Bay of Plenty Marine SAREX
Operation 'SCOLLY'
Motiti Island
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Written for NZ Police by:

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Executive Summary

1. The SAREX Operation SCOLLY was a well planned and well executed Multi Agency exercise which is summarized further in this report.

2. The exercise brought together representatives from New Zealand Police, Coastguard Eastern Region, New Zealand Surf Life Saving, Surf Life Saving Eastern Region Clubs, and local Coastguard Units.

3. Activation of the Multi Agencies appeared to work well with three different Coastguard (CG) units and two different Surf Life Saving (SLS) units responding and deploying promptly.

4. The Multi Agency IMT was set up at Tauranga Coast Guard's base following the activating phone call, and was active shortly after the phone call. NZ Police coordinated the IMT response. Good use was made in the IMT of the skills brought by the different agencies. Cooperation between the various participating agencies appeared to be very good.

5. Documenting of the IMT planning process was meager and could use enhancement.

6. The Communications team within the IMT appeared to be under-resourced.

7. Communication from the IMT to the on-water resources was in general good. Taskings from IMT to wet units could be more structured, as several taskings required clarification, resulting in some confusion and delays.

8. Coordinating of the various on-water units went well with the only adverse feedback received at the hot debrief relating to the clarity of taskings.

9. The wet units of CG and SLS worked effectively and efficiently together to complete the taskings assigned to them by the IMT and they located the targeted items successfully.

10. Electronic transfer and display of data was suggested as the way forward to replace paper transfer of taskings and other critical data.

11. Limitations of the offshore use of IRBs for Marine SAREX were not able to be fully explored.

Key Findings

1. The IMT brought together representatives from New Zealand Police, Coastguard Eastern Region, New Zealand Surf Life Saving, Surf Life Saving Eastern Region Clubs, and local Coastguard Units. These agencies worked together efficiently to set up an IMT and achieve the exercise's aims to locate and rescue the missing persons.

2. One SLS unit declined to participate and more work may be required in this area to fully utilize and co-ordinate all SLS assets that will be needed in the event of a large-scale marine emergency in this area.

3. The Multi Agency IMT was set up promptly, and was active shortly after the phone call activation with NZ Police coordinating the IMT response.

4. Activation of Multi Agency resources appeared to work well with three different Coastguard units and two different Surf Life Saving units responding and deploying promptly.

5. More regular briefings of all in the IMT during a response are recommended.

6. Documenting of the planning and reasoning processes appeared to be inadequate and would likely not stand up to Coronial scrutiny. Delegating an extra person dedicated to recording every event and its time would improve outcome in event of a review.

7. The Communications team within the IMT appeared to be under-resourced during the response.

8. Coordinating of the various on-water units went well with the only adverse feedback received at the hot debrief relating to the clarity of some taskings.

7. Communication from the IMT to the on-water resources was in general good, with radio operators relaying the taskings clearly. A few taskings from IMT to wet units required clarification, resulting in some slight delays.

8. A number of the IMT participants were unclear on the roles and responsibilities of various functions within the IMT.

9. Reports from radio operators back to IMT were informally structured and lacked detail at times.

10. Surf Life Saving set up an efficient staging point for Multi SLSC's deployment at Papamoa Surf Club located roughly central to responders.

11. A thorough safety briefing was given to the SLS wet units.

12. The IRBs are limited in their ability to search without a nearby larger vessel for reference.

13. Communication with IRBs when they are transiting to a location at speed is not currently feasible due to engine noise so tasking cannot be amended once IRBs have commenced their passage.

14. Comments were received at the hot debrief of VHF channel 66 being very busy.

15. Prompt and accurate feedback from wet units is vital to the decision-making team in IMT so this is an area that could be further exercised.

16. There was no apparent procedure for wet units to report to IMT when they were deployed onto the water and when they had all safely returned. They instead reported to their local base, as per normal.

17. The on-water units achieved the exercise's aims to locate and rescue the missing persons within a suitable timeframe.

Key Recommendations

A number of the IMT participants could benefit from additional training or refreshing of CIMS processes.

Strengthening of the Communications team within the IMT is recommended, as this area appeared to be under-resourced.

Delegating an extra person dedicated to recording every event and its time is recommended.

A manual SAD plot to back up the SAD from RCCNZ is recommended to reduce the chance of errors in relaying co-ordinates.

Reports from radio operators to IMT need to be better structured and a SOP could be instigated to assist with this.

Structuring of tasking from IMT for radio operators to relay out to the wet units could also benefit from improvement.

Electronic transfer of data is worth further exploring as the way forward, replacing paper transfer of data and taskings.

An on-water observer to identify any wet areas for improvement could be a useful addition for a future Multi Agency exercise.

A review of Coastguard and Surf Life Saving SOPs is recommended regarding the procedures for reporting back of wet units to the IMT when deployed and when safely back off the water, in a Multi Agency response.

Accurate feedback is vital to the decision-making team so this is an area that could be further developed.

Investigation is recommended into the amount of radio traffic that occurred on VHF channel 66 during the exercise to ascertain if this channel was congested with radio traffic.

Background / Overview

Introduction:
Periodically Coastguard and other Marine SAR Agencies participate in exercises that consider or simulate real life situations. The aims of these exercises are to improve operational readiness and identify any gaps or weaknesses in the SOP's of all participating Agencies. They also clarify roles, demonstrate agency capabilities and provide a sound training platform.

The New Zealand Police, Western BOP SAR District, requested that selected Coastguard Units and Surf Life Saving Clubs take part in a combined Marine SAREX to provide training for and to test the capabilities of on-water Marine SAR resources to work together, in a Multi Agency SAR response, whilst under the direction of an Incident Management team, working within the CIMS process.

Exercise Name:
This Marine SAREX is called "Operation Scolly" as central to the on-water area of this exercise are the Motiti scallop beds.

Operation Scolly:
Operation Scolly is a Marine SAREX that incorporated the activation of a number of Coastguard Units and Surf Life Saving clubs to respond to an on-water Marine SAR Scenario. A Police Incident Controller utilising a Multi Agency IMT coordinated the SAR response. It tested the IMT's ability to effectively manage the incident within the CIMS process. The on-water scenario tested the participants' ability to work together to achieve the outcomes required by the Incident Action Plan. It also presented the opportunity to identify any communication problems between the on-water resources and the IMT.

Functions exercised:
- Multi Agency and intergroup coordination Search and Rescue incident management.
- Applying CIMS to SAR at a moderate level within a scenario based environment.
- Coastguard Units/Surf life Saving Clubs Wet Units and their resources

Participating Agencies:
New Zealand Police, Coastguard Eastern Region, New Zealand Surf Life Saving, Surf Life Saving Eastern Region Clubs, Waihi Beach Coastguard Unit, Tauranga Coastguard Unit, Maketu Coastguard Unit.

Objectives for the Exercise

Exercise Aims:
To ascertain how effectively a Multi Agency IMT, following the CIMS management process, working from a centralised ICP, can manage the on-water scenario of this exercise in respect to:

- utilising gathered information;
- formulating an effective Action Plan;
- establishing effective communication with on-water resources; and
- coordinating and controlling the SAR response within existing SOP's.

To test how the on-water resources of Multi Agencies can effectively work together to complete the tasking assigned to them by the IMT; how the on-water resources of Multi Agencies communicate with the IMT; how the on-water resources of Multi Agencies' SOPs mesh, and to identify any changes needed to improve the efficiency and effectiveness of their responses.

Efficient communication between the IMT and the various on-water agencies involved in any Marine SAROP is a vital component of any successful operation. All forms of communication should be tested in an operational setting to identify and address areas of concern.

To facilitate the necessary training needed to enable Multi Agency IMT personnel to work efficiently together as a team. The New Zealand Police WBOP SAR District need to provide all management members from each agency with hands-on training as marine incident controllers within a Multi Agency IMT.

Specific SAREX Operation 'Scolly' Objectives:
1. To facilitate the necessary training needed to enable Multi Agency IMT personnel to work efficiently together as a team.

2. To test how efficiently and effectively Coastguard and Surf Life Saving on-water resources can work together under the direction of an IMT, by:

a. Testing the activation process of Marine SAR resources from incident notification through to the deployment of on-water resources in accordance with set agency SOPs, identifying any faults or amendments necessary to current SOPs.

b. Testing the ability of a Multi Agency IMT to effectively set up an ICP, put in place an Action Plan; to document the planning process; and to co-ordinate the on-water SAR resources to achieve the objectives of the Action Plan.

c. Testing the ability of Coastguard and Surf Life Saving on-water resources to work effectively and efficiently together to complete the taskings assigned to them by the IMT with the emphasis being on the communication between the IMT and the on-water resources.

d. Testing Surf Life Saving's efficiency in setting up a staging point for multiple SLS Clubs' deployment with the emphasis being on responder safety.

e. To establish the ability and limitations (if any) of SLSC wet crews to work in a non-coastal environment with the support of a Coastguard vessel.

f. Establishing and testing the lines of communication between all SAREX participants, identifying and finding solutions to communication shortfalls

Scenario

Operation 'SCOLLY' Scenario

At about 9.30am on Sunday 30 October 2016 the CER Duty 0fficer has received a telephone call from Gladys Knight to the effect that she and her husband Dave are up from Wellington visiting Family friends at Papamoa Beach. Dave and his mate Bill Crosby along with Bill's son Scott and his son's mate Dick, left the ramp at Papamoa Beach at first light this morning to go over to Motiti Island to get some scallops. They are in Bill's boat, which is a 4.6 Stabi craft with a centre console.

Gladys has just received a phone call from Dave to say that at about 7.30am Bill and the two boys went into the water for a scallop dive leaving him to look after the boat. Dave had taken a couple of seasickness tablets before leaving the house, which were making him drowsy, and he was not feeling at all well.
Dave had made himself comfortable in the hull of the boat and had fallen asleep waking up just after 9am this morning to find that the boat anchor had not held and he was drifting.

Dave does not know the area and has no idea where he is. There is no sign of the three divers. Dave is reportedly very seasick and is starting to panic. He is unable to get the Boat motor started. Dave has very little experience with boats.
The informant, who is an experienced boatie, was in the middle of obtaining information from her husband that she thought might help with the rescue response, when she lost contact with him. All attempts to reconnect have gone directly to his answer service.

Situation:

On Sunday the 30th of October 2016 on-water resources from Waihi, Tauranga and Maketu Coastguard Units along with IRB crews from Surf Life Saving Clubs Eastern Region took part in a full scale search and rescue exercise in the waters off Motiti Island.
The on-water crews were directed by a Police coordinated IMT working from the designated ICP at Tauranga Coastguard HQ.

Signals:

The Call sign for the Tauranga ICP was Coastguard Rescue Base.
The VHF Operational Channel was Channel 66.
VHF Ship to ship Communication was Channel 6 or 1.
The prefix 'SAREX SAREX' was used at the commencement of each VHF transmission in connection with this exercise.
In the event of a real time emergency, the prefix 'NO DUFF NO DUFF' would precede the tasking instructions to crews involved in the SAR response.

Observations

The observations below have been compared with the individual KPIs to assist with assessment of KPI achievement.

1. To test the activation process of Marine SAR resources from incident notification through to the deployment of on-water resources in accordance with set agency SOPs, identifying any faults or amendments necessary to current SOPs.

The on-water resources all activated very quickly once tasked, although Tauranga Coastguard wet resources appeared to be standing by outside the ICP beforehand. Whether this was due to them being ready to respond as they were on regular duty or whether this was due to advance SAREX notification was not clear, however this particular unit has had much practice in emergency call outs so their activation process has been well exercised.

The Surf Life Saving response teams were informed of the exercise only at the time of the event so that an accurate idea of response times could be acquired. The Papamoa SLS responders were reported to take 15 minutes from the initial request to being ready for at the boat ramp for a check of personnel, boat and equipment.

Once assembled, the crews of two SLS IRBs were briefed on the tasking, and safety requirements were checked including clothing, equipment, fuel, water & food. When all gear had been checked, the crews were briefed on the task and safety aspects. They were reminded of their ability and responsibility for making the call to proceed or abort once on the water. Radio frequencies and procedures were established, including use of mobile phones as back up.

One SLS unit elected not to participate on the day. More work may be required in this area to fully utilize and co-ordinate all SLS assets that would be required in the event of a large-scale marine emergency in this area.

2. To test the ability of a Multi Agency IMT to effectively set up an Incident Control Point; to put in place an Action Plan; to document the planning process; and to co-ordinate the on-water SAR resources to achieve the objectives of the Action Plan.

The scenario formation was incomplete in a few minor places, however this did not detract from the participants' exercising or achieving of their objectives.

'Who' does 'what' in each role took a while for the IMT to organise, but once this was established, the different agencies worked well together, each agency contributing information from their own area of expertise.

Notes were initially passed around on scraps of paper instead of on available forms but this was rectified during the course of the exercise.

At times, especially initially when the Intelligence and Planning teams were the busiest, the team got a bit buried in detail and could have paid more attention to the urgency of locating the 'divers' in the water. Once the IC stood back a bit to have more of an overview, this was resolved.

The whiteboards or equivalent electronic methods could have been more fully utilized to disseminate information and keep all IMT participants heading in the same direction. Electronic transfer of data might be the way forward and this was subsequently discussed at the IMT debrief as a possibility.

As is common in a simulation, there was a little confusion at times as to where the scenario stopped and reality started. Parking of a vehicle and empty boat trailer at an appropriate boat ramp showed thorough planning. It was unfortunate that the description of the vehicle did not quite match the scenario data given, causing some confusion in the IMT until clarified, as did the incorrect contact phone number for the boatman. However these inaccuracies reflect scenarios that could happen in a real event and were handled well by the IMT.

To pre-empt responders making up information, the medical status of each 'diver' was clearly written on each of the objects representing the missing 'divers.'

Two appropriate Action Plans were made and displayed on a laminated sheet, covering consecutive two-hour periods.

Timeline recording was used to log significant events but was incomplete with only 9 entries for the entire exercise. For example, the timeline did not include times of finding the second or third divers.

There was a distinct lack of recording of the IMT decision-making rationale and the times of these events. Delegating an extra person dedicated to recording every event and its time would be a useful improvement.

It was not understood by all participants that plotting of formal search patterns is normally done in the IMT not on board the vessels. This was well explained to all at the hot debrief. The initial reflex action of setting a search pattern would normally be up to the skipper, whereas the formal search pattern type and location would be developed once the IMT was set up and functioning. This misunderstanding relates possibly to a lack of training or currency in CIMS roles and processes.

There appeared to be no manual chart plotting done to determine initial splash point or search area – all TWC and target drift seemed to be derived from informal best estimates.

A manual back-up SAD plot is recommended to reduce the chance of errors in relaying co-ordinates. There were suitably skilled personnel available in the ICP to do this.

The SAD requested from RCCNZ used an initial estimate of splash position but did not appear to be updated once the boat target was located at 1112 hours and a more accurate splash position, and thence more accurate SAD, could be calculated.

Establishing a splash point for the remaining two missing 'divers' did not appear to have been calculated once the boat's chilly bin was located. This item could have been incorporated into the IAP to ensure it did not get overlooked.

The 'diver' planted on the rocky shore of Motiti Island was found at 1120 hours by crew on one of the smaller search vessels carrying out a coastline search.

Apart from an early briefing after the first half hour or so, there were no regular briefings to update all in IMT, resulting in only those at the planning table knowing what decisions had been made and why. Regular briefings of all in the IMT by the IC every half hour or hourly are recommended.

A number of the IMT participants could benefit from additional training or refreshing of CIMS processes. The CIMS structure was not clear to some participants especially in the beginning, when IMT responders were recruited who were, perhaps, not expecting to play a core role on the day.

Strengthening of the Communications team within the IMT is recommended, as this area appeared to be under-resourced.

Advice from well-meaning observers occasionally added confusion the busy IMT. At the initial briefing it was made clear that personnel could be either observers or participants, but not both. Observers needed to be reminded not to interfere.

3. To test the ability of Coastguard and Surf Life Saving on-water resources to work effectively and efficiently together to complete the taskings assigned to them by the IMT with the emphasis being on the communication between the IMT and the on-water resources.

The radio operators did good work with what they were given, with clear transmission of tasks, but could benefit from a more efficient system to record incoming information (not on scraps of paper); their reporting back appeared sometimes to be incomplete or lacking in detail. Reports from radio operators to IMT could be better structured with 'When, where, who, what' etc. rather than the informal (although very welcome news) 'we have found a person.'

There were reports of IRBs self-tasking (informal searching) until formal tasks were received. Several ambiguous taskings were issued so some IRB crews resorted to self-tasking until these could be clarified.

The perceived inadequate reporting back from wet resources to IMT was possibly due to communication breakdowns as a result of overloading of key communications personnel, rather than no feedback being given, however accurate feedback is vital to the decision-making team so this is an area that could be developed regardless.

The three missing 'divers' including one located amongst rocks on Motiti Island, were found in good time, indicating good teamwork between the Coastguard and SLS on-water units. An on-water observer to identify any wet areas for improvement could be a useful addition for any future Multi Agency exercises.

Overloading of radio operators was observed when tasking and requests for information from the wet units came at the same time from different sources within the IMT. An extra person could be appointed to relay radio communications from the radio operators to IMT, and this was in fact done part way through the exercise.

4. To test Surf Life Saving's efficiency in setting up a staging point for Multi SLSC's deployment with the emphasis being on responder safety; and to establish the ability and limitations (if any) of SLSC wet crews to work in a non-coastal environment with the support of a Coastguard vessel.

The forward staging point chosen for Surf Life Saving personnel was at the Papamoa Surf Club. This location was selected over the alternative location at Taylor's Reserve boat ramp due to better accessibility to fuel and other facilities at the surf club.

Two SLS boats were tasked to go out to Motiti Island together, and to radio/phone in on arrival and to report to the Coastguard vessel *TECT Rescue* on arrival.

For navigation the IRBs were relying on Coastguard's *TECT Rescue*. It was not clear to this IMT-based observer how well this worked for conducting the search pattern, however it is understood that the IRB crews lose situational awareness once land is out of sight, which happens much earlier for the small IRBs than larger Coastguard vessels.

Some of the limitations of SLS IRBs were clarified at the hot debrief but this area may possibly be worth further exploring. For example, are the navigational capabilities or limitations of the IRB teams with regards to search pattern execution taken into account in the SOPs and exercise planning?

On completion of the exercise the various wet units reported back to their respective bases that they were safely back and off the water, but there was no apparent clear system in place for this information to be relayed to the IMT.

5. To establish and test the lines of communication between all SAREX participants, identifying and finding solutions to communication shortfalls.

As per their normal SOPs, wet crews logged in with their own local bases when they set off, so it was not immediately apparent to the IMT when these assets were actually on the water. This aspect of the communication may benefit from some clarification.

Once electronic tracking of wet resources was established and viewed on the screen, it became apparent where the assets were located.

Communication with IRBs when they are transiting to a location at speed is not currently feasible so tasking cannot be amended once IRBs have commenced their passage.

Structuring of tasking to radio operators to relay out to the wet units could have been clearer. In several cases there were delays caused by requests for clarification of tasks.

Comments were received at the hot debrief that there was too much radio traffic on VHF channel 66. If this is found to be so from reviewing a record of the radio communications, a formal procedure for diverting of more traffic onto the alternative frequency might ease this.

The use of latitude/longitude co-ordinates when relaying search area datum is recommended to use for tasking of vessel skippers rather than a description, e.g. 500m northwest of the northern tip of Motiti Island, as latitude/longitude coordinates are easier for a vessel to locate.

Texting of search coordinates to skippers was a good method of avoiding transmission or transcribing errors, however texting is not always feasible on the smaller, wetter boats like the IRBs and also does not work well if operators' hands are cold. Emailing of tasks or pictures of search areas to wet units worked well to the larger boats.

Abbreviations

Abbreviation	Detail
AP	Action Plan
CER	Coastguard Eastern Region
CIMS	Co-ordinated Incident Management System
COMMS	Communications
IAP	Incident Action Plan
IC	Incident Controller
ICP	Incident Control Point
IMT	Incident Management Team
IRB	Inflatable Rescue Boat
OSC	On Scene Command
RCCNZ	Rescue Coordination Centre New Zealand
SAD	Search Area Determination
SAR	Search and Rescue
SAREX	Search and Rescue Exercise
SLS	Surf Live Saving
SLSC	Surf Life Saving Club
SOP	Standard Operating Procedure
TWC	Total Water Current
VHF	Very High Frequency (radio)

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