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DIVISION

# Management of Lessons Learned by the NZDF

Report No. 10/2011

31 May 2011

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The Minister of Defence

The Evaluation Division of the Ministry of Defence has undertaken a review for the Minister of Defence, pursuant to section 24(2)(e) of the Defence Act 1990, of how effectively the NZDF collates, analyses, shares and resolves lessons learned during the conduct of its activities.

I submit the accompanying report for your information. The Secretary of Defence and the Chief of Defence Force have been provided with copies.



Merus Cochrane  
Deputy Secretary (Evaluation)



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# Executive Summary

## Introduction

- 1 This review examined how effectively lessons learned in the course of NZDF activities are being collated, analysed, resolved and shared.
- 2 Field work for this review was completed in February 2011.

## Background

- 3 A lessons learned process essentially involves the collection, analysis, decision making, actioning and sharing of information relating to an activity undertaken. Almost all activities can have this process applied. The collection of data may be formal or informal, and the extent to which electronic systems are used will vary depending on the requirements of the process involved.
- 4 In December 2005, CDF Directive 31/2005 *Introduction of a Global Lessons Learned System to the NZDF* established the Electronic Activity Reporting and Lessons Learned System (EARLLS) as the NZDF global lessons learned system covering the full range of NZDF activities. 'Activities' were defined as operations, exercises and other activities (war games, trials, UN missions, Boards/Courts of Inquiry, courses, visits and conferences).
- 5 There are within the NZDF many activities, particularly at the functional level, that include a quality review and validation process and facilitate issue resolution, but do not utilise EARLLS. The most notable of these relate to logistics support, individual training, health and safety, security, and the NZDF project management framework. Boards/Courts of Inquiry activities also involve processes from which lessons are learned.
- 6 Much of our review has covered the utility of the global EARLLS and the operationally focussed lessons learned processes it facilitates. We also looked at whether it is feasible to incorporate other processes into EARLLS, or have formal links with EARLLS developed, to maximise the sharing of information.
- 7 Within this context of lessons learned, our expectations were that:
  - a there is clearly defined and effective strategic policy and guidance on identification, collection, analysis and management of lessons learned;

- b there are effective processes and systems for gathering, analysing and sharing individual knowledge and organisational experience for future use;
- c data gathered is being analysed and validated to form lessons learned; and
- d lessons learned lead to changes that result in improved military or business practice.

## Overview

### *Policy and guidance*

- 8 Effective NZDF and Service policy on post activity reporting for lessons learned purposes is in place. This policy predominantly directs the use of EARLLS for operational activities, which covers overseas missions, major exercises, and other readiness or collective training activities.
- 9 For visits, conferences and courses, there is general acceptance of post activity reporting but only in the case of the Army is there a formal instruction to input details of these activities into EARLLS. We have reported previously on the variability of post activity reporting for these types of activities and recommended that the NZDF ensures reports are completed.
- 10 The CDF Directive is unclear, in that while it refers to the full range of NZDF activities, it also specifically identifies those that are included. This has caused some uncertainty over the intent of the policy on lessons learned and may have restricted the extent to which EARLLS has been utilised elsewhere.
- 11 Service specific policy and guidance is in place for lessons learned in various functional areas.
- 12 There is no policy or guidance on the management of lessons learned in HQ NZDF through its strategic and corporate activities. AC Capability is looking at the potential utility of EARLLS within the NZDF project management framework.

### *Organisation and processes*

- 13 The NZDF has effective processes and systems in place, through EARLLS, for gathering, analysing and sharing individual knowledge and organisational experience for future use in relation to overseas missions, major exercises, and other readiness or collective training activities.

- 14 Extracting quantitative data from the system for reporting purposes is relatively easy but its quality is dependent on the accurate classification of activity reports and accompanying observations entered into the system. Approval or validation procedures are in place to ensure the quality of data entered into the system.
- 15 While the various areas that monitor post activity reports analyse trends in observations to identify and validate issues that arise, there is little performance measurement undertaken to determine and report the ongoing effectiveness of EARLLS and the lesson learned process it facilitates.
- 16 Other main lessons learned processes appear to be effective for the functional areas and activities they support. However, there is little sharing of information from these across the NZDF.

#### *Future developments*

- 17 Although HQ JFNZ has promoted the wider use of EARLLS, there remains a view that the system is predominantly for HQ JFNZ and Service operational activities. Some see difficulty in resourcing and using what they regard as a complicated and cumbersome system that has limited direction or support available.
- 18 Capability Branch recently looked into the adoption of EARLLS for the capability projects it manages. The review considered the responsibilities of Assistant Chief Capability, as the sponsor of EARLLS, for broadening the use of EARLLS by other HQ NZDF Branches and the NZDF generally.
- 19 Capability Branch identified that to achieve the use of EARLLS at the corporate/strategic level the NZDF needs policy that clearly outlines corporate intent and drives a lessons learned culture and objectives. Simply making the system available and expecting it to operate effectively across the organisation was not sufficient. There is a need for tailored processes that fit the requirements of a particular area and the communities of interest that are going to make use of it. This requires commitment, education and resourcing.
- 20 The successful introduction of EARLLS to facilitate lessons learned within the NZDF project management framework, and in particular the process of developing policy and procedures for this purpose, could provide an example for other areas within the organisation. As such, this could provide a starting point for the step by step expansion of EARLLS and its broader use as a NZDF lessons learned application. It could also provide the basis of a lessons learned centre of excellence within HQ NZDF for providing enhanced support to future EARLLS users. Its potential use to provide an overview of all Courts/Boards of Inquiry recommendations is a particular case in point.

- 21 Overcoming some of the current restrictions in EARLLS and enhancing its usability generally requires technical improvements. These include a search engine facility to undertake word based searches to seek relevant reports and observations. Currently, searching for information requires standard metadata topics (classifications). Fully interfacing EARLLS with the NZDF's proposed new document management system will simplify the exchange of information between the two applications.

## Conclusion

- 22 The NZDF has a variety of processes and systems through which lessons are learned. Of these only EARLLS provides a dedicated lessons learned management system.
- 23 Under the auspices of HQ JFNZ, EARLLS supports an effective lessons learned process used predominantly for missions, exercises and readiness or collective training activities. Other main lessons learned processes that do not utilise EARLLS appear to be effective for the functional areas and activities they support but there is little sharing of information from these across the NZDF.
- 24 The Army is further developing its Centre for Army Lessons to promote awareness, and achieve better coordination, of its various lessons learned processes. The platform based nature of the Navy and Air Force means that there is not the same need in those Services for a central coordination entity.
- 25 While benefits are achievable from establishing a single global lessons learned framework, the NZDF should seek a balanced organisational approach to lessons learned. Where appropriate, formal and informal processes that are coordinated and cross-linked should allow sharing of information across the organisation. The challenge, therefore, is in deciding what information should be shared, and where responsibilities for the development, management and support of lessons learned should be best located.
- 26 Capability Branch is assessing the potential utility and functionality of EARLLS within the NZDF project management framework.
- 27 Capability Branch has also considered whether EARLLS should be further promoted as a global lessons learned system. Clearly some other areas and activities could benefit from utilising the system and sharing information. As well as the development of policy that clearly outlines the corporate intent and drives the lessons learned culture and objectives, additional resourcing would be required to support the effective management of an expanded lessons learned process.

- 28 There is a need for a single senior sponsor or champion for lessons learned to coordinate future policy and development, who could also promote the effective and useful expansion of EARLLS across the NZDF.

#### Recommendations

- 29 It is recommended that the NZDF:
- a appoints a sponsor or champion to coordinate future policy and development on lessons learned and promote the wider use of EARLLS across the NZDF; and
  - b considers the use of EARLLS for registering and monitoring the implementation of all Boards/Courts of Inquiry recommendations.
- 30 It is recommended that HQ JFNZ:
- a develops performance measures against which the ongoing effectiveness of EARLLS can be gauged.



# Chief of Defence Force response

## Chief of Defence Force response

- 1 The contents of this report and its recommendations are noted. I am satisfied that the report presents an accurate representation of current Lessons Learned management processes within the NZDF. I endorse and support the findings of the report and accept the recommendations.



# Section 1

## Introduction

### Introduction

- 1.1 This review examined how effectively lessons learned in the course of NZDF activities are being collated, analysed, resolved and shared.
- 1.2 Field work for this review was completed in February 2011.

### Background

- 1.3 In 2003, a HQ NZDF Steering Group began development of lessons processes and culture for implementation across the NZDF. The Group's work reached the stage of developing an information system user requirement before a parallel HQ JFNZ and the HQ NZDF Communication and Information Systems Branch project overtook it.
- 1.4 In September 2004, the Electronic Activity Reporting and Lessons Learned System (EARLLS) was introduced. EARLLS involved HQ JFNZ managing the collation, analysis and distribution of Navy, Army, Air Force, Joint and overseas experiences as lessons.
- 1.5 While initially focused, by way of a trial, on the conduct of operations and exercises, in December 2005 the coverage of EARLLS was widened to become a fully supported NZDF corporate application. CDF Directive 31/2005 *Introduction of a Global Lessons Learned System to the NZDF* outlined the policy that established EARLLS as the NZDF global lessons learned system covering the full range of NZDF activities. Activities were defined as operations, exercises and other activities (war games, trials, UN missions, Board/Court of Inquiry, courses, visits and conferences).

## Lessons learned

*Learning means changing your behaviour, or developing a new approach or new skill. Learning implies change; not the potential for change, possible change, or communicating the potential for change but actual change.<sup>1</sup>*

*A Lesson Learned results from the implementation of a remedial action that produced an improved performance or increased capability.<sup>2</sup>*

### 1.6 A useful explanation of lessons learned is provided by NATO:<sup>3</sup>

Lessons Learned is broadly used to describe people, things and activities related to the act of learning from experience to achieve improvements. The idea of lessons learned in an organisation is that through a formal approach to learning, individuals and the organisation can reduce the risk of repeating mistakes and improve the chance that successes are repeated. In the military context, this means reduced operational risk, lower cost and improved operational effectiveness.

Lessons can be derived from any activity. They are a product of operations, exercises, training and experiments. During the course of our activities most of us will recognise ways of doing things more easily or efficiently that can be passed on to our colleagues and successors to help them avoid problems and do even better than we did.

### 1.7 The NATO handbook describes two types of knowledge that are captured and exploited when creating a Lesson Learned:

- a Explicit knowledge - knowledge that has been documented. Explicit knowledge can lead to a Lesson Learned by the use of a lesson learned process and information sharing tools.
- b Tacit knowledge – knowledge that has not been documented but is still valuable. This type of knowledge is stored in a person's head and can lead to a Lesson Learned when it is discussed and shared with others.

### 1.8 In the NZDF, *lessons learned* describes validating knowledge and experience derived from observations and study of military operations, exercises, activities and training, which may result in a change to NZDF equipment, training, doctrine, organisational structure, standard operational procedures, tactics, techniques and procedures, policies and most importantly a change in behaviour.<sup>4</sup>

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<sup>1</sup> The Lessons Learned Handbook: Practical approaches to learning from experience by Nick Milton.

<sup>2</sup> NATO, Joint Analysis and Lessons Learned Centre, *The NATO Lessons Learned Handbook*, 2010.

<sup>3</sup> Ibid, Introduction.

<sup>4</sup> CDF Directive 31/2005 *Introduction of a Global Lessons Learned System to the NZDF*. NZDF 31000/5/DSC dated 16 December 2005.

- 1.9 Observations submitted for lessons learned purposes do not always result in change, in which case they remain as a lesson identified. As such, they may be important in reinforcing the merits of current standard operating procedures, tactics, techniques and procedures, equipment, training, doctrine, organisational structure or behaviour.

#### Scope and approach

- 1.10 A lessons learned process essentially involves the collection, analysis, decision making, actioning and sharing of information relating to an activity undertaken. Almost all activities can utilise this process effectively. The collection of data may be formal or informal, and the extent to which electronic systems are used will vary depending on the requirements of the process involved.
- 1.11 There are within the NZDF many activities, particularly at the functional level, that include a quality review and validation process and facilitate issue resolution, but do not utilise EARLLS. The most notable of these relate to logistics support, individual training, health and safety, security, and the NZDF project management framework. Boards/Courts of Inquiry activities also involve processes from which lessons are learned.
- 1.12 While much of this review has covered the utility of EARLLS and the operationally focussed lessons learned processes it facilitates, consideration was also given to other such processes with a view to ascertaining whether either these could be fully incorporated into EARLLS, or have formal links with EARLLS developed, to maximise the NZDF's intent to share information.
- 1.13 Within this context of lessons learned, our expectations were that:
- a there is clearly defined and effective strategic policy and guidance on identification, collection, analysis and management of lessons learned;
  - b there are effective processes and systems for gathering, analysing and sharing individual knowledge and organisational experience for future use;
  - c data gathered is being analysed and validated to form lessons learned; and
  - d lessons learned lead to changes that result in improved military or business practice.



## Section 2

### Policy and guidance

*Expectation: There is clearly defined and effective strategic policy and guidance on identification, collection, analysis and management of lessons learned.*

#### NZDF policy

2.1 NZDF policy on lessons learned is contained in CDF Directive 31/2005 *Introduction of a Global Lessons Learned System to the NZDF*, which establishes the concept of a global lessons learned system and introduces EARLLS to achieve this intent. The specified aim of EARLLS is to:<sup>5</sup>

- facilitate collection, analysis, resolution and publication of issues and the lessons learned arising from the full range of NZDF activities. 'Activities' are defined as operations, exercises and other activities (war games, trials, UN missions, Board/Court of Inquiry, courses, visits and conferences);
- provide the post activity reporting system;
- provide a staffing mechanism for the resolution of problems identified conducting NZDF activities;
- provide simple trend analysis to enable further evaluation of systematic weaknesses that become evident over a period of time; and
- provide a readily accessible NZDF knowledge database for application of that knowledge to future NZDF activities, thereby enhancing the NZDF capability.

2.2 The Directive allocates the task of expanding the use of EARLLS for activities beyond those covered by the Maritime, Land, and Air Component Commanders to the respective Service Chiefs. Amongst other things, the Chiefs are to direct that all post activity reports are submitted for activity analysis through EARLLS, review the utility of EARLLS within their Service for other activities, and issue additional instructions to enable users within their Service to utilise the application.

2.3 EARLLS, and the policy surrounding it, is intended to promote the NZDF as a learning organisation, enabling lessons to be learned across the organisation and contributing to the maintenance of the 'knowledge edge'.

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<sup>5</sup> CDF Directive 31/2005, para 11.

## Service Policy

- 2.4 Service policy reflects CDF Directive 31/2005 and is largely focussed on the reporting of operational and readiness activities.

### *Navy*

- 2.5 NZBR 97 *Maritime Component Commander's Operational Orders* outlines the requirements for the preparation of situation or post activity reports as directed by operation/exercise/activity orders or instructions. Of note is that reports are required for all ship activities including maintenance periods.
- 2.6 NZBR 42 *RNZN Electronic Activity Reporting and Lessons Learned System* outlines the lessons learned process, reporting requirements, and responsibilities.

### *Army*

- 2.7 DFO (A) *Defence Force Orders for the Army*, Volume 7, Chapter 4 *Collective Training – Post Activity Reporting Requirements* outlines the need for submission of post activity reports as specified in the activity instruction. The DFO also includes guidance on the type of information requiring capture in EARLLS, notably any need for follow-up training or retraining, or follow-up action for the conduct of similar activities in the future.

### *Air Force*

- 2.8 DFBO *Defence Force Flying Orders* directs the use of EARLLS for reporting observations on all HQ JFNZ directed activities. The focus of reporting is the conduct of the activity and achievement of the activity objectives. If not achieved, explanations as to why and any impact on DLOC generation should be included. Air Force utilisation of EARLLS appears to be limited to flying operations and activities.
- 2.9 More recently the Air Force has directed the use of EARLLS in relation to its operational test and evaluation programmes for introduction into service of new or refurbished aircraft. NZAP 102 *RNZAF Operational Test and Evaluation Manual*, Chapter 8 *Operational Test and Evaluation Analysis and Reporting* makes the test director responsible for ensuring that lessons learned are documented appropriately using EARLLS. This is to ensure that lessons learned during one programme will increase the success of subsequent programmes, as well as potentially reduce resource requirements and improve programme efficiency.

## Other guidance

### *Joint lessons*

- 2.10 HQ JFNZ Standard Operating Procedures and Operational Instructions No. 802 prescribes requirements for activity reporting to be submitted through EARLLS. This includes specified post activity reports, and regular situation reports, for missions and longer duration deployments, as well as post activity reports for all exercises and readiness activities conducted under the auspices of HQ JFNZ.
- 2.11 The objectives of this reporting are to:
- a provide COMJFNZ, component commanders and force element commanders with a low cost feedback process and database management system to collate, and disseminate observations, issues and lessons learned; and
  - b provide a responsive method for identifying deficiencies and initiating corrective action in the areas of policy, organisation, training, education, equipment, doctrine, tactics, techniques and procedures, or platforms and their systems.
- 2.12 Procedures also require activity planners to review information held on EARLLS, in particular observations and issues submitted through previous post activity reports.
- 2.13 HQ JFNZ maintains an on-line EARLLS user guide and associated tutorials to assist new users to gain familiarity with the system.

### *Promotion of lessons learned culture generally*

- 2.14 General officer and NCO training provides an awareness of the importance of lessons learned within the NZDF. An introduction to EARLLS is included in this training.
- 2.15 From an ongoing business perspective, a lessons learned culture is promoted within the Services through the Naval Excellence Programme of continuous improvement, the Centre for Army Lessons and the Directorate of Air Force Safety. Each of these areas has a responsibility for encouraging organisation development through lessons learned.

### *Centre for Army Lessons*

- 2.16 The Army established a Centre for Army Lessons in 2000 with the aim of developing lessons learned processes within the Army. Although the Centre for Army Lessons achieved a number of successes largely relating to the collating and publication of lessons associated with various Army operations and activities, a lack of clarity over its role, and under resourcing, has limited its effectiveness in driving Army lessons learned.

- 2.17 An initiative to reinvigorate lessons learned across the Army, outlined in a soon to be issued draft Chief of Army Directive *NZ Army Lessons Policy*, allocates a central role to the Centre for Army Lessons. Key tasks include, the construction of a master topic list for lessons learned priorities, the development of a lessons learned website resource, and the creation and encouragement of a lessons learned culture through education and training.
- 2.18 This policy recognises that the collection of Army lessons learned involves a combination of ‘passive’ (EARLLS) reporting and many ‘active’ (formal and informal) methods, for example, lessons steering groups, training analysis, and through contact with military partners. Because of this, lessons from all these sources require coordination and integration before being actioned and shared across the organisation.

#### *Functional area lessons*

- 2.19 Service specific policy and standard operating procedures for various functional areas cover training validation, logistics issue resolution, health and safety accidents, security incident management and Board/Court of Inquiry recommendations.

#### Findings

- 2.20 Effective NZDF and Service policy on post activity reporting for lessons learned purposes for operational activities, covering overseas missions, major exercises, and other readiness or collective training activities is in place.
- 2.21 There is general acceptance of the need to complete post activity reporting of visits, conferences and courses. However, only the Army has a formal instruction to input details for these activities into EARLLS. We have reported previously<sup>6</sup> on the variability of post activity reporting for these types of activities and recommended that the NZDF ensures reports are completed.
- 2.22 There is a lack of clarity in the CDF Directive, in that while it refers to the full range of NZDF activities, it also specifically identifies those that are included. This has caused some uncertainty over the intent of the policy on lessons learned and may have restricted the extent to which EARLLS has been utilised elsewhere.
- 2.23 Service specific policy and guidance is in place for lessons learned in various functional areas.

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<sup>6</sup> Evaluation Report 7/2011 *Management of the NZDF's Programme of International Commitments*, dated 9 May 2011.

- 2.24 There is no policy in HQ NZDF regarding the management of lessons learned through its strategic and corporate activities. AC Capability is looking at the possibility of establishing EARLLS as the sole application for managing lessons learned relating to capability projects within the NZDF project management framework.



## Section 3

# Organisation and process

*Expectation: NZDF has effective processes and systems for gathering, analysing and sharing individual knowledge and organisational experience for future use.*

*Expectation: Data gathered is being analysed and validated to form lessons learned.*

*Expectation: Lessons learned lead to changes that result in improved military or business practice.*

### EARLLS

- 3.1 The NZDF's global lessons learned application EARLLS is an on-line system that facilitates the gathering of data to support change management and knowledge development. It allows for the banking and exchange of information related to the conduct of any activity. Information is input into the system by way of post activity reports which, as well as containing observations and issues that are analysed for lessons learned purposes, also provide general commentary on the conduct of the activity involved.
- 3.2 EARLLS is not an issue resolution tool for circumstances that require urgent remedies, such as a breakdown of equipment while on deployment or exercises. There are other more immediate methods established for units to report these types of incidents and seek an urgent solution.
- 3.3 An activity report including such incidents would nevertheless be subsequently recorded in EARLLS, along with observations. Depending on the nature of the incident the observations might simply confirm mitigation of the risk of something similar happening again. Alternatively, observations could be the means for indicating the action required to prevent such incidents taking place in the future, in which case EARLLS would be used to monitor the implementation of changes required for the particular lesson to be learned.
- 3.4 EARLLS resides on both the NZDF SWAN and DIXS networks.<sup>7</sup> The SWAN network holds all activity reports and observations while DIXS provides access to those that are restricted or unclassified. Commanders/managers

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<sup>7</sup>

SWAN – Secure Wide Area Network; DIXS – Defence Information Exchange System.

classify reports as they are validated and submitted to the system. Where possible, the aim is to reduce the classification level to restricted or below to maximise the availability of information and provide access to all potential users.

- 3.5 Any individual can submit observations to EARLLS for consideration but only commanders/managers and their delegated staff can approve and submit reports for analysis and action. This ensures that the workflow of issues is manageable for the activity, the reporting unit, and the individuals (subject matter experts) responsible for actioning any changes or modifications required. For the most part, force element units have personnel designated to manage activity related reporting procedures.
- 3.6 As well as enabling issues to be 'pushed' out for analysis and action by subject matter experts, EARLLS is a repository of information available to assist planners. When preparing an exercise or activity, planners can extract relevant information from post activity reports of previous iterations of that or similar activities. Information available may include commentary, observations, and lessons identified and learned.
- 3.7 EARLLS provides an automated subscription facility that enables personnel to receive all reports on specific areas or topics of professional or personal interest.

#### HQ NZDF

- 3.8 The main users of EARLLS within HQ NZDF are Strategic Commitments and Intelligence Branch and Capability Branch.
- 3.9 Strategic Commitments and Intelligence Branch reviews post activity reports held in EARLLS when preparing briefs for Senior National Officers appointed to overseas missions. Incoming Senior National Officers are briefed using prior activity reports and outgoing Senior National Officers are debriefed on their reports that are produced no later than seven days after prior to departure from the mission.
- 3.10 Strategic Commitments and Intelligence Branch personnel only infrequently receive issues for actioning as subject matter experts.
- 3.11 Observations or issues relating to equipment are routed to Capability Branch for analysis and possible action in relation to future procurement.
- 3.12 Most HQ NZDF Branches are in some way involved in learning lessons though it is most notably associated with project management activities. Internal processes rather than EARLLS are used for these purposes.

HQ JFNZ

- 3.13 HQ JFNZ is the application administrator and main user of EARLLS for lessons learned relating to overseas missions, major exercises, and other readiness or collective training activities. Over 70 percent of observations entered into the system relate to OLOC/DLOC generation activities.
- 3.14 As part of the introduction of EARLLS, HQ JFNZ established a Lessons Learned Cell consisting of three personnel. Amongst other things, the role of the Lessons Learned Cell involves:
- a managing lessons learned data in EARLLS for COMJFNZ and Component Commanders,
  - b conducting trend analysis on observations from operational activities and reporting findings to COMJFNZ and Component Commanders,
  - c monitoring the lessons learned process generally to ensure the Services and others are progressing issues for resolution,
  - d providing assistance and advice to the Services and other users of the EARLLS application,
  - e promoting the use of EARLLS and delivering training to all personnel who require it.
- 3.15 Although the Lessons Learned Cell has wide ranging responsibilities over the use and management of EARLLS across the NZDF, its primary focus is the Chief of Staff Mission Observation Screening (COSMOS) process. This is the HQ JFNZ mechanism for handling all mission post activity reports and attached observations. This involves a specific review process undertaken under the auspices of the COSMOS Group (CoS and HQ JFNZ Divisional Heads) to identify issues and trends that are warranted for analysis and immediate action.
- 3.16 Improvements made to the process of reporting and actioning feedback from pre-deployment training, for Operation CRIB in Afghanistan in particular, were an example of the outcome of this screening process. A further example was the analysis of post-activity reports from units associated with repatriation from Afghanistan of the first NZDF casualties. This led to improvements in procedures before subsequent evacuations were required.
- 3.17 As well as administering the COSMOS process, the Lessons Learned Cell closely monitors the progress of issues generally and regularly reports to the COSMOS Group, COMJFNZ and Component Commanders on actions taken.

- 3.18 Three post activity reports are required for all mission rotations and deployments. They cover pre-deployment training, post arrival in theatre, and the overall conduct of the operation. The latter is submitted shortly after the rotation or deployment is completed. For major missions, such as Operation CRIB in Afghanistan, an initial report is prepared to capture observations from the theatre reconnaissance undertaken prior to each rotation.
- 3.19 As well as these post activity reports, situation reports are submitted on a regular basis during the mission and these may contain observations for lessons learned purposes. All post activity and situation reports are processed through EARLLS.
- 3.20 More recently, psychologists have begun entering the outcomes of their mission debriefing reports onto EARLLS to provide an important source of information for lessons learned purposes.
- 3.21 HQ JFNZ has established subject matter experts to action issues and observations in each of the staff areas of that headquarters.

#### Services

- 3.22 Force element ships, units and squadrons all have specific personnel trained in EARLLS procedures. These individuals control the flow of observations or issues to their commanding officer for inclusion in activity reports.
- 3.23 A requirement to process submissions through the chain of command maintains the quality of data entered into the system and ensures the effective routing of issues to appropriate area(s) for resolution. Also, because the EARLLS search facility relies on the classification of observations by topic, correct allocation of these is important when entering submissions into the system. Without this it may be laborious for users to pull the specific data they seek, or retrieve all the relevant information on a particular subject.
- 3.24 Each Service has nominated subject matter experts to analyse EARLLS issues associated with exercises and readiness or collective training activities. These experts are located within the Navy's Maritime Operational Evaluation Team, the Centre for Army Lessons, and the Air Force's 485 Wing.
- 3.25 Subject matter experts are also in place to analyse Service issues relating to matters such as logistics support.

- 3.26 For any particular major exercise or activity, post-activity reports may be completed by all of the units involved and cover many areas of interest. Some of these will be resolved and actioned directly with the unit but others will require wider consideration. For these, good communication and coordination is required between the HQ JFNZ Lessons Learned Cell and subject matter experts to ensure appropriate handling of issues.
- 3.27 The ability to classify observations by relevant mission essential task lists, as these become fully developed, should improve the usefulness of EARLLS for collective training purposes.

#### EARLLS data

- 3.28 Figure 3.1 shows the total number of unclassified observations entered into EARLLS by HQ JFNZ and the Services over the last five calendar years. The table shows the outcome of those observations, in particular whether they resulted in a lesson being identified, a lesson being learned, or whether the units themselves resolved the issue involved. In the case of the latter, this could be a lesson learned also, but is specific to a unit and not of wider interest.

Fig 3.1: Outcome of Unclassified Post Activity Observations submitted to EARLLS.

Status	Observations					Total	% of Total
	2006	2007	2008	2009	2010		
Not started	0	0	0	5	52	52	1%
Analysis Phase	0	1	1	23	119	144	2%
Action Phase	0	1	2	19	64	86	1%
Lesson Identified	936	953	805	744	480	3,918	46%
Lesson Learned	357	550	584	639	412	2,542	30%
Unit Info Only	51	291	568	548	304	1,762	20%
Grand Total	1,344	1,796	1,960	1,973	1,431	8,504	100%

- 3.29 Fig 3.1 shows 8,504 validated observations were entered into EARLLS over the last five years and remain readily accessible for wider viewing. Of these, 2,542 (30%) have resulted in lessons being learned.
- 3.30 For HQ JFNZ and the Services the percentage of observations resulting in lessons learned was Joint 46%, Navy 19%, Army 9% and Air 26%. We note that the Army has a significantly higher number of 'Unit Info Only' observations than the other Services.

- 3.31 Figure 3.1 indicates that the total of observations submitted into EARLLS in 2010 was less than that for the previous three years. Those managing EARLLS have sought no explanation for this. We heard speculative suggestions such as, 'lower levels of collective training', and 'most lessons have been learned'. However, a reduction in post activity reporting might also indicate a reduction in interest in the process and the need for initiatives to regenerate awareness across the organisation.
- 3.32 Annex A to this report contains a small sample of lessons learned from operational and training activities, to indicate the wide nature of the issues involved.

#### Other lessons learned processes

- 3.33 Other formal lessons learned processes are in place for each Service relating to such things as training validation, logistics issue resolution, health and safety (accident prevention), security (incident management), Boards/Courts of Inquiry recommendations, and capability project management.
- 3.34 While the processes and systems in place to support these functions have differing purposes, the management of activities for each involves a formal process that involves the identification and analysis of issues, and the actioning of recommendations and solutions for future learning. None of these processes utilise EARLLS.

#### Other lessons learned sources

- 3.35 Outside organisations provide a crucial and significant source of operational and tactical lessons learned for the NZDF. These lessons learned can also be an important input into doctrine. Military partners, notably the Australian Defence Force, provide the most information.
- 3.36 There is formal exchange of lessons learned through multi-national military fora. The Naval Capability Directorate, Centre for Army Lessons, and the Air Power Development Centre, all of which are either directly responsible for, or closely aligned with, the development of Service doctrine, generally lead discussions in such groups.
- 3.37 Other informal sources of potential lessons learned include internal suggestion schemes and networking through established fora and communities of interest.

## Findings

- 3.38 The NZDF has effective processes and systems in place, through EARLLS, for gathering, analysing and sharing individual knowledge and organisational experience for future use in relation to overseas missions, major exercises, and other readiness or collective training activities.
- 3.39 Extraction of quantitative data from the system for reporting purposes is relatively easy. However, the quality of the data is dependent on the accurate classification of activity reports and accompanying observations when entered into the system. Approval or validation procedures are in place to ensure the quality of data entered into the system.
- 3.40 While the various areas that monitor post activity reports analyse trends in observations to identify and validate issues that arise, there is little performance measurement undertaken to determine and report the ongoing effectiveness of EARLLS and the lesson learned process it facilitates.
- 3.41 Other main lessons learned processes appear to be effective for the functional areas and activities they support. However, there is little sharing of information from these across the NZDF.

## Recommendation

- 3.42 It is recommended that:
- a HQ JFNZ develops performance measures against which the ongoing effectiveness of EARLLS can be gauged.



# Section 4

## Future developments

### Introduction

- 4.1 There may be benefits from establishing a single global NZDF lessons learned framework, foremost of which is the ability to gather, analyse and share information across the organisation. Nevertheless, it is unrealistic to expect all areas that have existing internal lesson learned processes incorporated into their management systems to either abandon, or duplicate, these in an attempt to utilise the global system (EARLLS).
- 4.2 What is required is a balanced organisational approach to lessons learned, incorporating both formal and informal processes which are coordinated and cross-linked where appropriate to allow information to be shared across the organisation. The challenge, therefore, is in deciding what information should be shared, and where responsibilities for the development, management and support of lessons learned should be best located.

### Corporate lessons learned

- 4.3 We were told that very little effort, other than education and direction, is required to make wider use of EARLLS. Among the reasons we heard for other areas of the NZDF not adopting EARLLS is the absence of overall policy that clearly outlines the corporate intent of the NZDF and drives its lesson learned objectives. (We commented in paragraph 2.22 on a lack of clarity in the policy intent outlined in CDF Directive 31/2005 regarding the scope of EARLLS.)
- 4.4 Although HQ JFNZ has promoted the wider use of EARLLS, there remains a view that the system is predominantly for HQ JFNZ and Service operational activities. Some see difficulty in resourcing and using what they regard as a complicated and cumbersome system that has limited direction or support available.
- 4.5 As previously mentioned, HQ NZDF Capability Branch recently commenced an exercise to look into the adoption of EARLLS for the capability projects it manages. The review considered the responsibilities Assistant Chief Capability had as the sponsor of EARLLS for broadening the use of EARLLS by other HQ NZDF Branches and the NZDF generally.

- 4.6 Amongst the requirements that were identified to achieve the introduction of EARLLS at the corporate/strategic level were:
- a NZDF policy that clearly outlines corporate intent and drives a lessons learned culture and objectives;
  - b the need to provide EARLLS with a greater degree of importance and resourcing,
  - c the need to ascertain the best location for sponsoring EARLLS as a corporate application.
- 4.7 The NZDF has found that it is not enough to simply make EARLLS available and expect the system to be operated effectively. There is a need for tailored processes that fit the requirements of a particular area and the communities of interest that are going to make use of it. This requires commitment, education and resourcing.
- 4.8 Uncertainty over whether the original intent of CDF Directive 31/2005 was for EARLLS to be a corporate application, as opposed to a largely tactical/operational tool, has resulted in Capability Branch restricting its immediate consideration to the development of a system implementation strategy for Capability Branch and the wider HQ NZDF.
- 4.9 In our view, the successful introduction of EARLLS to facilitate lessons learned within the NZDF project management framework, and in particular the process of developing policy and procedures for this purpose, could provide an example for other areas within the organisation. As such, this could provide a starting point for the step by step expansion of EARLLS and its broader use as a NZDF lessons learned application. It could also provide the basis of a lessons learned centre of excellence within HQ NZDF for providing enhanced support to future EARLLS users.
- 4.10 Of particular note are Boards/Courts of Inquiry, identified in the CDF Directive as activities to be included in EARLLS. The HQ NZDF Chief of Staff organisation is at present developing a stand alone register to monitor progress in implementing the recommendations (essentially lessons to be learned) of all Courts of Inquiry. While each of the organisations that are responsible for assembling Courts of Inquiry currently undertake their own monitoring, the significance and profile of recent enquiries has prompted HQ NZDF to improve its oversight of the situation.
- 4.11 There is potential for the use of EARLLS as a register for capturing all inquiry recommendations. It would provide the tool to direct recommendations to the appropriate personnel for action.

- 4.12 The recent organisational changes that have centralised the human resources, logistics, capability, and certain training functions should result in greater standardisation of management practices across the NZDF, including processes involving lessons learned. In time, therefore any future initiatives to coordinate or cross-link information through EARLLS for sharing information on lessons learned should be easier to achieve.
- 4.13 If expansion of EARLLS is to be a goal for the NZDF, it is probable that a single champion or sponsor of the system would be necessary. The absence of such leadership at present is likely to be contributing to the uncertainty about the scope and purpose of EARLLS, and the continuing need to address the requirements noted in para 4.6.

#### EARLLS enhancements

- 4.14 Certain technical improvements are planned for EARLLS to overcome some of its current restrictions and enhance its usability generally.
- 4.15 A search engine facility is shortly to be introduced enabling users to undertake word based searches to seek relevant reports and observations relating to an area or item of interest. Currently, information can only be sought using standard metadata topic (classifications) that need to be assigned at the time activity reports and observations are entered into the system.
- 4.16 The NZDF intends to interface EARLLS fully with SharePoint 3®, the document management system it is introducing. Currently EARLLS is a stand alone application that sits alongside SharePoint 3. Interfacing will provide visibility to folders held within EARLLS for SharePoint users, making the exchange of information between the two applications easier. The timescale for this is currently unknown as it depends on HQ NZDF Communications and Information Systems Branch priorities.
- 4.17 The introduction of SharePoint 3 may reduce the desire of other areas in the NZDF to utilise EARLLS given the advanced filing and search facilities that SharePoint 3 offers. This may be adequate for supporting lessons learned processes in certain circumstances. SharePoint 3 is however simply a document management application and does not offer the overall benefits of a dedicated lessons learned management system.

#### Conclusion

- 4.18 The NZDF has a variety of processes and systems through which lessons are learned. Of these only EARLLS provides a dedicated lessons learned management system.

- 4.19 Under the auspices of HQ JFNZ, EARLLS supports an effective lessons learned process used predominantly for missions, exercises and readiness or collective training activities. Other main lessons learned processes that do not utilise EARLLS appear to be effective for the functional areas and activities they support but there is little sharing of information from these across the NZDF.
- 4.20 The Army is further developing its Centre for Army Lessons to promote awareness, and achieve better coordination, of its various lessons learned processes. The platform based organisations of the Navy and Air Force means that there is not the same need for a central coordination entity.
- 4.21 Capability Branch is assessing the potential utility and functionality of EARLLS for capability management processes within the NZDF project management framework.
- 4.22 Consideration was also given by the Capability Branch as to whether EARLLS should be further promoted as a global lessons learned system. Clearly some other areas and activities could benefit from utilising the system and sharing information. As well as the development of policy that clearly outlines the corporate intent and drives the lessons learned culture and objectives, additional resourcing would be required to support the effective management of an expanded lessons learned process. There is a need for a single senior sponsor or champion for lessons learned to coordinate future policy and development, who could also promote the effective and useful expansion of EARLLS across the NZDF.

#### Recommendation

- 4.23 It is recommended that the NZDF:
- a appoints a sponsor or champion to coordinate future policy and development on lessons learned and promote the wider use of EARLLS across the NZDF; and
  - b considers the use of EARLLS for registering and monitoring the implementation of all Boards/Courts of Inquiry recommendations.

# Annex A

## Examples of lessons learned

Service/Unit	Activity	Lesson Learned
Joint	Samoa Tsunami	CA Directive 03/09 Civilian Volunteer Health Specialist Capability promulgated to provide guide for managing volunteers.
Joint	Samoa Tsunami	24/7 surge operations in HQ JFNZ needs pre-planned rosters of on call staff to de-conflict with other requirements.
Joint	Samoa Tsunami	Need for a Liaison Officer posting to coordinate response every time FRANZ accord is enacted for significant humanitarian disaster relief operations in the South Pacific. (SCI Branch to action)
Joint/40 Sqn	SKYTRAIN	Future Skytrain exercises will have a dedicated Army 5 Movements Company Liaison Officer appointed.
Joint/Army	ARIKI TG AFFIRM	Need identified for body armour with integral neck protection and better shoulder protection resulted in Army protective equipment capability project specifications being modified.
Joint/Army	KORU TG GYRO	LOV should not be modified and used as light infantry patrol vehicle as it compromises soldier safety. Provisions of DFO(A) relating to the operation of LOV should be complied with.
Navy/HMNZS <i>Te Mana</i>	CUTLASS	Changes to distribution of NZ Fleet Plan.
Navy/MOET	ARIKI TG TIKI	Provision of Conduct After Capture and Conventionally Directed Activity should be introduced into OLOC boarding party training. (CFPT to action.)
Navy/HMNZS <i>Hawea</i>	KAUWAE	Procedures for briefing prior to boarding to be conducted in accordance with SOPs.
Army/2LFG	SILVER WARRIOR	Better use of turret on LAV to full potential incorporated into cavalry capability training.
Air Force/OSWOH	WILLOH	If ADF elements deployed to NZ require arrestor gear, they will have to bring their own portable gear or nominate alternate airfields of suitable length for emergency situations.
Air Force/3 Sqn	STEEL TALON	Expert Health and Safety advice is required when planning for water sources and corresponding use.
Air Force/485 Wg	TEAL	Incoming TG TROY WO is trained in measuring water disinfectant levels.
Air Force/5 Sqn	AME Antarctica	5 Squadron personnel are kept up to date with respect to cold weather clothing.
Air Force/40 Sqn	AME Antarctica	Cold weather procedures changed for heating aircraft on overnight operations.
Air Force/40 Sqn	40 SQN DET AFGHANISTAN	Plug in USB GPS solution introduced for moving map to display to classified airspace required to safely operate in Afghanistan.
Air Force/485 Wg	Aero-Medical Evacuation Capability Project.	Project manager required to identify and coordinate all stakeholder requirements. Project officers to cover each operating domain medical, operational and technical.
Air Force/485 Wg	DSE OT&E	A steady state of OT&E capability will be required to manage P-3K2 and NH90 OT&E. Both IIS and OT&E teams must be generated and maintained separately. However, OT&E is part of IIS, not a separate activity.







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