Exercise Evaluation Report

Matanaka Caves

Location: Waikouaiti, Otago

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Executive Summary

This Search and Rescue Exercise (SAREX) was a valuable learning tool for all agencies and personnel involved.

Often in the SAR sector there are few times when multiple agencies work together except when in high stress operations when life or property are at risk. In these instances, lessons are often learnt after mistakes are made.

SAREXs like Exercise Matanaka Caves provide an opportunity for SAR systems and processes to be tested in a semi-controlled manner where if mistakes are made there is minimal risk to life or property.

The most important outcome from this exercise was that all major marine rescue assets in the Otago Coastal region were given the opportunity to practice working together.

The agencies all showed a willingness to work together and outside of the actual searching and rescuing, much was gained simply by getting to know each other.

All spoken to agreed that it was a worthwhile event and that it should happen more frequently.

1. Recommendations

1. Conduct multi agency SAREXs more frequently.

To ensure a high level of inter-agency cohesion, medium to large scale SAREX's should be conducted more frequently. Conducting one at a minimum every 12 months would be appropriate given the scale of the exercise, volunteer time constraints and financial considerations.

2. Know and stick to the CIMS system.

More emphasis needs to be placed on ensuring all personnel have an adequate understanding of the CIMS model. All team leaders and those who may form the IMT should be fully conversant with all aspects of CIMS to level 4. It is imperative that the principles of CIMS are more strictly adhered to at all SAREX's and SAROP's.

3. Always hold a debrief.

It is integral to the success of the SAREX that debriefs are conducted. Either a hot debrief (straight after the exercise) or a cold debrief (in the days following) will ensure that all personnel present are given the opportunity to provide constructive feedback to their own teams, other organisations, the IMT and the exercise organiser. Debriefs also provide a valuable opportunity to conduct self-evaluation in order to improve personal and team performance.

4. Test systems before they are needed.

Unlike SAROPs, SAREXs are pre-planned and known about, therefore all necessary tests and checks should be conducted on all of the equipment that is to be used at the event. This provides the personnel the opportunity to further train with the systems and processes that they will utilise in real life SAROPs.

5. Have a written Safety Plan and appoint a Safety Officer

For any SAREX, especially those held in an area not worked in before, it is vital to have a written safety plan to ensure risks to SAR volunteers and emergency services staff are managed appropriately. As with all major SAROPs a safety officer should be appointed, ideally independent from the IMT management positions in a medium- large SAREX.

2. Introduction

This multi-agency SAREX was conducted in order to test response management of a Search and Rescue operation in a tidal cave system. The organisations involved were a mix of marine rescue assets, Land SAR and communication groups, police and the local rescue helicopter.

The scenario was based around a group of 6 people who had entered the cave system, some of whom were washed out by a rogue wave.

The exercise was organised by the NZ Police Otago Coastal Search and Rescue coordinator and learnings taken from the SAREX, as well as recommendations made in this report will help to guide the development of the Matanaka Caves Rescue Pre Plan.

The IMT for the SAREX operated remotely using the AREC mobile communications centre (truck) and the police caravan.

The weather was challenging but realistic for Dunedin winter conditions, with a strong southerly wind developing throughout the day.

3. Background

3.1 Background to the Exercise

With few multi agency Marine SAREX's in recent years, a SAREX was mooted for mid 2018 and consequently organised. The area in question (Matanaka Beach) is growing in popularity, with fishing boats (commercial and recreational) as well as kayakers, surfers and general swimming taking place in the Karitane/Waikouaiti area. The Matanaka Caves are a system of caves, which are only accessible by sea in suitable tide/swell conditions. Some are up to 200 metres long. As the popularity of the area (and specifically the caves) grows, so does the possibility of a rescue needing to be conducted. Hence, the reason for the SAREX.

3.2 Dates, location, organising agency(s), key people

29 July, 2018.

Matanaka Caves and surrounds, Waikouaiti, East Otago.

Organised by Sergeant Nathan White, New Zealand Police.

3.3 Participating organisations

NZ Police; officers from Dunedin area and Omarama. Dunedin Coastguard, Dunedin Marine Search & Rescue, Helicopters Otago, Dunedin Water Rescue Squad, Fiordland Marine Rescue Squad, Amateur Radio Emergency Communications, Otago Harbour Master, Recreational Boats, Surf Life Saving NZ, Land SAR.

3.4 Exercise aim

To meet the exercise objectives, as set out below.

3.5 Exercise objectives

The exercise objectives as set by the Exercise Organiser are as listed below;

1.Risk Management of marine assets

Effective briefings/hazard identification, appointment of safety officer, ensuring all factors considered for the marine environment.

2.IMT using SARTrack in marine search

Use of SARTrack as primary management tool, effective use of AU support personnel, SARTrack running at a forward operating base on remote power and internet.

3. Multi agency cohesion

Aiming task assets fairly and evenly and promote response agencies cooperating and working together.

4. Development of pre-plan for Matanaka Caves.

As it states due to increased risk due to popularity and tourist activity in the cave is increasing, with local companies now taking guided tours through.

5. IMT development

Likelihood of new IMT talent turning out for this operation. Great opportunity for new people to work alongside the experienced.

3.6 Exercise Scenario

The exercise scenario set by the Exercise Organiser was;

“This morning at 8am, a group of 6 set off from Matanaka beach with the intention of exploring the Matanaka Caves. 5 were in Kayaks and one was on a blue surf board. They have managed to get a message out to say that they have become separated from their kayaks and are lost within the caves.

Two of the party cannot be accounted for and are believed to have been washed out of the cave by a rogue wave.

They are all wearing appropriate wetsuits and life jackets.

Injury status is not known.

At this point we do not have names or background information for the missing parties.”

4. Evaluation Methodology

4.1 The agreed outcomes of the evaluation activity

To observe the SAREX, evaluate it, analyse the observations, pair these with recognised best practise and provide meaningful feedback to the participants, in order to provide a tool which can be used to improve the SAR service to the community.

4.2 Evaluation scope

As it is not possible to view each organisations individual actions at each stage of the SAREX, the focus of this evaluation was centred on the Incident Management Team (IMT) and their use of the supporting agencies.

Where possible, observations were also made regarding the individual delivery of services, by the supporting agencies, but this was limited.

4.3 Aspects of the exercise observed, what was not observed

The method used for recording observations was notetaking. No video or audio was recorded, although photographs were taken of the Incident Action Plan (IAP) and other information on whiteboards. I also listened to the simplex radio channel used for all comms and gleaned as much information as possible to understand what was happening at sea.

The following items were unable to be directly observed during this evaluation:

Any activities that occurred in the water, including but not limited to:

- Searching for and/or rescue/recovery of patients from the Matanaka Caves,
- Any activities occurring North of Cornish Head,
- Any offshore searching or rescue/recovery of patients by tasked vessels,
- Any searching or rescue/recovery of patients by the Otago Regional Rescue Helicopter

4.4 The process followed in preparing and submitting the report

Attended the Pre-Exercise Briefing at St Kilda SLSC. This was held on Wednesday 25/7/18, four days prior to the SAREX. On the day of the SAREX, I arrived early to observe the set up of the Incident Control Point (ICP) and to ascertain who were given roles and how. During the Briefing and actual SAREX, my focus was to observe first, and understand; second. This means I was mainly just watching and listening but did ask questions when required in order to understand events and decisions as they occurred. Informal discussions with various personnel helped to aid my understanding of what had occurred and why, and also to establish areas for improvement. A draft report was written in the hours immediately following the SAREX, while information was front of mind. In the days following, some reference material was used or the purpose of clarifying Incident Management Team (IMT) roles and marine specific SAR best practice.

5. Findings

1.Risk Management of marine assets

Effective briefings/hazard identification, appointment of safety officer, ensuring all factors considered for the marine environment.

A well written GSMEAC briefing was given by the Exercise Organiser prior to handing over to the incoming IMT. Some hazards were identified during this briefing and also covered in depth during the Pre Exercise Brief, a few days earlier. I saw no indication of a Safety Officer being appointed for this exercise. The IMT appeared to leave much of the risk management to the assets themselves, which they were capable of handling, although ultimate responsibility for safety lies with the Incident Controller and IMT so this should process should have been more formal. Sea/swell info, weather, water temp, tides etc were all noted on the IMT whiteboard.

2.IMT using SARTrack in marine search

Use of Sartrack as primary management tool, effective use of AU support personnel, Sartrack running at a forward operating base on remove power and internet.

Digital / GPS equipped radios were distributed to ocean going assets for tracking purposes. The SARTrack system wasn't used much during this exercise due to issues with computers in the police caravan. The two generators decided not to go and this didn't help, although the AREC truck was able to provide reliable internet capability. As mentioned elsewhere in this document, the AU support personnel could have been utilised more.

3. Multi agency cohesion

Aiming task assets fairly and evenly and promote response agencies cooperating and working together.

With around 10 agencies/organisations participating in this SAREX there was a need to ensure all were tasked appropriately, in a timely manner and without crossover into each others core duties. Coastguard did a good job of On Scene Command (or Forward Command). This role is pivotal in a multi agency response with a water search/rescue component especially if you have an IMT based on land without a visual appreciation of the situation.

The SAREX gave all groups an opportunity to test and enhance their operational capabilities, be it on the water, in the air or on land.

I observed no major deficiencies in how each supporting agency conducted their own role.

4. Development of pre-plan for Matanaka Caves.

As it states due to increased risk due to popularity and tourist activity in the cave is increasing, with local companies now taking guided tours through.

For this to occur, a full debrief needs to be conducted so that observations and challenges encountered on the water can be brought to the attention of the IMT and Exercise Organiser. No hot debrief was run following this exercise and there has been no mention of any cold debrief. These debriefs would provide substantial assistance to the NZ Police who are intending to write a Pre-Plan for this type of response and area.

It should also be noted that this objective is not actually something that can be achieved during this SAREX. Instead, the learnings from this SAREX could in turn be used to inform the Matanaka Caves pre-plan.

5. IMT development

Likelihood of new IMT talent turning out for this operation. Great opportunity for new to work alongside the experienced.

Kinaesthetic learning! This was a valuable opportunity for potential SAROP IMTs to practise with real assets at hand. Learning by doing!

The appointed IMT for this exercise were experienced Police Officers who are part of a structured Police Search and Rescue Team. Upon one officer moving to a field-based role (Logistics to Rescue Swimmer) a Land SAR member was introduced to the IMT. A very minimal handover was given.

While the IMT worked together reasonably well, a more structured CIMS based model would have led to a more cohesive response.

Outside of the five written objectives, there are other key areas where findings could be noted and recommendations implemented in order to improve the Marine SAR Response.

CIMS

While CIMS principals were applied in parts, overall there should have been a lot more integration of the CIMS model across the SAREX.

The IMT was split into CIMS functions but personnel were frequently working on tasks not relevant to their own CIMS IMT role.

The Operations Manager completed the majority of the Planning, rather than managing the field assets, while the Planning/Intell Manager assisted in this process but should have taken the lead. The Logistics Manager had good lists of assets, but waned from appropriate taskings, and tended to just assist wherever needed as opposed to doing Logistics tasks.

As is so commonly seen with small- medium scale SAR operations and/or exercises, the Incident Controller (IC) was very hands on. The focus of the IC should have been more about ensuring the IMT stayed within their areas and got required CIMS functions competed rather than simply “doing what needed to be done”. The ICs role is to manage people.

SYSTEMS

In this day and age, a myriad of technology is used to conduct a Search and Rescue Operation. Having these systems tested and ready to use in times of need is integral in ensuring an efficient search and rescue response. Multiple technological and mechanical issues were encountered during this SAREX, which in a real situation at another location could have proved more problematic. Two generators hadn’t been run prior to use and weren’t operating, the computers set up in the caravan weren’t functioning correctly and thus precluded SARTrack use. The AREC truck wasn’t set up as it usually would be for a SAROP and this made it far more difficult for radio operators.

COMMS.

A VHF Marine simplex channel (69) was used for primary communications. This means of communication appeared appropriate for the scale of the SAREX and seemed to work ok. As anticipated, once vessels were North of Cornish Head, they were unable to call base, but correctly used Coastguard as the relay vessel, which was also acting as On Scene Command (or Forward Command). The main point of land-based comms was via the AREC communication truck, which used the call sign “SAR Base”. Members of the IMT used the SAR Base for delivering taskings and messages although this process needs to be refined. The AREC truck is undergoing refurbishment at present and was also understaffed which put significant workload on a small group of AREC members. It was noted by land assets and also the helicopter crew that the single radio channel was extremely busy, with multiple cutover and broken conservations. One option could be to run two separate channels or consider operating a duplex channel via a repeater so communications don’t have to be relayed to assets thus clogging the channel.

ADMINISTRATION ASSISTANTS

These were available and used for ad hoc taskings, based out of the Police Caravan. While assisting in some aspects of the IAP planning, scribing and general duties, these personnel could have been used far more effectively. It would have been worth considering incorporating them into the IMT under one (or two) of the appropriate Managers. Such as in the Operations Team and the Planning/Intell team. With a more formalised role, and appropriate tasks allocated, these personnel could have been a significant asset to the IMT.

SUBJECT MATTER EXPERTS / TECHNICAL EXPERTS

The IMT sought out the expertise of these personnel very early in the piece. Integral information was provided, which in turn helped to guide the IMT towards the required scope of the taskings required, the area in which to work and the marine environmental factors which would affect their plans. Another way to better utilise these experts would have been to actually co-opt them into the IMT. A marine subject matter expert could have been included in the Operations Team under the Ops Manager. Thus, making more use of the SME’s skills and knowledge.

SAR TRACK

SARTrack was not used to its’ full capability during this SAREX. It appeared to not be useable in the Police Caravan, due to a computer based issue that I am unsure of. I understand it may have been useable in the AREC Truck, but I cannot confirm this. This SAREX was the ideal opportunity to further test the SARTrack system, and making it useable (if possible) should have been prioritised.

ASSET BRIEFINGS

These were minimal or non existent, prior to tasking assets. Information’s on vessels, personnel and other assets, was generally gathered once on scene and already tasked and I witnessed no formal briefings occurring on land or relayed via radio.

ASSET TASKINGS

From the information I could observe on land and via the radio, taskings appeared to be appropriate for each type of asset available.

INTERAGENCY INTERACTION

There were around 10 different agencies/organisations participating in the SAREX and all conducted themselves in a professional manner. Many learnings would have been taken from the numerous interagency conversations witnessed during the day. Overall interagency cohesion was of a high level.

DEBRIEFING

No hot debrief was held following this SAREX and there has been no mention of a cold debrief. Debriefs are a pivotal part of any SAREX and should be held at every SAREX.

Without a debrief, field assets don't have an easy way to feed back issues faced in the field to the IMT and vice versa. Field teams NEED the opportunity to put forward ideas to the IMT as they are the ones who are most affected by decisions made at IMT level during any SAROP or SAREX.

Debriefs also provide an opportunity to air issues found operating within a multi-agency response and provide an open forum to discuss things that went well, and also areas that need improvement.

PERSONNEL AND PATIENT TRACKING

It is vital to ensure that tracking of all individual search personnel, vessels and patients happens from the moment they are tasked to the point they log off at their base. The IMT has a duty of care on behalf of the Lead Agency, to ensure this occurs. At the end of this SAREX a member of the public notified an Administrative Assistant that a patient (mannikin) had simply been left behind and had washed ashore at the end of the beach. This occurred due to either miscommunication, or an assumption being made about the whereabouts of the patient.

6. Conclusions

This SAREX provided a valuable learning opportunity for a myriad of response agencies to test their own systems and processes, as well as allowing them the opportunity to work together towards a common goal.

Of the five objectives, four could be assessed during this SAREX. The other, which was reagrding the development of the Matanaka Caves Pre Plan, will be informed by the learnings from this SAREX.

The other four objectives, which related to risk management, use of SARTrack, multi agency cohesion and IMT development were able to be assessed.

The risk management objective was mostly met, although there is room for improvement in this space.

The objective relating to the use of SARTrack was met to a minimal degree.

In terms of multi agency cohesion, this was met and exceeded.

The IMT were given a valuable learning opportunity which they made the most of and they would of learnt a lot from the experience, therefore this objective was met.

Overall, the SAREX was an enjoyable learning experience and was well worth the time and money invested to make it happen. Thanks must be given to the Exercise Organiser for his efforts, as well as the lead and support agencies for opting to be part of the exercise.

"***The only exercise, where we learn nothing, is the exercise we don't do."***

7. Appendix

Reference: SARTrack Limited. www.sartrack.co.nz

Used for gleaning information on the appropriate use and functioning of the SARTrack system.

Reference: The New Zealand Coordinated Incident Management Systems (CIMS) 2nd Edition Manual.

Used to confirm appropriate use of the CIMS model.

Reference: NZ SAR. www.nzsar.govt.nz

Used to check adherence to industry standard forms and operating procedures.