could this be realized?	Frequency and intensity of views on the benefits and costs of more/less coordination, integration and communication. Analysis of suggestions for change.	Interviews: Program Management of All Eleven DND/CF Safety-Related Programs; Command Staff; Union Representatives. Questionnaire Survey: General Safety Officer Community.
3. What review mechanisms does the Program have in place to ensure that its policy and procedures reflect the Canada Labour Code, Part II, the Canada Occupational Safety and Health Regulations, as well as Treasury Board Directives and Standards?	Documentation of mechanisms used and analysis of their adequacy.	Interviews: Program Management and Staff. Benchmarking: Other Government and Private Sector Organizations with Comparable Programs.



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Program Success: What impacts/outcomes does the Program appear to have realized?

Issues	Indicators	Methodologies for Collection of Data and Information
4. How has the General Safety Program contributed to preventing accidental deaths or injury, as well as accidental damage to or destruction/loss of materiel, works, and buildings?		
(a) What are the trends in the national DND/CF safety statistics for accidents, injury frequency rates, and injury severity rates? (Also possible damage incidence.) What are plausible explanations for the observed trends, and if possible, what are the estimates of the extent to which changes in the statistics can be attributed to the General Safety Program?	Direction of changes in numbers of accidents, injury frequency rates, and injury severity rates over say a ten-year time horizon. Exploration of possible explanations. Possible inferential analysis of the impact of the General Safety Program.	Review of available Program statistics and reports; consultation with program officials. Comparative Analysis: Other Government and Private Sector Organizations' Statistics. Expert Opinion: Occupational Health and Safety Associations.
(b) To what extent have the policy and procedures of the Directorate of General Safety provided leadership and direction to NDHQ Groups and CF Commands and areas for the development and implementation of their occupational health and safety programs?	Opinion on the extent to which the Directorate's policy and procedures are clear, well-communicated and useful in the DND/CF. The extent to which the Program's activities are perceived as being "visible".	Interviews: Program Management and Staff, Command Staff, Union Representatives. Questionnaire Survey: General Safety Officer Community.
(c) Are the centralized/core training courses meeting the needs of the target client groups? Similarly, to what extent is the local training within the General Safety Program meeting the needs of the client groups at that level? Are there any significant gaps in the training that is being offered on both a centralized and a local basis?	Client group views on the extent to which existing training courses are meeting identified needs. Identification of gaps and enumeration of possible approaches to closing such gaps.	Interviews: Program Management and Staff, Command Staff, Union Representatives. Questionnaire Survey: General Safety Officer Community. Expert Opinion: Educational Institutions.
(d) Is the occupational health and safety promotional and motivational material reaching its intended audiences? What has been the general impact of this material?	Expressed evidence that material is reaching intended audiences. Anecdotal evidence on the impact of the material in raising awareness/interest and informing. Suggestions for improvements.	Interviews: Program Management and Staff, Command Staff, and Unions. Questionnaire Survey: General Safety Officer Community.



ANNEX D

Program Success (cont'd)

Issues	Indicators	Methodologies for Collection of Data and Information
(e) To what extent are the legislation interpretation and occupation health and safety consulting services of the Directorate of General Safety considered to be helpful by users in the DND/CF?	Extent to which users are satisfied with the services. Anecdotal evidence of application of the services.	Interviews: Program Management and Staff, Command Staff. Survey Questionnaire: General Safety Officer Community.
(f) To what extent do the DND users of the services of the Occupational Health and Safety Program (OHSP) of Health Canada find the services to be satisfactory?	Opinion on satisfaction with the services of the OHSP. Identification of concerns and areas in need of improvement.	Interviews: Program Management and Staff, Command Staff, and Unions. Questionnaire Survey: General Safety Officer Community.
(g) What have been the preliminary impacts of the Return to Work Program with respect to assisting injured or ill workers to return to work more quickly than is likely to have occurred in the absence of the Program?	Anecdotal evidence from recent cases on the benefits being realized by the Program. Identification of possible improvements.	Interviews: Program Management and Staff, Command Staff, Unions. Questionnaire Survey: General Safety Officer Community.

Program Design and Delivery: Are the design and delivery components of the Program appropriate and do they appear to perform as planned?

Issues	Indicators	Methodologies for Collection of Data and Information
The Functional Authority Framework 5. Are the accountabilities for the General Safety Program in DND/CF clear, and are the responsibilities as described in the Functional Authority Framework understood and acceptable to the stakeholders?	Stakeholder opinion on the responsibilities and the accountabilities for General Safety of the Functional Authority Framework in terms of clarity, understanding and acceptance.	Interviews: Program Managers and Staff, Command Staff, Unions. Questionnaire Survey: General Safety Officer Community.
6. Is the General Safety Program Consultative Framework performing satisfactorily in terms of coordinating the resolution of problems and the development of positions pertaining to the General Safety Program?	Evidence from stakeholders on the performance of the Consultative Framework in terms of meeting expectations. Description of issues and concerns.	Interviews: Program Management and Staff, Selected Members of the Steering Group and the Consultative Group. Questionnaire Survey: General Safety Officer Community.



ANNEX D

Program Design and Delivery (cont'd)

Issues	Indicators	Methodologies for Collection of Data and Information
<p>Human Resources</p> <p>7. To what extent is there need for developing competency profiles and career progression criteria for General Safety Officers?</p>	<p>Perspectives on the benefits and disadvantages of competency profiles and career progression criteria for the General Safety Officer positions.</p>	<p>Interviews: Program Management and Staff, Command Staff.</p> <p>Questionnaire Survey: General Safety Officer Community.</p> <p>Expert Opinion: Associations, Educational Institutions.</p> <p>Benchmarking: Practices in Other Organizations.</p>
<p>8. What would be the relative benefits of requiring formal certification of General Safety Officers?</p>	<p>Views on the benefits in relation to the costs of certification.</p>	<p>Interviews: Program Management and Staff.</p> <p>Expert Opinion: Associations and Educational Institutions.</p> <p>Benchmarking: Experience of Other Organizations.</p>
<p>9. What indications are there at the present time that there are sufficient numbers of General Safety Officers in DND/CF to adequately perform the required responsibilities?</p>	<p>Changes in staff levels over time in relation to the size of DND/CF.</p> <p>Indications of work load issues.</p>	<p>Statistics on Staffing Levels in DND/CF for General Safety Officers.</p> <p>Interviews: Program Management and Staff, Command Staff.</p> <p>Questionnaire Survey: General Safety Officer Community.</p>



ANNEX D

Program Design and Delivery (cont'd)

Issues	Indicators	Methodologies for Collection of Data and Information
<p>Human Resources (cont'd)</p> <p>10. Are there recruitment, retention and succession issues for the General Safety Officer group in DND/CF, and if so how could these issues be addressed/resolved?</p>	<p>Supply and availability of trained safety personnel to fill entry and other level positions in DND/CF.</p> <p>Estimates of the extent of attrition within the group.</p> <p>Identification of retention issues such as salary, job satisfaction, and career opportunities.</p>	<p>Estimates of Supply/Availability of Trained Safety Officer Personnel with Various Levels of Experience.</p> <p>Age Profiles for the General Safety Officer Community in DND/CF.</p> <p>Interviews: Program Management and Staff, Command Staff.</p> <p>Questionnaire Survey: General Safety Officers.</p> <p>Expert Opinion: Associations, Educational Institutions, and Other Organizations.</p>
<p>11. To what extent do the General Safety Officers have access to their Commanders?</p>	<p>Indication of the extent and frequency of access to Commanders.</p> <p>Analysis of implications and suggestions for change.</p>	<p>Interviews: Program Management and Staff, Command Staff.</p> <p>Questionnaire Survey: General Safety Officer Community.</p>
<p>Risk Assessment and Risk Management</p> <p>12. To what extent are risk management approaches being applied to occupational health and safety in DND/CF? Where risk assessment is being applied, is risk management being practiced?</p>	<p>Identification of the extent and nature of the use of risk assessment and risk analysis for occupational health and safety in DND/CF.</p> <p>Analysis of gaps.</p> <p>Nature of practices in other organizations.</p>	<p>Interviews: Program Management and Staff, Command Staff.</p> <p>Questionnaire Survey: General Safety Officer Community.</p> <p>Benchmarking: Other Organizations.</p> <p>Expert Opinion: Associations.</p>



ANNEX D

Program Design and Delivery (cont'd)

Issues	Indicators	Methodologies for Collection of Data and Information
<p>Performance Measurement and Reporting</p> <p>13. Are the DND/CF summary reports on accidents, injuries and property damage/loss being distributed to the key decision-makers on occupational health and safety?</p> <p>To what extent is the information contained in the reports useful and being used in decision-making?</p> <p>Are there changes in the content and presentation of the information that could be introduced that would enhance the impact of the reports?</p>	<p>Evidence that reports are being sent to decision-makers.</p> <p>Indication of the extent to which decision-makers find the reports useful and illustrations of actual use.</p> <p>Analysis of suggestions for change/improvements in content and presentation.</p>	<p>Interviews: Program Management and Staff, Command Staff, and Unions.</p> <p>Questionnaire Survey: General Safety Officer Community.</p> <p>Benchmarking: Practices in Other Organizations.</p>

Program Alternatives: In summary, from the findings of the evaluation study, what key changes could be made to the Program to enhance achievement of its objectives?

Issues	Indicators	Methodologies for Collection of Data and Information
<p>14. From the findings of the evaluation study, are there changes that could be made to the design, organizational structure and delivery of the General Safety Program that might better achieve the Program's objectives, and what are the general cost implications of these?</p> <p>What are the main lessons learned from other organizations in the public and private sectors that could be applied advantageously to the DND/CF General Safety Program?</p>	<p>Summary and analysis of key possible changes from the findings of the evaluation, and indication of the general direction of implications.</p> <p>Summary of key lessons learned from other organizations.</p>	<p>Review and Priority Assessment of Key Changes from the findings of the evaluation.</p> <p>Review of Interviews with Other Organizations.</p>



ANNEX E – BENCHMARKING THE DND/CF GENERAL SAFETY PROGRAM WITH SAFETY ORGANIZATIONS IN OTHER JURISDICTIONS

Issues	D Safe G	Other Federal Government Departments CANADA	Enbridge	Bell Canada	Canadian Labour and Business Centre – 12 Case Studies	New Zealand Defence Force	Australian Defence Safety Management Agency (ASMA)	German Federal Ministry of Defence
Organization and Governance	<ul style="list-style-type: none"> – a formal Functional Accountability Framework for general safety delineates responsibilities and accountabilities for all levels of management and staff – VCDS has corporate-level responsibility for General Safety program for Dept and CF. D Safe G exercises corporate functional direction performing five activities: program framework and policies, core trg, promotion & motivation, consultation services, accident information and reporting 	<ul style="list-style-type: none"> – corporate Health and Safety organizations are functionally organized providing consultation and interpretation of legislation and regulations, development of policies and standards and ensuring implementation of a safety program – majority of Depts view H&S as a Human Resource Management function – H&S function strongly supported by committee structures – regional network supported by full and part-time coordinators 	<ul style="list-style-type: none"> – environmental, health and safety policy, standards and practices are promulgated corporately to ensure consistent application across the organization – functional direction permits flexibility in program application and implementation for business and geographic specific practices and procedures – a company-wide EH&S policy stating corporate goals applies to all business units setting overall program direction and provides oversight to all health and safety issues 	<ul style="list-style-type: none"> – health and safety function a responsibility of Human Resources Industrial Relations Group – Corporate Directorate of Health and Safety provides functional direction and consultation advice to managers and operators in the field – program implementation is responsibility of management and supervisors in the field – corporate safety directorate responsible for corporate decision-making on safety issues, union interfaces, overall governance of the function 	<ul style="list-style-type: none"> – corporate H&S generally viewed as a function of Human Resources/ Industrial relations. Responsible for loss prevention, risk mgmt, promotion of safety culture, integration of H&S and loss prevention into strategic planning and provide support to indiv. programs – individual and tailored programs administered and delivered within business units – specialty committees of SMEs develop and recommend operational safety standards 	<ul style="list-style-type: none"> – functional authority for H&S management located at HQ where policy and standards are established. Authority delegated to each service to implement standards – the Personnel Branch provides functional safety management and coordination for all services – corporate organization provides policies, coordination of corporate objectives for safety management, coordinates national forum on safety mgmt and conducts annual safety audit 	<ul style="list-style-type: none"> – safety program mandated by national legislation – implementation and management is the responsibility of line management throughout ADO – a Defence OHS Committee established as a sub-committee of the Defence Committee – dedicated OHS and Compensation Branch established 	<ul style="list-style-type: none"> – federal legislation provides guidance for OH&S for both military and civilians – functional responsibility to implement federal health and safety legislation in Ministry of Defence rests with Chief of Staff at Executive level – all supervisory staff responsible to ensure workplace practices are in accordance with legislation and regulations – OH&S specialists are corporate resources. ‘Accident representatives’ perform secondary duties within operational areas

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Issues	D Safe G	Other Federal Government Departments CANADA	Enbridge	Bell Canada	Canadian Labour and Business Centre – 12 Case Studies	New Zealand Defence Force	Australian Defence Safety Management Agency (ASMA)	German Federal Ministry of Defence
Organization and Governance (cont'd)	<ul style="list-style-type: none"> – program adapted for implementation by each Environment. Commanders responsible for implementing program consistent with functional direction – H&S Committees at all echelons permit all personnel to participate in the H&S program 		<ul style="list-style-type: none"> – H&S programs in each business unit supported by local EH&S Committees to discuss issues, policies and local operational safety objectives 	<ul style="list-style-type: none"> – Directorate H&S provides functional direction to provincial Safety coordinators to implement a local safety program 	<ul style="list-style-type: none"> – corporate safety program ensures a program in place while ‘practice of safety’ is a line responsibility 	<ul style="list-style-type: none"> – single services delegated responsibility for own safety processes and system implementation 		
Human Resource Management Issues	<ul style="list-style-type: none"> – competency profiles are drafted for all levels of Gen Safety Officers to guide training and development – historically most GSOs recruited from CF and trained in-house. Recruiting now extends to University and College graduates – Canadian Registered Safety Professional (CRSP) designation is not mandatory but encouraged through D Safe G sponsorship – reclassification of levels has made levels competitive with industry and OGDs 	<ul style="list-style-type: none"> – majority of H&S programs include Employee Assistance and harassment programs – CRSP designation viewed positively by all depts but not an essential requirement – internal recruitment is normal source of safety officers – AS 4/5 normal classification for regional safety officers 	<ul style="list-style-type: none"> – 33 full-time health and safety officers deliver the Environmental Health and Safety program to an organization of 6000 	<ul style="list-style-type: none"> – safety trg mandatory for all managers – professional qualifications and certification required only for Director and specialized staff; i.e., ergonomists and hygienists – operational safety staff require strong knowledge and experience of field operations and internal safety trg – recruitment and succession planning a current priority 	<ul style="list-style-type: none"> – companies have recognized their significant investment in hiring, training and retaining employees and it is a business imperative to keep them healthy and safe at work 	<ul style="list-style-type: none"> – most full-time safety staff at corporate office have university qualifications in safety mgmt – unit and base safety officers have industry experience – professional qualifications and safety experience sought for new hires 	<ul style="list-style-type: none"> – there are no mandatory qualifications in the health and safety organization other than for medical personnel – resource levels determined and budgeted for by each service and prioritized relative to other management priorities and to achieve agreed service levels 	<ul style="list-style-type: none"> – national legislation provides guidelines for the organization, roles and responsibilities to ensure an effective occupational health and safety organization – legislation requires the appointment of experts on occupational health and safety and use of staff doctors

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Issues	D Safe G	Other Federal Government Departments CANADA	Enbridge	Bell Canada	Canadian Labour and Business Centre – 12 Case Studies	New Zealand Defence Force	Australian Defence Safety Management Agency (ASMA)	German Federal Ministry of Defence
<p>Human Resource Management Issues (cont'd)</p>	<p>– demographics reflect an ageing safety community</p>				<ul style="list-style-type: none"> – a strong safety culture exists where there is sr. mgmt commitment to the program, insistence on safe work practices, affirmation of H&S as a core company value, formal structures to deal with H&S, allocation of resources to H&S initiatives, and rewarding managers for meeting H&S goals – professional safety designations are not mandatory – usually held by 30% of staff – CRSP most common designation – considerable use of computer-based trg to allow low cost, available trg – industry salary ranges - \$40K-\$60K for staff, \$60-\$80K specialists, \$80K+ for prog directors 			<p>–experts in occupational health and safety are qualified safety engineers, certified safety officers or doctors trained in occupational medicine</p>

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Issues	D Safe G	Other Federal Government Departments CANADA	Enbridge	Bell Canada	Canadian Labour and Business Centre – 12 Case Studies	New Zealand Defence Force	Australian Defence Safety Management Agency (ASMA)	German Federal Ministry of Defence
<p>Performance Measurement/Data Collection/Reporting</p>	<ul style="list-style-type: none"> – information on accidents and injuries is reported through the health and safety module of Human Resources Management Information System. D Safe G aggregates and analyzes data for DND/CF and reports to corporate level annually – GSOs provide mgmt reports to commanders/mgrs locally. Inconsistency in info reported, frequency, and conduct of trend analysis between locations – safety audits and evaluations of the program (SPDETs) are conducted locally to gauge compliance and measure extent of program implementation – acknowledged that rate of reporting of accidents and injuries requires improvement 	<ul style="list-style-type: none"> – accidents by type, frequency and trends are standard measures captured – WSIB costs are captured – some Depts record “refusal to work” incidents under the Canada Labour Code 	<ul style="list-style-type: none"> – senior company mgmt reports quarterly to Board of Directors Env Health and Safety Committee – regular audits conducted to determine compliance with company standards, policies and objectives as well as regulatory compliance – EH&S performance indicators used are regulatory citations, fines, penalties, lost-time, injury severity, recordable injuries, absenteeism, motor vehicle injury frequency, training coverage, EH&S awards 	<ul style="list-style-type: none"> – accident statistics and trends are reported quarterly to VPs and company president – safety program in each business unit audited every 3-4 years – costs of total lost time (incidental and disability) at 4% of payroll considered low for the industry – mgmt acknowledges that there should be greater utilization of the data and statistics collected 	<ul style="list-style-type: none"> – industry-wide trends in reduction of lost-time injuries since early 1990’s, reductions in WSIB payments and reduction in occupational work time lost is attributed to integrating health, safety and lifestyle initiatives – audits, absenteeism and lost-time accidents are most common indicators – cost of lost time accidents approx 7.1% of payroll costs – comprehensive reporting and collection of accurate accident and incident statistics is problematic – company balanced scorecard approach to PM often includes health, safety and wellness issues 	<ul style="list-style-type: none"> – the National Health and Safety in Employment Act requires that all accidents be reported but acknowledge that full and complete reporting does not occur (particularly minor accidents and incidents) – detailed statistics collected at HQ in Personnel Branch Information System, and distributed to indiv services for analysis and action – safety data at Service level used on case-by-case basis, not as a mgmt tool – mgmt reporting still considered weak in NZDF 	<ul style="list-style-type: none"> – a centrally managed database collects and stores all safety and compensation data – current reporting rates estimated at 10%-15% of all incidents – future linking of medical and accident reporting intended to improve data collection – info system generates standard reports for senior management to monitor safety in workplace and substantiate funding. Quarterly safety governance reports provided to Secretary and Chief of Defence Staff – safety costing data part of operations costs. Costs of accidents, injuries and productivity loss not visible to mgmt 	<ul style="list-style-type: none"> – separate costs and expenditures are not collected for occupational health and safety – while all accidents and injuries are to be reported, the intro of new data collection systems has prevented comparison of historical trends – safety data and statistics are collected, analyzed and reported at the supervisory levels

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Performance Measurement/Data Collection/Reporting (cont'd)					– lost time injury trend avg 50% decrease since 1995. H&S program considered contributory but no direct attribution			
Promotion/Visibility/Management Commitment	<ul style="list-style-type: none"> – senior mgmt commitment is demonstrated through the issuance of policy statements at the corporate and other levels of DND/CF – DND/CF only organization with a dedicated departmental safety publication “Safety Digest” distributed monthly at all DND/CF locations – has a national awards and recognition program for safety – local senior staff open safety training courses – D Safe G reports directly to VCDS – extensive use of printed posters 	<ul style="list-style-type: none"> – formal venues for the exchange of occupational health and safety information are generally lacking – senior management commitment is universally recognized as essential top program success and acceptance – senior management endorsement of safety policy statements is the most common means of demonstrating commitment 	<ul style="list-style-type: none"> – a Board of Directors’ EH&S Committee meets quarterly to monitor performance and provide strategic direction to EH&S program management – senior mgmt has the responsibility to establish, reinforce and communicate EH&S policy and strategic commitment across all business lines – EH&S components are integrated into all day-to-day business activities, programs, procedures and project planning 	<ul style="list-style-type: none"> – there is enhanced reliance on web-based communication for health and safety issues 	<ul style="list-style-type: none"> – mgmt commitment demonstrated through health and safety as company core value, allocation of personnel and financial resources in support of programs delivered directly to employees; i.e., Health and lifestyle programs, senior management involvement in corporate health and safety committees and consideration of health, safety and loss prevention in business and purchasing decisions 	<ul style="list-style-type: none"> – senior management support demonstrated by being responsive to program change initiatives, providing approvals and sign-offs for policy statements 	<ul style="list-style-type: none"> – the Secretary and Chief of the Defence Force have jointly issued a corporate policy statement on workplace occupational health and safety which is constantly reviewed and updated – senior management has issued a ‘safety vision statement’ for the organization – the ADO leadership team (Secretary and Chief of Defence Force) present at the annual Defence Safety Management Conference 	<ul style="list-style-type: none"> – senior leadership provides approval and guidance for implementation of a safety management program across the Ministry as well as a concept of operations with supporting resources

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Promotion/ Visibility/ Management Commitment (cont'd)			<ul style="list-style-type: none"> – recent emphasis on intranet to promote employee awareness of EH&S policies and programs 		<ul style="list-style-type: none"> – in many instances, up to 10% of variable component of managers’ pay linked to H&S goals – universal agreement that a relatively small investment in health and wellness can result in substantial gains in productivity and efficiency – web sites and electronic media are replacing safety posters 		<ul style="list-style-type: none"> – a Defence OHS Committee established as a sub-committee of the Defence Committee – dedicated OHS and Compensation Branch established – a comprehensive Defence OHS Strategic Plan is imminent 	
Risk Assessment/ Risk Management	<ul style="list-style-type: none"> – risk assessment conducted at most locations but limited to specific job hazard assessments and linked to conduct of audits and Safety Program Development and Evaluation Technique (SPDETs) – limited by a lack of guidance and training on risk management and resource constraints 	<ul style="list-style-type: none"> – risk assessment is conducted in relation to specific job tasks to identify, eliminate or manage risks – risk assessment limited to specific job hazard assessment 	<ul style="list-style-type: none"> – high risk job hazard assessment is now carried out to assist injury prevention – health and wellness programs are being introduced and integrated with safety awareness programs to promote employee health, prevent personal injury and increase productivity 	<ul style="list-style-type: none"> – health and safety risk assessments are performed for all new tasks and equipments entering the company that require it as determined by the corporate H&S Group 	<ul style="list-style-type: none"> – risk management is being conducted through strategic risk assessments as Boards of Directors and managers are aware of their accountabilities and liabilities. Legal responsibilities and accountability for employee health and safety has resulted in increased corporate attention 	<ul style="list-style-type: none"> – NZDF safety management program does not apply a ‘risk management’ approach but employs a continuous improvement approach to its safety programs and seeks “excellence in safety” 	<ul style="list-style-type: none"> – represented at the strategic level in the form of the imminent Defence OHS Strategic Plan 	<ul style="list-style-type: none"> – the Health and Safety at Work Act stipulates the employer must determine and document risks to the health and safety of workers and institute required health and safety measures to address those risks

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Issues	D Safe G	Other Federal Government Departments CANADA	Enbridge	Bell Canada	Canadian Labour and Business Centre – 12 Case Studies	New Zealand Defence Force	Australian Defence Safety Management Agency (ASMA)	German Federal Ministry of Defence
Risk Assessment/ Risk Management (cont'd)				<ul style="list-style-type: none"> – risk assessment could include but is not restricted to conducting a ‘physical demands analysis assessment’ to identify risk components of each job – computer-based training modules are aligned to specific job risks 	<ul style="list-style-type: none"> – risk assessment is performed via individual job analysis assessment – training is aligned to job risks 	<ul style="list-style-type: none"> – the Royal NZ navy is the only service applying a risk management approach to its safety program 		
Management of Specialty Safety Programs	<ul style="list-style-type: none"> – eleven other functional safety authorities exist as distinct orgs, each with own legislative or policy mandate. Embedded in operational activity – at some Bases, functional safety programs combined – GSOs in field responsible for more than one program 	<ul style="list-style-type: none"> – OGDs generally lack the breadth or diversity in programs or mandate to require specialty safety programs in addition to their Occupational Health and Safety Program 			<ul style="list-style-type: none"> – individual safety programs unique to business units respond to corporate initiatives, policies and direction to ensure standardized and consistent delivery while reporting to unit mgrs to ensure technical competency and applicability 	<ul style="list-style-type: none"> – “specialty” safety programs are managed and administered integral to normal business lines where safety issues must be considered. Flight Safety is the only distinct safety other than the ‘General Safety Program’ 	<ul style="list-style-type: none"> – DSMA provides corporate policy, advice and legislative consultation to all organizations with safety responsibilities – safety practices are required to be integrated with operational activities 	<ul style="list-style-type: none"> – specialty programs such as flight safety, motor vehicle safety, weapons and ammo safety are independent and aligned with operations. The Health and Safety at Work Act provides consistent application of principles and regulations to safety risks

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<p>Trends and Emerging Safety Issues</p>	<ul style="list-style-type: none"> – recognized need to clarify application of Canada Labour Code Part 11 and safety policies to CF members, contractors and visitors to DND property – requirement for horizontal distribution and exchange of safety information across the safety community and Bases – requirement to improve completeness and accuracy of reporting of accidents and injuries 	<ul style="list-style-type: none"> – defining dept'l responsibilities and accountabilities for contractor safety is an emerging issue – health and wellness issues are being included in occupational health and safety management 	<ul style="list-style-type: none"> – in order to further reduce health and safety incidents, attention is being directed to contractor safety and office safety mgmt (ergonomics) – lost-time injury frequency reduced in last five years by 35% – safety culture assessment is a current activity 	<ul style="list-style-type: none"> – Health and Wellness programs as well as Employee assistance programs included in the H&S Business Plan – company responsibility for contractor health and safety an emerging issue that has been addressed through management training 	<ul style="list-style-type: none"> – mgmt of H&S shifted in last decade from traditional occupational issue of accident prevention and promotion to addressing H&S as a lifestyle issue – occupational lost-time injuries account for 15% of lost time – overall health and lifestyle injuries address 85% of lost time injuries – mental health and stress recognized as an H&S issue – increased emphasis on Human Systems integration of H&S 	<ul style="list-style-type: none"> – lower limb and sports-related / physical training injuries pose the greatest risk to the NZDF – considerable effort is placed on ensuring uniform and consistent implementation of corporate safety policies, standards and management structures 	<ul style="list-style-type: none"> – current challenge is to inculcate a safety culture across the Defence Force – need recognized to introduce a risk management approach and improve reporting of all risks, hazards and incidents of all risks, and hazards 	<ul style="list-style-type: none"> – by 2004 all costs incurred for injury rehabilitation and accident compensation are to be paid by the Ministry to provide financial incentive to lower accident costs – current challenges are: creating a Ministry-wide safety culture, educating sr. staff on their role and reducing burden of excessive regulations

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Safety Management Processes	– D Safe G has developed and implemented a comprehensive approach to evaluating the implementation and management effectiveness of the General Safety Program at Bases through the Safety Program Development and Evaluation Technique (SPDET)		<ul style="list-style-type: none"> – EH&S components are considered and integrated into all planning and program activities – comprehensive internal EH&S audits are conducted in all business units ranging from monthly inspections to comprehensive system reviews 	<ul style="list-style-type: none"> – local H&S committee structure mirrors corporate H&S committees – issues only rise to corporate level if the issue impacts on the company as a whole – 125 web-based trg modules linked to job risks, hazards and trg needs 	<ul style="list-style-type: none"> – health and safety programs are viewed as a component of continuous improvement initiatives 	<ul style="list-style-type: none"> – NZDF safety mgmt system is audited annually to provide standardized defence-wide measures of compliance with policies and practices – delegation of authority to single services to implement and tailor safety mgmt programs has created need for common approaches for all H&S practitioners across Services 		

ANNEX F – BENCHMARKING OF COSTS TO DND/CF DUE TO WORK-RELATED ACCIDENTS, INJURIES AND ILLNESSES

Background

While there is no absolute means of calculating the annual cost of work-related accidents, injuries and illnesses to the Department of National Defence and the Canadian Forces, it is worthwhile to calculate an appropriate ‘order of magnitude’ cost for several reasons. By applying a consistent methodology, a trend of increasing or decreasing costs can be determined, analyzed and evaluated for their contributing causes, identify potential areas of continuous improvement and cost reduction, and contribute to ongoing program and policy development considerations. In addition, calculation of annual DND/CF accident and injury costs can serve as a performance measurement benchmark against industry norms and the performance of other employers in similar jurisdictions. Calculation of a ‘rough order of magnitude’ of costs to the organization provides a relative measure of program effectiveness (costs/program expenses) and places the organization investment in health and safety programs and activities in perspective.

In June 2000, a consultant’s report conservatively estimated the annual costs of occupational injuries and illnesses to the Department and the CF at \$27M. In order to more accurately understand the impact of health and safety programs and an appropriate management response to current issues, a more complete and current determination of the magnitude of the situation is required. The following description of the assumptions, methodology and final cost estimate of occupational accidents and injuries will contribute to the assessment of the impact of a general safety program.

Methodology

This calculation of work-related accident and injury costs to DND and the CF has its genesis in a costing exercise conducted for the Defence and Civil Institute of Environmental Medicine (DCIEM) in June 2000¹. This initial exercise has been expanded by including additional cost factors; basing the estimate of the cost of an accident or injury on more definitive evidence; assessing reasonableness of costs through benchmarking with industry, the Conference Board of Canada and HRDC criteria; and expanding the universe of costs to be included.

¹ MacDonald, Heather. Scoping Study: Human Systems Integration Accident Database. MacDonald Associates Consulting. June 2000.



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The difficulties involved in calculating the costs of occupational accidents and injuries are many fold: reliance on the availability, comprehensiveness and accuracy of existing data; obtaining consensus on cost elements to be included; accuracy of costing assumptions; identification of direct and indirect costs; and estimates to correct for reporting and data anomalies.

The following basic assumptions were used to calculate this cost estimate:

- In order to determine the annual number of accidents, it was estimated that only 25 per cent of all accidents and injuries in DND and the CF were systematically reported, documented and recorded. This reporting rate was accepted in the 2000 consultant report and substantiated by the CRS review team conducting benchmarking with the Canadian Labour and Business Centre, the Australian Defence Safety Management System (utilizing a 10 per cent – 15 per cent reporting rate), HRDC statistical norms, and subject matter experts in the DND/CF safety community.
- There is no ‘absolute’ or accepted methodology to calculate the cost of a work-related accident or injury. In order to calculate total costs to the organization, a “proxy” cost for an accident must be computed. The 2000 consultant report accepted a ‘per injury cost’ of \$1000 based on Workplace Safety Insurance Board (WSIB) payments in Ontario (1999). For the purposes of this report, the ‘per injury cost’ has been calculated using a four year average (FY 1998/99 – 2001/02) of DND Workplace Safety Insurance Board Claims that are administered by HRDC on behalf of the Department. The average cost per workplace injury has been calculated at \$2191. In the absence of any additional data, this “proxy cost” per accident/injury was also applied to the calculation of CF costs.
- Indirect costs of accidents and injuries are calculated using the Treasury Board ratio of 4:1 (indirect to direct costs) to account for lost productivity, replacement of injured personnel and damaged equipment, training of new personnel and administration costs.
- Accident and injury costs for the CF have been calculated using additional cost factors to those used for civilians. In order to calculate a more comprehensive costing of accidents and injuries in the CF, material costs resulting from MSE (mobile support equipment) accidents have been included, based on the average material cost of damages (\$2832/accident averaged over 12 years 1990 – 2002) and the average number of accidents per year (1232/yr averaged 1994 – 2002). In addition, the annual incremental cost of pension claims resulting from occupational accidents and injuries that could have been prevented through hazard assessment, prevention, safer practices or use of human systems engineering have been included. This calculation has been based on three major pension conditions: hearing loss, locomotor systems and gunshot wounds/accidents and injuries.



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- It is assumed that these costs calculated for work-related accidents and injuries are a very conservative estimate of the total costs to the Department and the CF. Reporting rates for accidents estimated at 25 per cent may vary considerably from year to year and location to location. The reported CF injury frequency rates (IFR) of 2.2 (FY 2001) is significantly less than the IFR for civilians at 4.0 (FY 2001) which would indicate a reporting rate of less than 25 per cent for the CF. Current Departmental efforts to strengthen the reporting process and implementation of the Health and Safety module of the HRMIS should result in more comprehensive reporting. Note also that no costs have been attributed to non-disabling accidents that occur in the workplace (where no time is lost), or safety related injuries that occur away from the workplace (but result in absenteeism and sick-days), despite their impact on business operations, effectiveness and efficiency. An average of 482 non-disabling civilian accidents are reported annually. Within the CF there has been no consideration or calculation for disabling or non-disabling sports injuries that have resulted in 13,500 days lost or on light duties.

Estimate of Injury Costs: Civilian Employees

As of 31 December 2001 there were 15,041 full time civilian public servants in DND. The average reported number of disabling injuries (1999 – 2001) is 320. Based on an estimated reporting rate of 25 per cent, the total number of disabling injuries annually would be 1280². Assuming direct costs of \$2191.00 per compensable injury, total annual direct costs would be \$2,804,480. Using the Treasury Board Secretariat ratio of 4:1 to estimate indirect costs of injuries³, this adds indirect costs of \$11,217,920. The total costs to DND for civilian accidents and injuries is \$14,022,400.

² Based on the annual HRDC report of Occupational Health and Safety Statistics, 1 in 15 federal jurisdiction workers (governed by the Canada Labour Code), suffers an occupational injury annually. Based on this statistic, the DND civilian population should report approximately 1333 injury/accidents per year. For the purpose of this costing exercise, an estimate of 1280 civilian occupational accidents/year has been used.

³ Indirect costs include lost productivity, replacement of injured personnel and damaged equipment, training of new personnel, administration and benefit costs.



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Estimate of Injury Costs: Canadian Forces

Using data collected through the CF663 form and reported in the General Safety Accident Information System (GSAIS) from 1999 to 2001, the average number of disabling accidents per year is 690. Based on an estimated reporting accuracy of 25 per cent, a conservative estimate of annual disabling accidents is 2760⁴. Assuming the same average direct cost of \$2191.00 per compensable injury as civilians in DND, the total annual direct cost of accidents and injuries to the CF would be \$6,047,160. Using the Treasury Board Secretariat guideline of 4:1 to estimate indirect costs, the total indirect costs would be \$24,188,640. The total direct and indirect costs to the CF for accidents and injuries is \$30,235,800.

To calculate a more comprehensive total of accident/injury costs to the CF, the cost of MSE accidents (\$3,489,024 annual average over last eight years) and the annual incremental cost of pensions (\$4,097,201 – average of major pension conditions resulting from accidents and injuries) have been added. The total annual cost estimate for accidents and injuries to the CF is \$37,822,025.

Total Costs of Accidents and Injuries – DND/CF

The annual estimate of the costs of accidents and injuries to DND and the CF is calculated at \$14,022,400 for civilian employees of the Department and \$37,822,025 for members of the CF. The total annual cost to DND and the CF is \$51,844,434. It must be noted that this is an estimate of the costs on an annual basis but does not represent costs attributed to a specific fiscal period. This calculation has been extrapolated from available data which, in many cases, has been normalized by averaging several years of representative data.

Benchmarking Cost Data

During the course of this evaluation, the CRS team benchmarked various aspects of the Department's General Safety Program with similar programs in other Federal Government Departments, Canadian industry and other military organizations. The calculation of annual costs of accidents and injuries to the organization was not a standard practice, but considerable interest was expressed in the assumptions and approach used by the CRS evaluation team. However, notional estimates of organization costs were available. A Conference Board of Canada Report – Health Promotion Programs at Work states: "A survey of 281 Canadian organizations conducted by Watson Wyatt in 2000 found that direct disability absence costs (i.e., income replacement and medical costs) were 7.1 per cent of payroll, on average." Benchmarking with Bell Canada indicated their costs of accidents and injuries averaged

⁴ Using the HRDC benchmark of 1:15 workers sustaining injuries as a result of accidents, the CF could expect approximately 3982 accidents per year. For these costing estimates based on reported accidents/injuries and a reporting accuracy of 25 per cent, 2760 accidents were extrapolated for the CF.



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approximately 4 per cent of payroll costs. This was considered very favourably in the telecommunications industry. Based on FY 2001/02 personnel costs for regular and reserve members and civilians of \$4.2B, the cost of accidents and injuries to DND/CF is 1.23 per cent. This noticeably low percentage may reflect several factors regarding the DND/CF safety program:

- Significant under-reporting of accidents, injuries and work-related illnesses occurs in DND and the CF. The estimated reporting rate of 25 per cent may be optimistic;
- The actual annual costs of work-related accidents, injuries and illnesses to DND and the CF are significantly higher than \$51M; or
- The DND/CF safety programs make an effective contribution in encouraging a safety culture in the workplace, ensuring that safe work practices are carried out and that an effective and cost-efficient safety program is being delivered to the Department and the CF.

