



Western Bay of Plenty SAREX

Tuhua Island April 2012

Compiled for the N.Z. Police by:

**Nick COYNE
SAR Consultant**

nickcoyne@clear.net.nz

**Barry SHEPHERD
N.Z. Police**

barry.shepherd@police.govt.nz

SAREX Tuhua 2012



Summary

The N.Z. Police and their support agencies have mandated responsibility to maintain an effective Search and Rescue capability within New Zealand. In order to fulfill this responsibility at district level the Bay of Plenty Police organized a Search and Rescue Exercise (SAREX) late April 2012 focusing on a response to Tuhua Island. The reason for this focus was

- Tuhua Island was made open to the public in 2009. It was closed prior to this due to private ownership and biodiversity programmes on and around the island
- The island has no permanent population or SAR response capacity
- There has been a noticeable increase in visitors since public access has been allowed. Activities include tramping, fishing and diving
- Tuhua Island is 20 nautical miles from Tauranga and 16 nautical miles from Waihi. Tauranga would be the most likely response centre
- Since 2009 there has been 2 reported land searches on the island and a number of close to shore incidents
- Access to the island is limited to water vessel and helicopter
- Any SAR response would involve a number of organisations contributing a range of assets –marine ,air and land.

Prior to the SAREX, a vulnerability assessment identified a range of likely SAR operations on or around Tuhua: such as land based search/marine emergency/diving accident. Associated issues are:

- Logistics due to the remoteness of the island
- Safety due to variable weather and sea conditions which may limit a response
- The need to use transport assets from a range of responding agencies
- Implementing a common communications plan across all the responding agencies
- Complying with Quarantine /Biosecurity conditions.

Opinion was an exercise should be held to test systems and assets for a response on or around Tuhua Island in order to develop a useful Response Plan.

During this exercise people from different agencies worked in a larger than their “normal” IMT and were often performing roles with which they were unfamiliar.

Events to back ground the SAREX and Response Plan

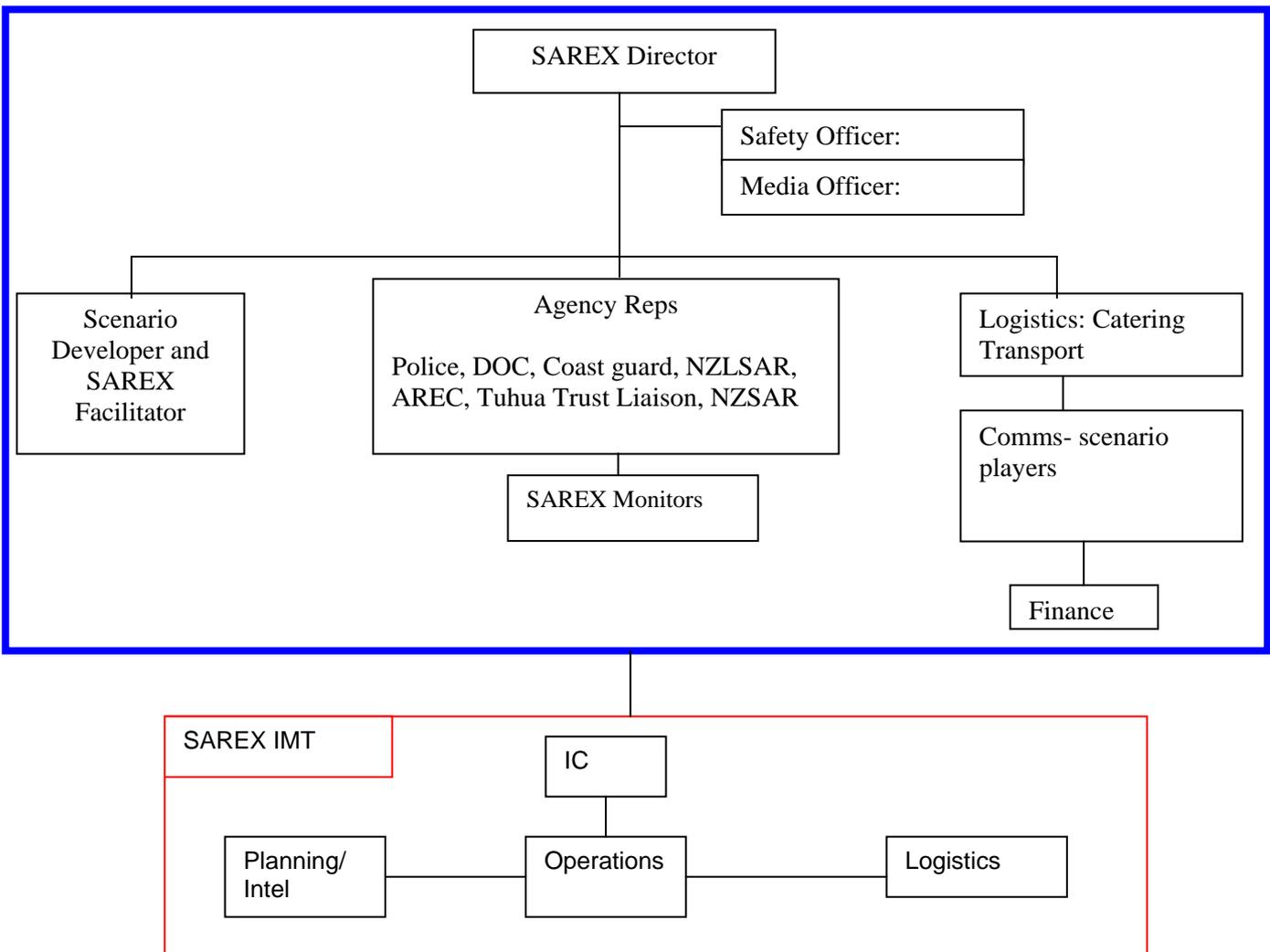
There were a number of lead up activities to the SAREX such as a familiarisation weekend attended by Land SAR and Coastguard, tracks on the Island were GPS logged and recorded, winch training was undertaken to comply with RNZAF operational requirements and a working group was established to plan and facilitate the SAREX. This group comprised of Police, Land SAR, DOC (who also represented the Tuhua Island Trust Board), AREC, Coastguard personnel and a SAREX facilitator / consultant.

The objectives of this committee were to facilitate the SAREX ,provide input for a suitable written Response Plan post SAREX and facilitate ongoing relationships between the agencies as needed in a multiagency response within this region.

Information for this Plan was to come from the work already done, experiences gained on the SAREX, it's debrief and various reports that are produced by observers/ monitors.

The Monitors sought views and opinions during the SAREX from the responding agency representatives, members of the IMT, field teams and the subjects of the search. These views have been included, where thought relevant, and considered in the report.

Planning Structure



SAR Exercise Overview

Scenario: Based on a Marine and land incident on and around Tuhua Island

Date: 27-29th April 2012

Location: Bay of Plenty

Response Lead Agency: New Zealand Police

Scenario Writers: Craig Madden and Nick Coyne

SAR Participating Agencies: N.Z. Police, Coast guard, DOC, Land SAR, AREC, Trust Power Rescue Helicopter and Air Patrol.

The Western Bay of Plenty SAREX 2012 was a full scale exercise using Land, Marine and Air assets. It was managed by an IMT comprising of Police, Land SAR and Coastguard personnel. It was supported by the AREC and a Marine communications unit. The over all aim was to enhance regional capability for any SAROP that requires a multi agency coordinated response. Particular reference was to Tuhua Island. The scenario was designed to test the formation of a multi agency IMT, its separate functionalities and the field response. Any changes needed to improve the efficiency and effectiveness could then be observed. It was reported by responders that the scenario reflected “reality” based on personal experiences.

Objectives for the SAREX

There were 9 main objectives for the exercise:

- a) *Ensure all agencies/ organisations that are required in a SAROP at Tuhua are identified in the current preplan*
- b) *Ensure coordination and consensus between these responding agencies/ organisations*
- c) *To test and identify areas of vulnerability in the S.O.P.'s of these responding organisations*
- d) *To effectively manage a search from an Incident Control Point in Tauranga – 20 nautical miles from the operational area*
- e) *Ensure there is a common communications plan between all organisations on a SAROP*
- f) *To continue, build and further relations with all responding agencies*
- g) *To ensure value is delivered for all personnel and agencies involve.*
- h) *To ensure the safety of all participants including role players*
- i) *To maintain and further the relations between all responding agencies during this SAREX and the Trustees /owners of the Tuhua Island”.*

SAREX Objective Outcomes

- a) *Ensure all agencies/ organisations that are required in a SAROP at Tuhua are identified in the current preplan.*

The pre SAREX meeting as well as during the SAREX identified a number of agencies further to that already involved, that should be included in any resource list or response plan for Tuhua Island. **These are R.C.C, USAR, Cliff Rescue, Surf Life Saving, Harbour Master, Air Patrol and Kayak Club.** This is in addition to Police, Coastguard, DOC, AREC, and Trust Power Rescue Helicopter.

- b) *Ensure coordination and consensus between these responding agencies/ organisations*

A committee has been formed with a clear intent to facilitate future multi agency responses and input in to a Response Plan. Operationally the SAREX identified some areas where better coordination could be achieved namely in the planning and tasking phases. These are addressed under objectives c), d) and e).

- c) *To test and identify areas of vulnerability in the S.O.P.'s of these responding organisations*

1. **Call out Procedures** – Appropriate for a SAREX considering normal Police protocol. However allowing the IMT to call in support, plan and resource the next days activity on the first evening would reflect reality and ensure early tasking of field assets. This reluctance did place an artificial restriction and limits on the exercise.

Some thought needs to be given in any Response plan that provides clear points of contact for responding agencies so resources are available in a timely and appropriate manner e.g. AREC and MSU were alerted later than optimum.

- ii. **Information gathering** – Mostly done well in the sizing up of the situation however information was lost (or thought irrelevant) as the scenario developed, and a bigger IMT was needed. This could be addressed through organizational structure with all incoming information channeled through the Intelligence unit no matter the initial thoughts on relevancy by people receiving the information. Information analysis was done well but this often lagged due to at times an under populated IMT.
- iii. **Incident Management Team set up** – The SAREX identified what worked and what didn't. The CIMS functions being isolated from one another caused dysfunction. Full credit to the team in adapting so Planning and Operations were in close collaboration. All of these functions could see and hear what was happening in the respective work areas. Having this physical proximity allowed good situational awareness for all the IMT. As this ICP will be used in a future multi agency response the room set up needs to be noted in the response plan.

On day 1 and part of day 2 not all IMT members knew their roles given as this was a marine and land response. Again this could be addressed in the organizational structure. Identifying who were the managers of the functions did prove difficult and named jackets e.g. Operations Manager, Planning Manager, would be of benefit. The earlier use of jackets is suggested.

The IMT principally reflexed tasked although there was a clear need to start some formal search planning. This appeared due to a number of factors such as ,not clearly defining the search area (an area comprising of both marine and land) early on, an organizational structure that did not reflect the nature of the incident and an under manned IMT.

Moving the assembly and team registration area away from the IMT room is also suggested to stop congestion and unneeded noise.

There was discussion on whether to have radios in the Op, Planning etc. areas so the radio traffic could be heard. To do so would help situational awareness of all the IMT and give some flexibility. Some messages do need to be replied to immediately (or meaning given to the task through conversation) without the normal delays incurred going through more formal channels.

- iv. **SAR Plan** – Initial planning and tasking was appropriate and followed standard Police practice. Having some clear written objectives for all the IMT to see early on would enhance unity of action. These could be white boarded in the first instance. Later on several written IAP's were produced but at times it was not clear if operations were following these. Having the operations manager input into these plans and displaying the IAP for that operational period would help. This was also mentioned in the debrief where some marine units were unaware of their part to play. Displaying an IAP in the briefing area and /or attaching a short IAP to team takings again would help unify action.

There was no access to 1: 50,000 topo maps of Tuhua. It would have helped planning and operations and recommend copies are kept and made available for a SAROP.

- v. **Incident Control**- After initial involvement the IC took more of a managing the team role with regular meetings and provision of sitreps. Some of the liaison responsibilities went unfilled at times particularly "family liaison" due to people delegated that responsibility leaving the ICP/IMT and not making it known. While not thinking this would happen in a real operation it does highlight the nature of volunteers, time availability, shifts and the IMT being left with important functions unfilled. An organization chart was drawn up on a white board but as people moved in and out of roles it was not up dated. Having this chart well displayed would help the IC's awareness and subsequent forward planning. Sectorising the search area on any chart would also help awareness as to the nature of the operation of which the I.C has control.

Safety plan – some aspects could be pre recorded such as to the recording vessel carrying capacity (licenced).

1. **Planning / Intelligence** –In the initial response phase information gathered supported the plan. Given that there was a marine aspect to the search and corresponding low subject survivability the early development of scenarios and tasking to those possibilities should take priority over the land response particularly in the uncertainty stage. Profiling of equipment for survivability and response capability remains essential.

The use of scenarios and an appreciation of how it could have been used to help in where and how to search appeared limited. Useful intelligence was available to weight scenarios e.g. size of boat motor and known sea conditions. There was a lack of people available for this and had at times less priority against operational matters. Marine and Land planning people up skilling in this area could be of benefit.

Written IAP's can also add practical value to a search operation separate from a recording of search function. At times the process seemed to hinder the common sense and ability of the planning team. An appreciation of the value added when strategizing the operational objectives would be of some benefit. A written IAP also helps the interface between Operations and Planning. Underlying guidelines such "what do we know" (situation) "what do we need to do about it" (plan) and who is going to it (tasking) provide some clarity for action planning.

S.A.D. given by the R.C.C. had an assumed splash point. Once an object was found using a reverse process to find the splash point remained a useful but unexplored idea.

Planning for the next operational period occurred and an IAP was prepared for an incoming team .Some thought needs to be given as to from where the incoming IMT will be sourced and who has the appropriate skills. There appeared to be some vulnerability in the area as to availability and number of marine controllers.

The scenario called for a marine and a land search plan. Having a defined search area that takes in Marine and Land possibilities would be helpful if not essential when moving from reflex search to a more a formal search process.

Investigation was hampered by the lack of personnel however this may not occur on a SAROP. Earlier plotting of subject movements and intentions would have helped determine relevancy of incoming information.

Operational structure and an awareness of it by IMT members will be the key to a unified approach in this area.

It should be noted that the early involvement of D.O.C. (because of their local knowledge, skill base, resources and wanting bio security considerations) is essential for any IAP.

No information from the debriefing of resources (for planning purposes) was observed during the SAREX. Time restraints limited this opportunity. It is apparent that the Tuhua Island sector supervisor would have a critical role in this process and should be part of the "job" description.

VI. **Operations** – generally performed well. Some issues with Land SAR people tasking marine units e.g. giving GR instead of Lat Long. Also the conveying of complex information such as tides, currents, drift patterns etc. proved difficult to do in clear and concise ways. Thought could be given to "on board" vessel internet/ fax etc. to facilitate this. Vessel licenced carrying capacity (as could be noted in a safety plan) will also restrict timings and level of response. Who tasks of Aerial units – Marine or Land – also needs some consideration .Again operational structure, sectorising and an IMT that has knowledge of how Land SAR and Coastguard work is important and will address much of the above.

Earlier production of visual aides such as maps, acetate overlays, team logs, locations would help situational awareness. Consistent reporting or the recording of GR, documents/overlays with dates and times also would have helped.

Briefing teams and equipment – A full general briefing was given but some teams reported inadequacies which would impact on their effort and search outcomes. Examples were the comms plan was not known to all, maps printed lacked GR figures (which is of some concern as 1:50,000 topo maps of the island were not available for the team kits) and some of the marine units were not aware of what they were looking for or the reason for their tasking. There is some merit in making known the action plan (IAP) to the field resources along with their tasking so teams have the background to make informed decisions. Having a direct radio link to operations so conversation can be freely carried out also would be of benefit.

Team taskings: The travel time to the island presents an opportunity for early deployment while planning and tasking is finalised. Initial tasks could be radioed to the teams after deployment. Team names and numbering could be done as to the environment they are operating in e.g. Tuhua Marine 1, Tuhua Land 1.

Tracking of resources: Aerial and marine resources were tracked live and GPS logged. Field resources by reported GR on message forms. It is assumed teams GPS logged their tracks for downloading on debrief. The fact some maps in the field did not have printed GR figures may have lead to some of the observed anomalies in reported locations.

Performance in the field – Teams presented as skilled and professional in their approach. The Marine units operated under some challenging sea conditions at times and were proactive in achieving search goals. The opportunity to trial POD from the fixed wing aircraft was missed but a range of small (buoy) and larger (body) objects were located in the search area. On land teams sound searched, located a number of significant clues, gained information by way of interview and administered first aide.

Land Sector

The subject on the southern side of the island did not hear any search teams. Her location was 500m off the track. This concurs with sound POD trials which give an effective sweep width of approx 400m under “ideal” conditions i.e. variables such as terrain, wind and other white noise such the sea will have an impact. Several sound lines had been in the area but it was the subject who made contact with the last search team as they moved out of the area. A mobile subject in the search area potentially moves in and out of range so it is important that teams still sound line even if other teams are ahead. Apparently this was not the case.

The naming of a forward control point could lead to some confusion between agencies. Should it be On Scene Coordinator or Sector supervisor? It is suggested that the OSC remains as a Cat 2 / R.C.C. term and sector supervisor is used in line with CIMS terminology for a Cat 1 event.

Quarantine restrictions need to be considered in the Response plan as they will still apply in an operation. This reinforces having a sector supervisor on the island. This aspect needs to be discussed with D.O.C. and the Police. The resulting S.O.P.’s would then be inputted into the Response Plan.

VII. **Logistics** – The search plan and it implementation was not hindered by logistics during the SAREX. In any operational response the weather could have an impact and would need to be planned for.

VIII. **Search Recording** (log of actions) – Paper based, I Man, Live Tracking

Paper based – job sheets, tasking forms, message forms (Marine and Land) etc.

Both Marine and Land forms were used variously and it is in the operations area where there could be conflict. **For a joint operation it is important that this aspect is discussed.** Obviously one standard set of forms would be ideal and may occur in some areas such as planning .The organizational structure again will determine the necessity and extent of standardization.

It took some effort to sort team files due to a number of factors – man power being one. Numbers and Bulldog clips are simple solutions and should be used before a back log occurs. It was noted all

managers logged actions and decisions either in personal note books (to be photocopied post op) or on forms.

I Man – A centralized data base for the entire search. It's ability to log, record, report becomes more important given a multi agency response. At times data missed being entered for various reasons such as some agencies not being aware of this centralized point or communications not being in a written form.

As with any data entry having a number of people in the MSU to call on is important. Further depth to the MSU group may be needed and could be drawn from other SAR agencies. This would be beneficial as these groups already have some familiarity with this type of operation. There was some issue with a lack of printers and computers. Even if operations is paper based I-Man does give the advantage for everyone to be aware of the entries and access information. The other advantage is it can save on "runners". This did happen to an extent but the opinion was more networked computers would be an advantage. Police computers because of restricted access have a limited value in the ICP.

It is recommended all agencies are briefed and made familiar what data is recorded on this system. IMT information flow will be critical to this and will need to be reconsidered in a multi agency response.

Live Tracking – Marine and air assets were tracked live. The exercise showed it as a very valuable tool with huge potential for all SAR agencies.

d) To effectively manage a search from an Incident Control Point in Tauranga – 20 nautical miles from an operational area.

This was largely achieved. Having a Sector supervisor on the island contributed to this.

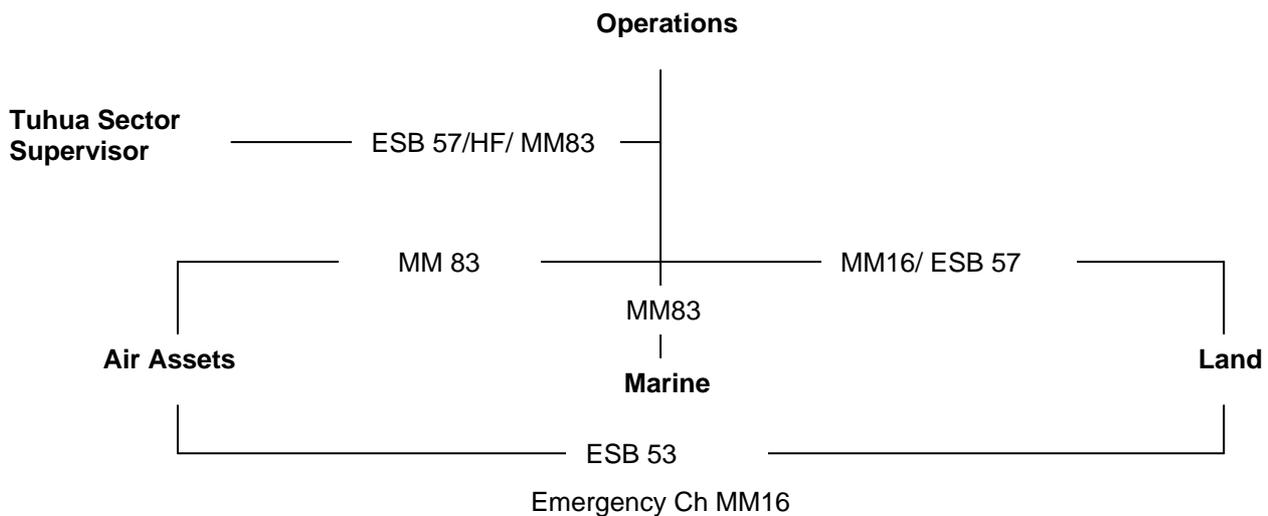
The sector supervisor at times coordinated air and ground assets. He was able to appropriately re task and advise on conditions being experienced on the island. Recording action and close communication with the mainland IMT – Operations – is critical to this success. His own log would need to be kept and later recorded on the main file. Minimising delay in this would be an advantage e.g. information that the boy had separated from his caregiver although apparent in the field on day 1 was not known to the Tauranga based IMT until mid morning the day 2. This instance reflected some isolation of field information from the IMT. Internet link either by the land line or IPSTAR could be considered as ways of facilitating this.

Again because of the islands remoteness, access difficulty and quarantine requirements it is recommended that such a supervisor is an experienced operational manager briefed to the role (developing descriptors may be necessary) and specific requirements of the island. Being Police would be an added advantage although not a necessity.

e) Ensure there is a common communications plan between all organisations on a SAROP

Communication – Initially operated in 2 separate locations with no unified comms plan. Improvement came about by having both marine (air) and land radio operators in the same room under 1 unit manager. Having a permanent aerial dedicated to land frequencies attached to the Coast guard building was suggested as being of benefit

Below is a comms plan formulated for the Tuhua response.



HF radio proved difficult because of a number of factors. The telephone relay function was used to advantage and should be noted in any Response plan.

Satellite phones (and their availability) along with the fixed telephone link already on the island also have their place. If the sector supervisor is relying on the fixed phone link an outside bell would be an advantage.

Not all of the people in the comms unit were familiar with the CIMS structure and it would be helpful for a multi agency operation to have basic training in this.

f) To continue building and further relations will all responding agencies

It is recommended the SAREX committee continue as its members are from the major responding agencies .Other co opted members could also be considered from organizations such as Surf life saving etc. It is also very well placed to contribute to the Response Plan (as having observers on the SAREX) and to organize further exercises.

g) To ensure value is delivered for all personnel and agencies involved.

This report, the SAREX and the work leading up to it is focused on creating an appropriate, useful Response Plan for the area. Information gained such as reporting of winch sites identified should be noted and recorded as they are limited on the island.

Table top exercises involving a multi agency response could follow to embed, fine tune and test any response plan .It is noted that some other regions preface a multi agency SAREX with a number of table top exercises. This an option that could explored in the future.

h) To ensure the safety of all participants including role players

A written safety plan was developed prior to the SAREX and is appended.

i) To maintain and further the relations between all responding agencies during this SAREX and the Trustees /owners of the Tuhua Island”

There was open dialogue between all the observers during the exercise and issues raised were dealt with constructively. Any relationship between the Coastguard and other units has to be cognizant of the fact they have assets with expensive running costs. Staggering a SAREX over 3 months with 2 table top exercises before a full operational exercise has been suggested. Particularly relevant in any joint exercise.

The Tuhua Trustees were kept informed around all the planning concerned with the SAREX. There are a number of culturally sensitive areas with no fly zones and wahi tapu sites. It is recommended any response plan includes and engages the Tuhua Trust Board.

Conclusions

The scenario was designed to probe functionalities and along with other pre SAREX events gathered information to input into a response plan. It did highlight ,an IMT that proved to be experienced, flexible and capable of running a multi agency search. The field resources used were also capable, skilled and willing to contribute to improving on the ground response. The prevailing attitude amongst all those present was one of openness to the monitoring process and a genuine desire to improve their SAR response where possible.

Recommendations

1. That the Pre SAREX committee convenes (with the same or extended representation) as an entity to help facilitate and coordinate multi agency responses in the Bay of Plenty Area and give consideration to the following:
 - a) A resource list and response plan is constructed using material from the pre SAREX activities, experiences from the SAREX / SAROPS and various reports
 - b) Any response plan for Tuhua has the early involvement of D.O.C. and establishes a liaison with the Tuhua Trust. This refers to both when formulating the plan and when implementing (during an operation)
 - c) For multi agency responses having a larger and more structured IMT using CIMS guidelines. A suggested structure is appended
 - d) Examine each agencies recording systems and information flows. Adopt what suits the organisational structure and have a common data entry point
 - e) Identify further people who would be suitable in the IMT and MSU for a multi agency response so there is some depth to allow for a rotation of management teams. These people could be from within or adjacent to the district
 - f) CIMS training that relates to multi agency (Marine /Land/ Air) responses is undertaken so those unfamiliar are fully briefed on the functions and information flows within the IMT
 - g) Refresh skills and further training on action planning and scenario development for search particularly as it relates to multi agency responses in an expanding incident
 - h) The Police keep available a suitable number of BC 37 NZ Topo Maps 1:50,000 scale for the IMT and field team purposes
 - i) Sector supervisors, particularly for on Tuhua, have developed for them a list of “job descriptors” to which they are briefed
 - j) Re-familiarise land based search teams on some of the concepts around the use of sound with mobile subjects
 - k) Conduct annual multiagency table top exercises and a full scale exercise when it is seen as necessary.

Monitors:

Nick Coyne
SAREX Facilitator/ SAR Consultant
[REDACTED]
nickcoyne@clear.net.nz

Barry Shepherd
Police SAR Coordinator
Taupo
barry.shepherd@police.govt.nz

Western Bay of Plenty Area SAREX 2012 Monitors Report

