

New Zealand Search and Rescue SAREX Guidelines

(Correct as at 22 February 2013)



Analyse SAREX Need

completed



1: Establish SAREX Planning team (See Appendix A for instructions and Appendix C and D for Examples)	<input type="checkbox"/>								
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2: Identify trends and predictions, response needs and asset assessment (See Appendix B)	<input type="checkbox"/>								
Hunting still tends to be the predominant recreational (legal and illegal) activity in the area selected for the SAREX New Incident Control Point IE Makaraka Rural Fire and SAR Base New technologies IE I-Man and G-Man, GPS units, Mapping systems (Memory map) Training Needs identified via NZLandSAR Field Officer									
3 Summarise need:	<input type="checkbox"/>								
SAR response Day/Night all weather conditions to lost hunter in the area Establishing SOP for ICP set up at RF building in Makaraka Refresher in processing LKP, T&C, Search Techniques IMT hand-over									
4: Specify the purpose of this SAREX:	<input type="checkbox"/>								
To practice Gisborne SAR Incident Management Team and Field Team personnel, in all aspects of a wilderness SAR operation and with emphasis on IMT functions and the field team deployment and tactics									
5: Determine specific SAREX objectives:	<input type="checkbox"/>								
SAREX Objectives - IMT 1. Implement pre-plan 2. Establish ICP 3. Establish and implement IAP 4. Successful hand-over process 5. Effective use of helicopter resource 6. 7.									
SAREX Objectives - Field Teams 1. Practice all Field Team personnel in the use of Tait radios and GPS. 2. Practice all personnel in search methods, tracking and sign cutting by both day and night.									
SAREX Objectives – MSU 1. Practice MSU personnel in the use of computer mapping techniques and information recording									

Select exercise name:
6: Op Waingake

Establish a budget:

Scenario set up:
7: Helicopter cost:
Food:

Obtain lead/joint agency authority NZ Police
8: Eastern District Ops Manager: Insp M O'Leary sign off to be obtained

9: Seek multi agency participation
NZ Police
NZLSAR (Hawkes Bay, Whakatane, Gisborne)
Rural Fire
Air Force

Design SAREX

10: Set Key Performance Indicators (KPI's)

√

i. IMT KPIs

Tasks to be completed by IMT

1. Initial assessment of scenario
2. Develop and implement Incident Action Plans
3. Establish an efficient documentation system
2. Identify a CIMS structure (including people allocated to each role)
6. Determine and establish the ICP for the first and subsequent operational periods
8. Establish effective communication systems (IMT / Field Teams / Lead Agency)

ii. Field Team KPIs

Teams will do the following within the required SOP

1. Use correct radio procedure
2. Use TCA LKP
3. Use TCA to follow sign
4. Use correct safety procedures with Air Force Helicopters
5. Rescue lost party

iii. MSU KPIs

Tasks to be completed by the MSU

1. Assist with set up and running of ICP
2. Practice using I-Man software
3. Practice using mapping technologies
4. Implement information recording systems

11: Develop exercise scenario
Lost party scenario developed by John [REDACTED] & Rex [REDACTED]

12: Evaluate plan against training need
Table top, Workshops, Field ex all meet the training objectives set for the SAREX

13: Determine exercise controllers, participants and resources required
Exercise Controllers

[REDACTED]

Confirm and announce exercise date/time and location

22 – 24 Feb 2013 Waingake and Morere
22/02 1800 for IMT
14: 23/02 0700 registration for field teams
23/02 0800 – 1200 training and familiarisation
23/02 1300 – 24-02 1200 Field Exercise

15: Develop detailed events
Initial Notification
Develop an IAP (Reflex tasking)
Set up ICP
Deploy teams
TCA deployed
Track to Lost Party
Patient assessment
Recovery/Rescue plan

16: Develop exercise safety plan
Safety Officer (Rex Allen) appointed. RAMs completed
It will be up to the team leader on site to assess situation and develop action plan to deal with situation. IMT is to be informed immediately and plan passed to IC.

17: Develop exercise 'control rules'
"No Duff No Duff No Duff" is the call for a real emergency. Anyone can make that call.

18: Appoint exercise monitors (local and external) and define their role

Ian Newman NZLSAR Observe / Train	Allan Macintosh: Monitor Radio protocols
Peter Corbett NZLANDSAR Observe and train	Phil Burgess (SAR Sect) Observe

19: Confirm multi agency participation
As in 9

20: Set up SAREX

Conduct

completed



21:	SAREX's are run under CIMS, IAMSAR, or other recognized structure. CIMS will be the incident management system used during this SAREX	<input type="checkbox"/>
22:	Monitoring systems/real time feedback processes are in place Monitors have established check sheets and controllers report to them as required	<input type="checkbox"/>
23:	Start the exercise	<input type="checkbox"/>
24:	Sustain and control exercise activity	<input type="checkbox"/>
25:	Intervention (if required) to keep exercise on track If teams unable to find track at LKP after x hours provide team with GR of lost party.	<input type="checkbox"/>

Debrief

completed



26:	Hot debrief immediately after SAREX Sunday 24/02/13 1300hrs <ul style="list-style-type: none"> Includes all personnel/agencies, written or verbal Preliminary feedback from monitors Provide appropriate exercise closure 	<input type="checkbox"/>
27:	Cold Debrief within appropriate time frame TBA (Within 4 weeks) <ul style="list-style-type: none"> Key performance indicators are evaluated Internal review and analysis of SAREX systems, performance and processes 	<input type="checkbox"/>
28:	Monitors analysis and findings completed	<input type="checkbox"/>
29:	SAREX report completed	<input type="checkbox"/>
30:	Report circulated to participants and agencies	<input type="checkbox"/>

Implement Learning



31:	Implement report findings into Pre-plans, SOP's and training and development	<input type="checkbox"/>
32:	Ongoing evaluation	<input type="checkbox"/>
33:	Develop 'lessons learned' and distribute as appropriate	<input type="checkbox"/>



Gisborne SAREX Evaluation

22 – 24 February 2013

1. Introduction

Over the weekend of Friday 22 February to Sunday 24 February 2013 Gisborne Police in conjunction with local LandSAR and AREC personnel conducted their annual SAREX which also involved the use of an Iroquois Helicopter from RNZAF.

Gisborne Police and LandSAR (hereinafter referred to as Gisborne SAR) have recently acquired the use of the Gisborne District Rural Fire facility on the outskirts of town. This is a large multi-purpose 3 story building with very real potential to be utilized as a permanent fixed Incident Control Point (ICP) for the majority of their search and rescue operations – particularly during those first few hours of initial response and reflex tasking. The use of these shared facilities also provides an opportunity to collaborate with a number of other agencies to provide significant benefits for the Gisborne District in terms of:

- Enhanced interagency operability
- Greater degree of information and resource sharing across the agencies
- Commonality of incident management processes and systems utilising CIMS thereby enhancing the overall emergency response capabilities
- A permanent, stable, well resourced and set up ICP for the management of a variety of emergencies with the possibility of developing an all-hazard approach to incident management within the Gisborne District

The facility however is only bricks and mortar and this in itself will not achieve the above benefits without the proactive development of trust and confidence between the agencies – an exercise in relationship management and the building of powerful partnerships – a journey that

has already begun with this SAREX being another milestone along the way. Gisborne SAR is to be congratulated for taking this initiative and early signs are very positive that they will succeed – well done guys.

I was invited to attend the SAREX to observe and to deliver a short clue site processing lesson on the Saturday morning.

Whilst there I was also asked to prepare this SAREX evaluation which I see as fulfilling two primary purposes:

- to provide feedback to NZSAR to ensure their SAREX subsidy is being well spent
- to make recommendations to Gisborne SAR to reinforce good performance and suggest ways in which future performance can be enhanced

Given that I did not go into the field, and that the Police intend to conduct a cold debrief on March 7 (following a thorough hot debrief at the conclusion of the exercise) I do not intend to comment on the field activities and will limit this evaluation report to the conduct of the SAREX from an incident management point of view.

2. Objectives

The following objectives were clearly stated in the SAREX joining instructions:

Incident Management Team

- Implementation of a prepared Incident Action Plan (IAP) for an operational period
- Preparation of an IAP for the next operational period
- Complete handover process

Field teams

- Safe helicopter deployment including winching
- Locating and processing a clue rich site
- Tracking – and looking for clues of the missing party
- Night searching
- Extrication of an injured person

Other objectives emerged during the conduct of the exercise and these included:

- To conduct a day/night all weather search; and
- To establish standard operating procedures for the Incident Control Point (ICP) at the rural fire facility

And more specifically:

Incident Management Team

- Initial assessment
- Develop and implement an IAP
- Implement documentation system
- Utilise CIMS structure
- Establish ICP for 1st operational period
- Maintain effective communications systems between IMT & field teams
- Conduct an IMT handover

Management Support Unit

- Assist with the set-up of the ICP
- Utilise IMan and other information management systems
- Utilise mapping software

Comment

The objectives were clearly articulated prior to and during the exercise and were used as the basis for a hot de-brief at the conclusion of the exercise on the Sunday afternoon.

The objectives were also the driver for the way in which the exercise was formatted – the exercise scenario and all other activities being designed to achieve the objectives or desired learning outcomes.

So Gisborne SAR should be commended for the way in which they targeted this exercise to achieve some quite specific learning outcomes – and although not all were achieved, most were and this has to be seen as being a fairly satisfactory outcome. The non-achievement of learning outcomes being useful lessons themselves particularly when those lessons are identified as a result of effective de-briefing with all personnel – and with actions taken to remedy them they then become lessons learnt.

3. SAREX format

The SAREX commenced on the Friday evening with a briefing to the IMT followed by an outline of the scenario which the IMT used to initiate some reflex tasks in the field and to prepare an IAP for the IMT to implement on the Saturday using field resources deployed by helicopter into bush country close to Gisborne.

On the Saturday morning all personnel were briefed as to the conduct of the SAREX and the following programme was outlined:

0800 - 1200 Modular training	• First Aid
	• Navigation
	• Clue site processing
	• Tracking/search methods
	• Helicopter safety
1200 - 1230	Lunch
1300 Sat – 1200 Sun	Field exercise
1300 Sun	Debrief
1400 Sun	Demobilisation

Field personnel from Gisborne were participating along with some IMT and MSU personnel from Whakatane and Hawkes Bay.

SAREX management and scenario incident management shared a common Incident Controller (IC) – with SAREX management also involving a ‘lost party’ management and tracking component of 3 staff. This dual role for the IC, on occasions, challenged his ability to retain situational awareness and adequate control of both events – more comment on this under ‘Modular Organisation’ later in this report.

4. Scenario design

Without going into specifics the exercise scenario was designed to maximize the opportunity for all field teams to achieve their objectives. This initially involved the deployment of the field teams by helicopter into search areas which contained little or no relevant sign – followed by a re-deployment of all teams late on the Saturday, again by helicopter, into clue rich areas which necessitated the use of 5 different lost parties with an abandoned camp site for each that required processing – and ultimately the finding and extraction of the lost parties by each team.

This was also an unfolding scenario that the IMT had to manage – resulting late on the Saturday and into the Sunday with the 5 different scenarios as outlined above.

Comment

The scenario design was positive in that it was created to maximize the learning outcomes for the field resources – and as intimated earlier these were largely achieved. The scenario did however present an artificial learning environment for the IMT which again highlighted the difficulties of exercising both field and IMT resources contemporaneously.

If this type of scenario was going to be used again I would suggest that the IMT is utilized purely as event management with search management exercising being conducted as a separate IMTEX type activity for the IMT alone.

5. Incident Management Evaluation

Due to my inability to observe the field activities I have limited this evaluation to incident management matters. And due to the artificial nature of the scenario which was designed primarily to achieve the field focused objectives I am not going to comment necessarily on the specific search management aspects of the exercise.

To provide some structure and a coordinated incident management flavour I have used the seven principles of CIMS as the basis for this evaluation – the seven principles being:

- a. Common terminology
- b. Integrated communications
- c. Designated incident facilities
- d. Modular organisation
- e. Comprehensive resource management
- f. Consolidated incident action planning
- g. Manageable span of control

a. Common terminology

The everyday use of terminology that is common to all agencies is really important to provide clarity and to prevent unnecessary confusion particularly pertaining to incident facilities, functions and processes.

Gisborne SAR is obviously making good progress in terms of the transition from the old ways of managing an incident to total CIMS immersion where the CIMS terminology rolls off the tongue naturally and becomes quite intuitive. This was evident by language used within the IMT, the vests worn by some of the IMT personnel and the discrete formation of some of the units within the IMT such as the Resources Unit, Communications Unit and the Management Support Unit.

There were however some hangovers from the past – such as the Incident Control Point (ICP) being described sometimes as either the HQ or Base.

Comment

It is suggested that Gisborne SAR, in conjunction with the other agencies who are likely to use the new facility or work alongside SAR agree to the common CIMS terminology for all things pertaining to incident management and the facility – and clearly identify these with their correct names. An example being a sign on the front door of the facility identifying it as the Incident Control Point (ICP) – another area inside the building where field teams gather to prepare and be briefed could be labeled either the Staging Area or Assembly Areas, whichever is appropriate under the circumstances – more on this later in the report.

Allied to that, but not strictly part of the CIMS principles is the need to consider other search and rescue specific terminology to attain national consistency – an example being the use of the phrase “TCA the last known point” – TCA is a training course not a process or task, the correct terminology being “to sign-cut and process the last known point”.

b. Integrated Communications

The ability to communicate with all personnel from all agencies involved in an incident is extremely important not only for the accurate conveyance of information but more importantly for health and safety reasons to provide a real time response capability to mitigate hazards in the field.

Without wanting to labour the point the radio communications on this SAREX created problems for all personnel and I’m sure the specifics will be identified at both the hot and cold de-briefs and will be rectified over time.

However integrated communications is far wider than just the ability to pass a message over a radio and extends to all forms of information management within the IMT.

Comment

Gisborne SAR has a great opportunity now that they have a permanent fixed operational facility to enhance existing, and develop new processes and systems, around the way in which they communicate within an incident across all agencies involved – some specifics include:

- A comprehensive radio communications plan identifying all areas of coverage from the facility utilising all available channels with both fixed and portable repeaters – collaboration with other agencies would no doubt be of benefit e.g. seeking authority to programme some of the forestry and fire channels into the LandSAR and Police radios could extend the coverage.
- The development of a similar plan identifying all areas of cell phone coverage – and obviously having the ability to equip field teams in those areas with cell phones.

- Incorporating into the operational communications plan some contingencies in the event primary communications fall over - this will obviously depend on the particular circumstances and will have to be considered on a case by case basis.
- For the IMT – the development of a comprehensive information management system incorporating documented information flows through the IMT, whiteboard templates for the Planning Intelligence, Operations and Logistics Sections to display and disseminate information and an agreed understanding around the integration of paper based systems and processes with the electronic options such as IMan – and how and when the IMT transitions from one to the other as the incident escalates beyond initial response and reflex tasking.

c. Designated Incident Facilities

It is extremely important that all personnel within an incident, including those from other agencies or locations have clarity as regards the purpose, location and nomenclature of all designated incident facilities.

The rural fire facility in Gisborne lends itself nicely to compartmentalization into designated functional areas or facilities for incident management – such as:

- **Incident Control Point (ICP)** – ground floor set-up as per SAREX – probably needs some refinement such as the detachment of the communications area from operations
- **Assembly Area** – a number of choices downstairs plus the classroom/cafeteria area upstairs if required – great for downtime between tasks
- **Staging Area** – again a number of choices down stairs under cover from inclement weather and adjacent to the ICP for briefing and de-briefing convenience – would normally require the appointment of a Staging Area Manager reporting to the Operations Manager which I believe is similar to the incumbent Team Manager role being utilized in Gisborne. This area also provides an ideal location for the Resources Unit with a sign-in/out capability reporting to the Planning Intel Manager but working collaboratively with the Operations Section. Supply and other Units such as Catering and Medical could also be domiciled in this area.
- **Heli-pad** – across the road in the clear ground provides proximity to the Staging Area with no apparent aerial hazards and easily managed – care to be taken with traffic hazards around the roadway.

Comment

Given that Gisborne SAR will be sharing this facility with other agencies including Rural Fire it is suggested that all agencies involved collaborate to create a common set of facilities to suit a wide range of incidents. Consistent use of the facility for the same purposes will create the clarity required – as long as they are clearly labeled using common terminology and the functionality is understood and agreed to.

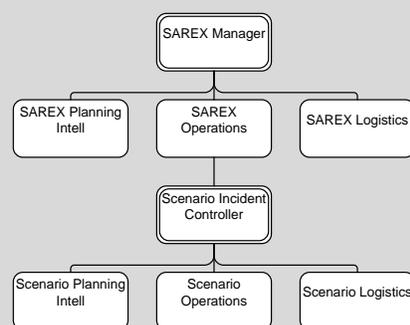
d. Modular organisation

This is about top down management in that every incident must have an Incident Controller (IC) who is in charge whilst being responsible and accountable, and for the incident response capabilities (including the IMT) to expand or contract depending on the scale and or complexities of the incident by activating or deactivating modules within its structure.

Comment

During the SAREX the IMT was formed early on the Friday night to begin planning for the deployment of field teams the following day and by midday on the Saturday a substantial IMT had been formed comprised of all sections and some discrete, although not necessarily clearly identified units within those. An example being the separation of the planning and intelligence functions within the Planning Intelligence Section – although this should more correctly have been a Situation/Planning Unit, Intelligence Unit split with an overall Planning Intelligence Manager appointed. Another example was the Communications, Supply, and Catering Units within the Logistics Section.

A significant feature of this exercise was that the Police Incident Controller was not only in charge of the scenario as the IC but was also the event manager for the SAREX which made it difficult for him to maintain situational awareness and control of both components at the same time. I would suggest for future SAREXs that these two functions are separated and populated by different individuals with both components utilising a CIMS structure with one embedded in the other as outlined below:



This structure mirrors the relationship between an Emergency Operations Centre (EOC) and one or more ICPs with the SAREX Manager essentially being a Response Coordinator – so very much aligned with the CIMS principles – it could also be used to manage multiple scenarios with more than one IMT as occurred during the Gisborne SAREX.

Note that the activation of the SAREX Operations Section is discretionary as it is in other areas of incident management – particularly at a regional level.

e. Comprehensive resource management

A common theme for many emergency response situations is lack of information, lack of time and lack of resource and this is the same for search and rescue where often getting adequate and appropriate resources on site as soon as possible is critical in order to save lives – marine and avalanche incidents being two examples.

So apart from using time wisely and gathering more information incident management has to maximize the use of every resource or asset at its disposal which includes such things as:

- Pre-planning to identify all available resources in the operational area – including those belonging to other agencies – and the creation of a readily accessible call-out capability
- Effective incident action planning to identify the resources required to achieve the incident objectives – right resources in the right place
- The tracking of all resources available to the IMT for planning purposes – requires the activation of a Resources Unit (or resource tracking capability) using tools such as the T card system
- Regular status monitoring of all resources for not only task management purposes but also for the health and safety of all personnel
- Effective demobilization and de-briefing procedures – to make sure personnel get home safely and are available to respond again

Comment

It was very pleasing to see the use of the T Card system for signing in and out of the incident at the Gisborne SAREX, and although this appeared to be a relatively new process most personnel were conversant with it by the conclusion of the exercise. The system probably requires some refinements which I'm sure will come with the creation of a dedicated Resource Unit Team Leader (& staff – who do not necessarily have to have SAR experience and can be common to all agencies) and the use of the T Cards at all Gisborne SAR activities including meetings and training events which will ingrain this process into all personnel.

The sharing of the Rural Fire facility also provides the opportunity to collaborate with those other agencies and to share resources – in other words Gisborne SAR and other agencies can not only play in the same sand pit but play with each other's toys – the use of the rural fire command vehicle as a forward operations or staging area was a great example.

f. Consolidated incident action planning

It is important that all agencies and personnel involved in an incident are working to the same plan – in other words having the same goal and measureable objectives and working together to compliment each other's actions to achieve that goal.

However it is often said that a plan is only relevant at the time it is conceived and to put this in a military context – no plan survives contact with the enemy – which means that as a plan is implemented it needs to be regularly reviewed to determine if it is still relevant given the actions that have occurred and the information that has been gathered – and if need be modified to cater for the changing circumstances.

Comment

Although there appeared to be an effective exchange of information between the functional areas of the Gisborne IMT I did not see any regular planning or management meetings between the IC, Operations, Planning Intel and Logistics.

I would suggest that these meetings are scheduled at regular times during an operational period (possibly hourly – but this depends largely on the tempo and complexity of the operation) involving the managers only from those sections. These scheduled meeting times need to be clearly displayed on a whiteboard in the ICP with the meetings themselves only taking a few minutes – short sharp and focused on the plan or issues arising from the implementation of it – also a chance to identify minor problems and resolve them before they become more problematic whilst considering forward planning needs.

This requires not only a manageable span of control but the appointment of managers who can actually manage and not do – incident managers as opposed to task managers. A good manager needs to be able to stand back and delegate others to do the work – this enables him/her to attain and retain situational awareness within their functional area in order to maximize the effectiveness of all involved and to anticipate issues and resource needs ahead of time. This also allows the manager to attend the scheduled planning meetings without disrupting the work flow within the section. A useful term for this management style is MBWA – Management By Wandering Around – so if, as a manager, you have to ability to walk around observing people and process, asking the odd question and seeing how they are interfacing with other functional areas (among other things) then you're probably doing OK.

g. Manageable span of control

Span of control is the number of functions or people someone can effectively manage – and is generally defined as being between 3 and 7 with 5 being an optimum depending on the seriousness, complexity or scale of the functions being managed.

To attain manageable span of control within an incident requires a management structure with clearly defined functions, roles and responsibilities and the ability to populate the IMT with sufficient skilled people to obtain the optimum number of functions or lines of reporting to cope and work effectively.

Ultimately it is the responsibility of the IC to see that all personnel have manageable span of control but each section manager, unit leader or team leader also needs to consider not only their own span of control but that of their subordinates.

Comment

During the SAREX there was an isolated situation where a member of the communications team found that they were unable to effectively cope with the demands of message handling between the radio operator and the IMT. This situation could have been identified earlier by the Communications Unit Team Leader and rectified by perhaps modifying the processes to reduce the workload, assigning someone else to assist or rotating staff though that position to provide some down time and much needed rest. A Logistics Manager or IC who had sufficient situational awareness may also have identified this problem before it became a major issue.

And as a general observation, to maintain IMT capability and capacity Gisborne SAR could well benefit with some succession planning to bring younger people into some of the key roles.

6. Incident Health Evaluation

Although un-connected to the SAREX the following is an Incident Health Evaluation from North America that Gisborne SAR may find useful for future SAROPs. This list of questions is intended for the Incident Controller or other key management personnel to ask themselves from time to time to evaluate the management health of the incident and is closely aligned with the MBWA principle alluded to earlier.

- I have time to review this list
- An atmosphere of positive urgency is being maintained
- Clues and items found are being tracked and resolved
- Staff are taking breaks and not working beyond scheduled shifts
- Regular and scheduled planning meetings are occurring
- Search efforts are focused on achieving safety, investigative, confinement and search objectives – remember Management by Objective (MBO)
- The identity, location and status of all incident personnel are known
- Transportation, food, shelter, and communications requirements for the next 12 hours are identified and are being addressed
- Resources are being assigned promptly; unassigned personnel aren't wandering around the ICP
- Teams returning from assignments are being debriefed promptly. Debriefing information is being recorded, and is being considered in developing future assignments and objectives

- The family supports the search effort
- Media coverage is positive and helpful
- Rescue, medical, demobilization plans are ready for implementation

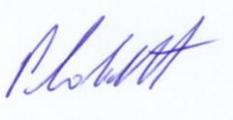
7. Conclusion

The Gisborne SAREX was a well planned and executed event with some clearly defined and targeted objectives – most of which were achieved.

And although this SAREX identified a number of areas where improvements can be made, particularly in the area of incident management, I remain confident that Gisborne SAR remains a very effective land search and rescue capability on the East Coast of New Zealand.

The one aspect that probably impressed me the most was the very effective relationship between the Gisborne Police and the LandSAR volunteers – in particular the leadership demonstrated by the Police.

With the opportunities that the fixed multi agency ICP brings I certainly look forward to seeing the building of more diverse relationships and powerful partnerships with the other agencies including Rural Fire, Civil Defence and Coastguard which can only enhance the wider emergency response capabilities for the people of Gisborne and surrounding areas.



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