



**New Zealand Search
and Rescue Council**

**Annual Report
2010/2011**





Chair's Report



On behalf of the New Zealand Search and Rescue Council, I am very pleased to present this Annual Search and Rescue Report for the 2010-2011 year. The New Zealand Search and Rescue (SAR) sector plays an important role in ensuring New Zealanders and guests to our country are able to use and enjoy the many outdoor activities on offer.

Team-up, join forces, cooperate or collaborate – whatever words you want to use, working together well is at the heart of successful search and rescue. Effective cooperation and collaboration requires an inclusive and non-competitive approach as well as an ethic of contribution by everyone involved.

With the aim of “one SAR” firmly etched in the Council’s goals, it has been rewarding to see our search and rescue community embrace a culture of working and learning alongside each other. It has been great to see this evolution and the widespread adoption of this goal by SAR people throughout New Zealand. While SAR has the clear, shared purpose of finding and rescuing people in distress, the idea of “one SAR” is also very useful when we extend it into non-operational areas such as planning or joint training.

It has been a hard year; the devastating earthquakes in Christchurch and the Pike River incident have affected so many of us in so many ways. But when nature was at its worst we saw humanity at its best – from perilous acts of rescue to welcome words of reassurance. With considerable pride, the New Zealand Search and Rescue Council (NZSAR) would like to acknowledge the active involvement of our sector. LandSAR mounted the biggest operation it has ever been involved in, with 350 volunteers checking the homes, walkways and tracks in the west of Christchurch. Coastguard volunteers from the Southern Region helped run the Windsor School Welfare Centre around the clock. Surf Life Saving volunteers warned people away from contaminated beaches, helped with the clean-up, and shifted people out of affected homes.

Professionalism, preparation, courage and commitment – these are the qualities that our SAR people bring to communities throughout New Zealand. Their skills and dedication may not be shown every night on our TV screens, but they are there when we need them most.

Last year they were called on in 2,374 search and rescue operations over a region that stretches from Antarctica to the tropics. This may have involved rescuers being lowered from a helicopter to lift a hurt crew member from the pitching deck of a fishing boat, or pulling someone out of the sea. It could have involved teams being called out at night to help find a missing toddler, or a lost Alzheimer’s sufferer. Or, it could have included teams that located an injured tramp and carried that person over rough terrain to safety.

No matter what the circumstances, every year thousands of New Zealanders and guests to our country have reason to be grateful for the willingness of SAR people to face adversity and take them out of harm’s way. In the 2010/11 year our efforts resulted in 272 lives saved, 630 people rescued and a further 1,388 people being assisted.

The Council and I are very proud to be involved in this sector and I trust you will enjoy reading more about it and our work in this report. ■

Martin Matthews
Chair
New Zealand Search and Rescue Council



Secretariat Manager's Report



It has been rewarding to see significant progress in a number of areas important to New Zealand Search and Rescue over the 2010-2011 year. The National Search and Rescue Support Programme (NSSP) brought together a number of practical initiatives under the umbrella of the NZSAR Secretariat for the first time. The NSSP relies heavily on the participation, goodwill and hard work by a huge range of SAR people and organisations throughout the sector, and I would like to thank everyone involved for their assistance.

The 2010/11 NSSP not only achieved what we planned, but also enabled us to incorporate some additional high priority activities. On behalf of the Secretariat, the Rescue Coordination Centre (RCCNZ) ran a number of air observer training and refresher courses throughout New Zealand. This included eight fixed wing and five rotary wing courses involving 283 students. Effective air observation is crucial to the success of many SAR operations, so it is good to know we now have an expanded group of trained air observers positioned throughout the country.

The transition to 406MHz distress beacons, completed in February 2009, introduced new challenges for SAR operators using radio direction finding (DF) equipment. To help resolve these issues, RCCNZ organised a limited trial involving some air operators using 406MHz DF training beacons. This trial proved to be of significant benefit as the characteristics of the DF equipment and its full functionality could be explored in a controlled manner.

A number of workshops were conducted over the year, each targeted at a part of the SAR sector requiring a collective approach to address specific issues and risks. Their benefits are evident by the obvious strengthening of relationships throughout the sector and the widespread adoption of the “one SAR” culture. Initial debriefs from the emergency response to the Christchurch earthquakes have emphasised how important it is to have strong relationships prior to an emergency. The SAR workshops and exercises sponsored by the NZSAR Council are a very practical way of establishing and nurturing those linkages.

The NSSP also sponsored a range of developmental work. An example of this is the development of avalanche search and rescue pre-plans, which were the focus of a NZSAR workshop last year, and that were further refined and launched prior to winter 2011. Sound pre-planning is vital for time sensitive SAR operations, as this supports rapid and effective action and enhances our opportunities for a successful outcome.

We dedicated considerable effort to training development, with particular focus on preparing and delivering On Scene Coordinator (OSC) training and the further development of SAR Incident Manager/Controller training. The OSC work was completed within the year and a pilot OSC course was run in June, with the active support and involvement of many SAR agencies. SAR Incident Manager/Controller training development has progressed considerably during the year and implementation of the new courses is expected during the 2011/12 year.

A large number of search and rescue exercises (SAREXs) were supported during the year and it was very positive to see increased use of the SAREX planning guidelines and more effective monitoring and evaluation of SAREXs. This process of continuous improvement ties in well with the goals of the NZSAR Council.

A significant effort also went into SAR preventative activity during the year. The development and promotion of the family of three Safety Codes for outdoor (land), boating and water activities, and the ongoing development of www.adventuresmart.org.nz, has been a collaborative process involving a wide range of people and organisations. The widespread support and enthusiasm for these initiatives has been rewarding to see and I believe that they will allow us to make a positive impact on public safety over the coming years.

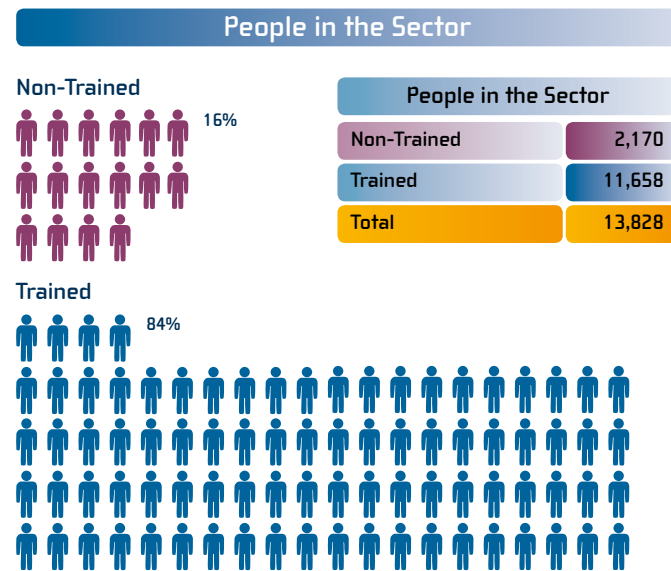
In addition to the tasks contained within the NSSP, the Secretariat also completed a number of discrete projects and fulfilled its many “business as usual” functions. Looking ahead to the 2011/12 year, we are planning to deliver much of the same but with greater depth and engagement. A significant and positive cultural shift is occurring across the 11,500 trained SAR people in a multitude of organisations as we demonstrate benefits of a cooperative and collaborative way of working together. Search and rescue is truly a team effort and we owe a large debt of gratitude to the many people and organisations that have assisted us over the past year. Thank you. ■

Duncan Ferner
NZSAR Secretariat Manager

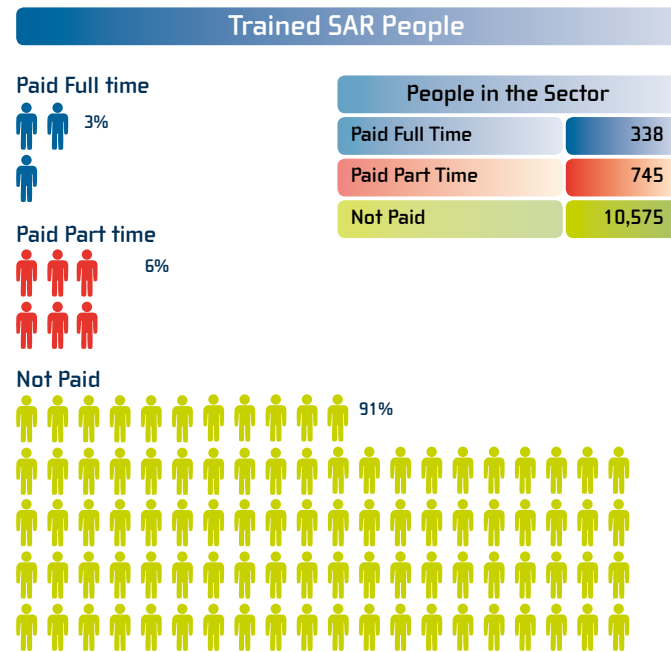
Who We Are

People in the NZSAR Sector

There are 13,828 people involved in the NZSAR sector. 84% of these are trained for SAR roles including coordinating a SAR response, flying a search aircraft, crewing a marine rescue vessel, or being part of a team searching the bush. 16% of the sector support SAR operations by performing roles such as providing strategic direction, administrative tasks, providing training, and carrying out prevention education.



New Zealand has one of the highest rates of volunteer involvement in SAR in the world. 91% of the people who provide the operational SAR response in New Zealand are volunteers.



SAR People by Mode/Activity

The 13,828 people who are involved in the SAR sector are spread across different activities and modes of operation. The table and graph below show how many people are involved in each of the following activities.

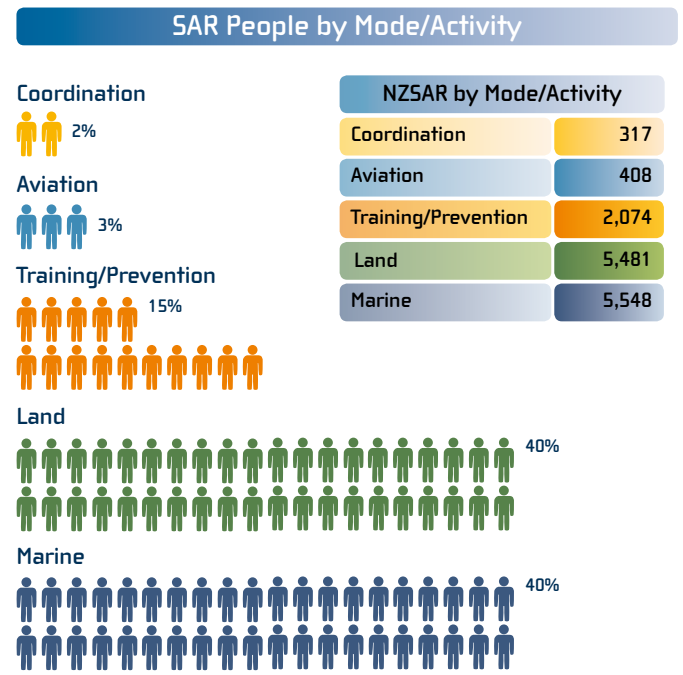
Marine: People who are active in marine-based SAR. Most of these people are volunteers from Surf Life Saving New Zealand and Coastguard New Zealand.

Land: People who are active in land-based SAR. Most of these people are volunteers from LandSAR New Zealand and the Amateur Radio Emergency Communications (AREC).

Training/Prevention: People involved in providing training and prevention services. Most SAR training is carried out in-house by each of the SAR organisations. The NZ Mountain Safety Council and Coastguard Boating Education Service are the main organisations that provide preventative education services to the public of New Zealand.

Aviation: People involved in the aviation segment of the SAR sector. This segment provides a great deal of support to a large number of SAR operations across all three modes – land, marine and air.

Coordination: People involved in the coordination of SAR operations, and in providing strategic direction and policy advice for the sector. These people are drawn from the New Zealand Police, Maritime New Zealand's Rescue Coordination Centre, the Maritime Operations Centre and the NZSAR Secretariat.



There are also 29 operational SAR dogs working in the sector – 13 trained as avalanche search dogs and 16 as wilderness search dogs.

What We Do

Coordinating Authorities

Two agencies in New Zealand have responsibility for coordinating Search and Rescue Operations (SAROPs) throughout the New Zealand Search and Rescue Region (NZSRR).

The New Zealand Police coordinate Category 1 SAROPs at the local level; this includes land, subterranean, river, lake, inland waterway and close-to-shore marine operations.



The Rescue Coordination Centre New Zealand (RCCNZ) coordinate Category 2 SAROPs at the national level; this includes operations associated with missing aircraft, aircraft in distress and off-shore marine operations within the NZSRR. Category 2 SAROPs typically require the use of national or international resources and may involve coordination with other states.



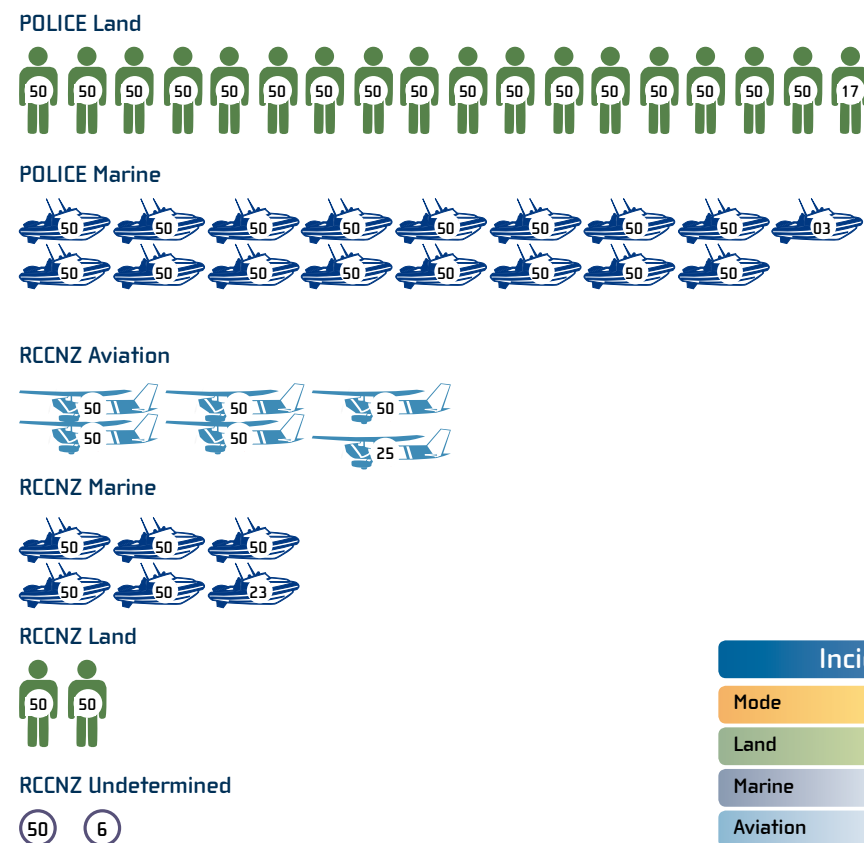
Incidents

During the 2010/11 year the Police coordinated 1,670 Category 1 incidents, and RCCNZ coordinated 704 Category 2 incidents. This is a total of 2,374 incidents, which is an average of 6.5 per day.

There were 1,076 marine-based, 967 land-based, and 275 aviation-based SAR incidents during the year. There was no significant change

in the overall amount of SAR incidents between the 09/10 and 10/11 years; however, there was a decrease in land incidents and an increase in marine incidents. There were also 56 undetermined incidents caused by distress beacon activations of a short duration.

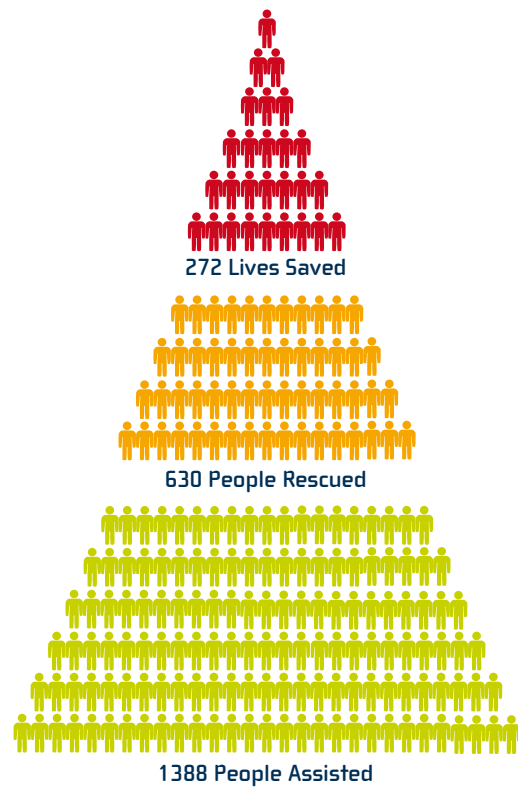
SAR Incidents in 2010/11



POLICE Land	867
POLICE Marine	803
RCCNZ Aviation	275
RCCNZ Marine	273
RCCNZ Land	100
RCCNZ Undetermined	56
TOTAL	2,374

What We Achieve

What We Achieve



In the 2,374 SAR operations during 2010/11, a total of 2,443 people were identified as being at risk. The NZSAR sector saved 272 lives, rescued 630 people, and assisted a further 1,388 people. These are very significant numbers, and they demonstrate the positive impact of the NZSAR sector.

Sometimes it is found that people were not at risk at any stage of the operation. Common examples of these include accidental beacon activations (usually from aircraft undergoing scheduled maintenance) and possible flare sightings (often caused by Chinese lanterns during summer).

Unfortunately there are also incidents that include the loss of life. Regrettably a number of people perish before SAR services are notified or despite our best efforts. A total of 153 fatalities were recorded during the 10/11 year.

Definitions

At the start of each SAR operation, it is assumed that there is a person, or people, at risk and that they require the assistance of New Zealand's SAR services. These definitions measure how these people have been assisted.

- Lives Saved:** Where, if SAR agencies had not intervened, life would definitely have been lost.
- People Rescued:** Where SAR agencies locate and rescue a person or people at risk and return them to a safe location.
- People Assisted:** Where SAR agencies aid a person or people at low risk, but who, if left, would be at risk.



¹ NZSAR & MSC Outdoor Recreation Participation Study
² MNZ Boating Safety Strategy
³ Airways New Zealand

Participation

To understand how we are performing at search and rescue, it is important to put SAR into the context of overall participation in the three modes of activity. Using this year's SAR data, the relationship between SAR incidents and participation is shown in the table below.

Participation in 3 Modes			
Mode	Participation or Flights	SAR Incidents	SAR per 1,000
Land <small>Number of people engaged in outdoor recreation activities</small>	1,336,383 ¹	967	0.724 Participants
Marine <small>Number of people involved in pleasure boat activities</small>	1,500,000 ²	1,076	0.717 Participants
Aviation <small>Number of flights</small>	1,000,000 ³	275	0.275 Flights

Value For Money

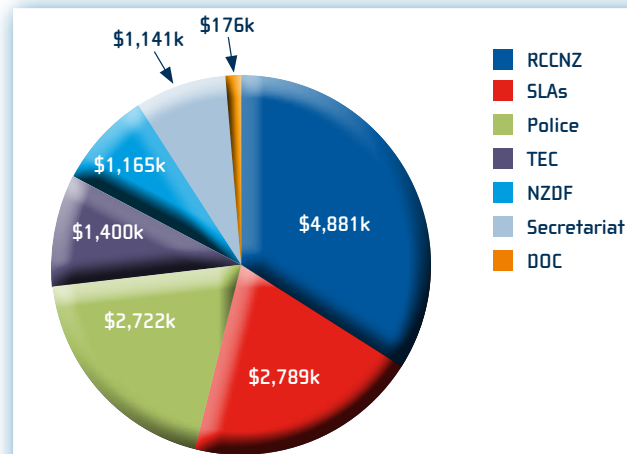
Government SAR Expenditure 2010/11

The Government's investment in search and rescue for the 2010/11 financial year was \$14.273m. For the first time, \$4.679m of the Government SAR funding was sourced from the fuel excise duties paid by recreational boat users. This was directed to the costs of the NZSAR Secretariat, the Service Level Agreements with key providers and part of the Rescue Coordination Centre New Zealand's (RCCNZ) costs.

Significant elements of the Government's costs vary from year to year as they are operational costs driven by the number, length and type of SAR operations conducted. In addition to these costs, there are also significant overhead and capital costs across the very diverse sector which are challenging to capture and report. This expenditure ensures that coordinating services are available on a 24/7 basis and ensures SAR people are trained and equipped for SAR operations.

The graph shows the breakdown of the \$14.273m spent by the Government for SAR purposes in the 2010/11 financial year. For the first time, these figures include an estimate of the expenditure on SAR training and education by the Tertiary Education Commission.

Government Expenditure on SAR



Notes:

- The full cost for the provision of SAR services is significantly greater than the figure shown. Non-governmental agencies involved in SAR receive funding from a wide variety of sources, including significant levels of community support. Some multi-purpose government agencies are also unable to separate out the SAR component of their overhead, capital and infrastructural costs.
- NZDF costs are marginal costs only, reflecting fuel and other operational expenses, but not including the costs of wages, asset maintenance or training.
- RCCNZ costs are subject to final auditing.
- The NZSAR Council has SLAs with Coastguard NZ, Surf Life Saving NZ, LandSAR NZ and Amateur Radio Emergency Communications.

The Benefit

Over 270 lives saved = \$870 million in social costs saved. NZSAR has estimated that New Zealand averted \$870 million in social costs during the past year as a result of the 272 lives saved by the SAR sector.

The people who were saved, along with their families and friends, were of course personally grateful. However, the economic benefit to the country of SAR operations in terms of avoiding the social cost of premature fatalities is also significant and can now be quantified.

NZSAR used the Ministry of Transport's complex formula to determine a monetary value that can be assigned to loss of life (based on a Value of Statistical Life – VOSL – established from a willingness-to-pay survey). This approach has been widely used by many countries for use in safety intervention analysis.

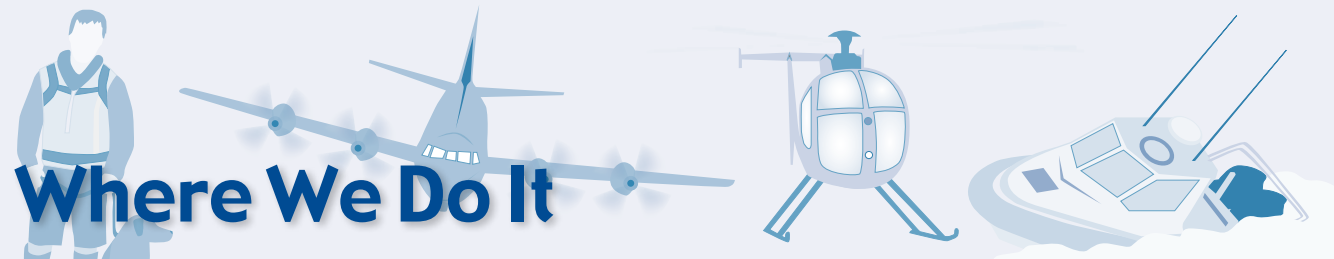
The total social cost of a premature fatality includes a range of costs – both financial and intangible. Financial costs include medical care and search and rescue costs. Many of these costs will be incurred whatever the outcome of the search and rescue effort. Intangible costs associated with the loss of life include pain and suffering and the emotional cost to families, friends and society at large. Intangible costs can be eliminated or significantly reduced if people can be saved in time.

In another busy year for New Zealand's rescue services and volunteers, a total of 2,374 SAR operations were carried out (see graph page 5) 2,443 people were identified as being at risk, and 425 of those were involved in life threatening incidents. Of those 425 people, 272 lives were saved; amounting to an estimated \$870 million saving in social costs for New Zealand.

Search and Rescue provides very good value for money for both the Government and the people of New Zealand. The activities of the 'one SAR family' across the sea, air and land environments provide essential response and rescue services to many New Zealanders and tourists, as well as across the wider Pacific and Antarctic in our international area of responsibility.

Although there are some limitations in the figures described on this page, it is apparent that for a relatively small overall investment, there is a very substantial return. The Council is pleased to note the financial efficiency and operational effectiveness of the sector and aims to sustain and improve both these aspects in the coming years. Using these numbers the intangible benefit to cost ratio may be estimated at approximately 61:1. There are, of course, also the very tangible benefits enjoyed by many very happy individuals, families and communities who are able to continue to enjoy 272 lives that would have otherwise have been lost. ■

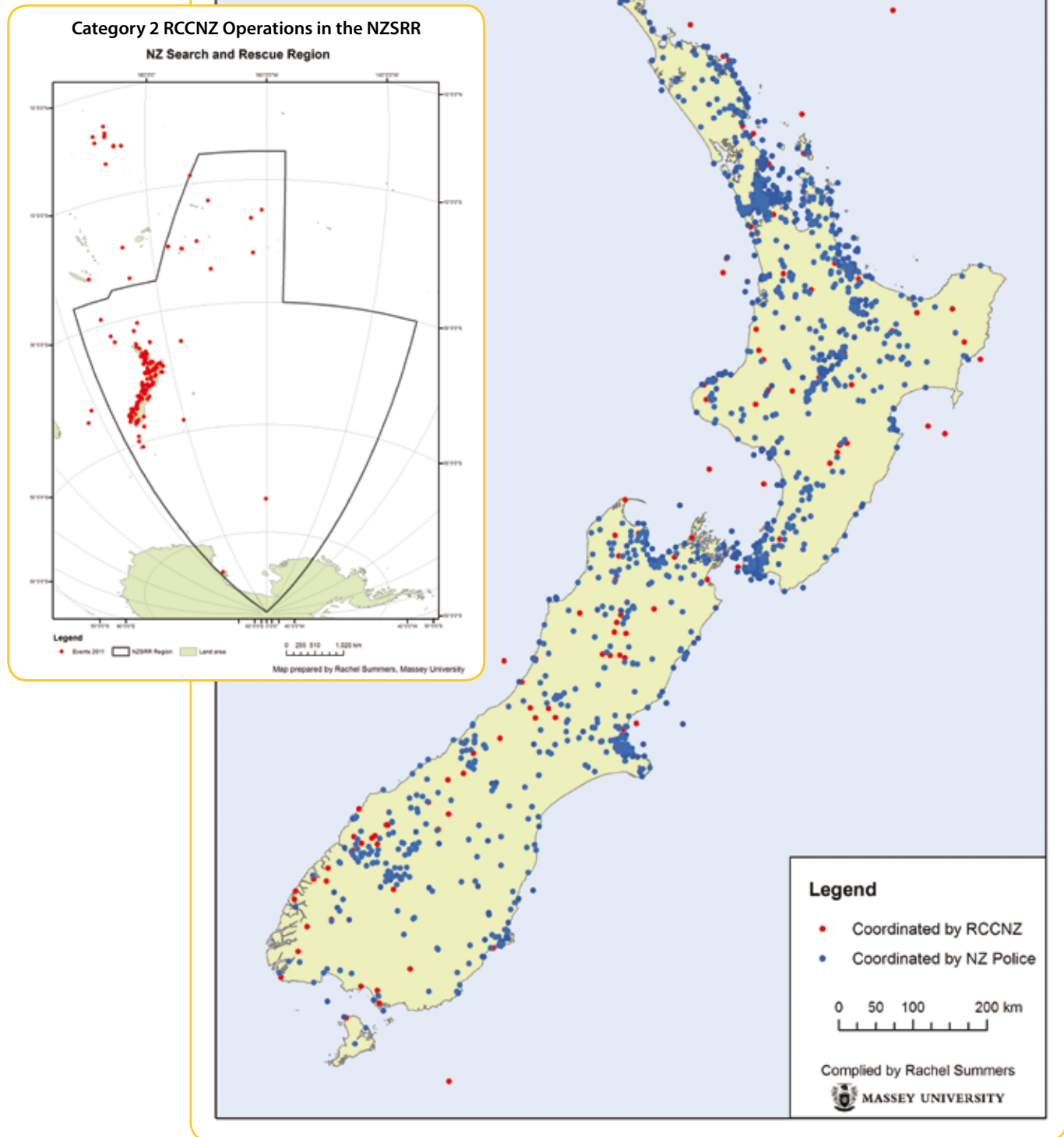
Where We Do It



Preventative Messages



Category 1 and 2 Search and Rescue Operations 2010/2011



The Secretariat is working with the Geographic Information Systems (GIS) team at Massey University to produce various maps such as this which assist in making robust strategic decisions for the sector.

Safety Codes

The NZSAR Council, together with dedicated specialist organisations and groups, have an important role to play in preventing the need for search and rescue responses. One of the Council's five goals is to support preventative strategies.

To this end the Secretariat, in collaboration with a wide range of organisations, has developed two more Safety Codes for Boating and Water, to sit alongside the Outdoor Safety Code.

The 'family' of three Safety Codes contain simple rules that are easy to remember and will give adventurers confidence to explore and enjoy their chosen pursuit, no matter what it is.

The messages were devised using technical expertise from organisations with an interest in keeping people safe while they are boating, in the water or outdoors. The three Codes encourage people to take responsibility for their own safety, to plan well and prepare effectively – particularly before they undertake an adventure activity.

The Codes' strength lies in their consistency across activities and organisations, allowing the key messages to cut through to the public.

SAR organisations do an excellent job of informing New Zealanders about keeping safe, but one group that falls between the cracks is overseas visitors. The NZSAR Council is intending to target them with these safety messages to ensure that their stay in New Zealand is filled with as much "prepared" adventure as they would like. To this end we will be working more closely with tourism organisations and groups that work with the visitor intentions system.



www.adventuresmart.org.nz



AdventureSmart is a portal designed to provide residents and visitors to New Zealand with one online location for the Safety Codes as well as other safety information and planning support, prior to engaging in land, snow, water, boating and air activities here.

Access to this information means that those taking part in the many recreational activities on offer in New Zealand will be better prepared and make better decisions, which will in turn hopefully reduce incidents.

The website was initially launched in December 2010 and since then much planning and work has gone into its improvement and expansion. Large numbers of activities have been added along with significantly more content and links to safety information from various sources, including government departments, governing and regulatory bodies and land, snow, water, boating and air organisations.

Features include:

- Providing the outdoors intentions process for land-based activities within the land and snow sections. It shows visitors that a process exists to tell people where you are going plus when and how to raise the alarm if you haven't returned.
- Splitting water activities to define safety information specific to boating and other water-based activities.
- Embedding the Safety Codes for Outdoor, Water, Boating, Snow and Firearms throughout the website and making them easily downloadable.
- Adding other helpful videos and links, including Avalanche Awareness and Recreational Boating.

The AdventureSmart website is a collaborative project funded by NZSAR and managed on its behalf by the New Zealand Mountain Safety Council (MSC). Both organisations would like to thank the many representatives sector-wide who contributed their advice and knowledge to the project. ■

What We Use



North Island Search and Rescue Assets



- Coastguard New Zealand  
- New Zealand Police  
- Surf Lifesaving New Zealand 
- New Zealand Defence Force   
- LandsAR New Zealand   
- Auckland & Wellington International Airports 
- Helicopter Rescue Trusts 
- RCCNZ Rescue Coordination Centre New Zealand 
- Dunedin Marine SAR 
- Antarctica Scott Base 



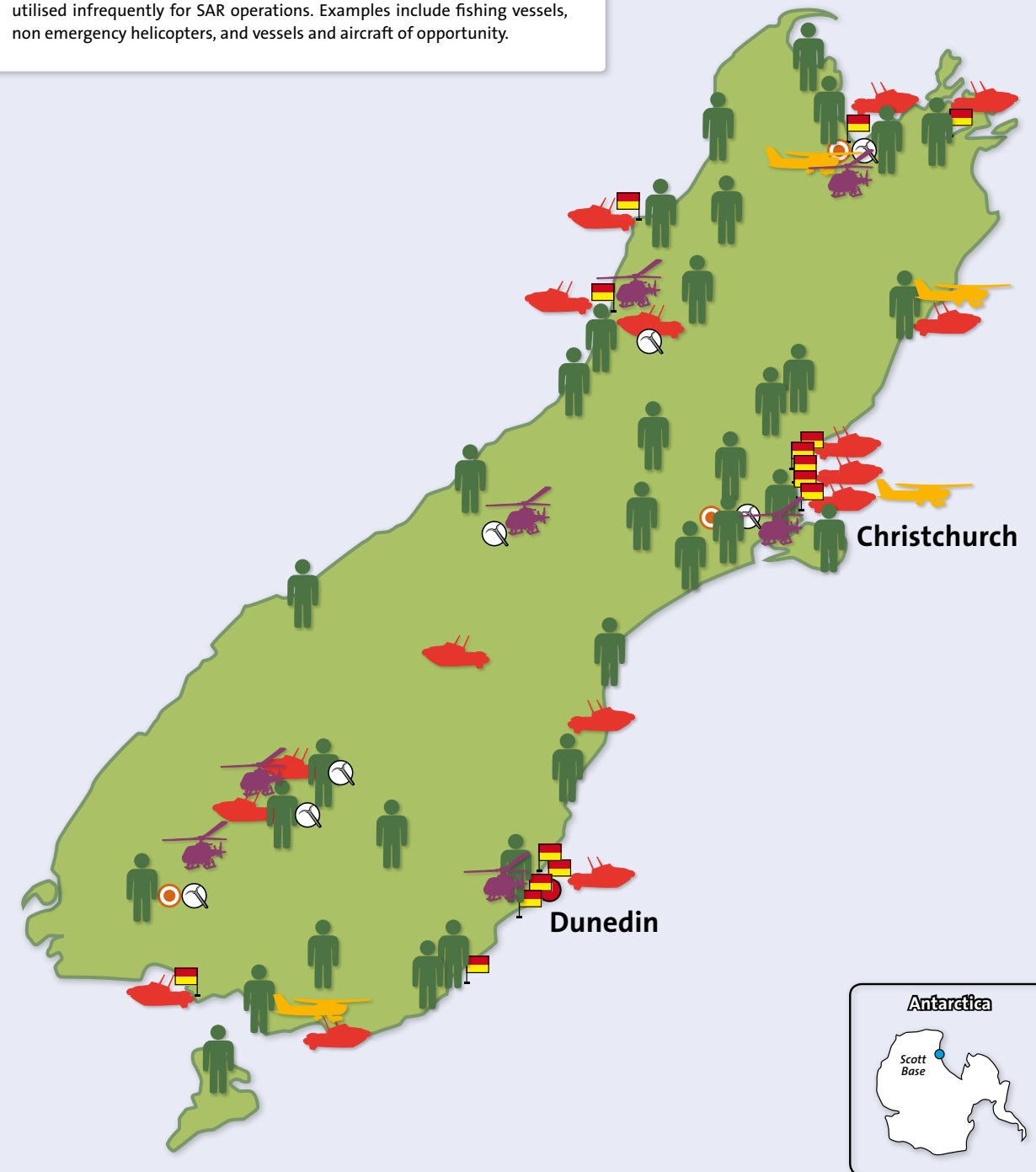
South Island Search and Rescue Assets



The most important component of New Zealand's search and rescue sector is its people, and they use a wide range of physical assets to support them during search and rescue operations. This map illustrates where the sector's Groups, Units, Clubs, and assets are located around the country.

The key on the opposite page will help you see where the various LandSAR Groups (including caving and alpine/cliff rescue teams), Coastguard Units (including air patrols), Surf Life Saving Clubs, Rescue Helicopters, Police SAR assets, and Defence Force SAR assets are located. In total the sector can call on 210 Inflatable Rescue Boats, 77 Coastguard Rescue Vessels (plus 33 Private Rescue Vessels), 72 aircraft (helicopters and fixed wing), and over 250 four wheel drive/all terrain vehicles.

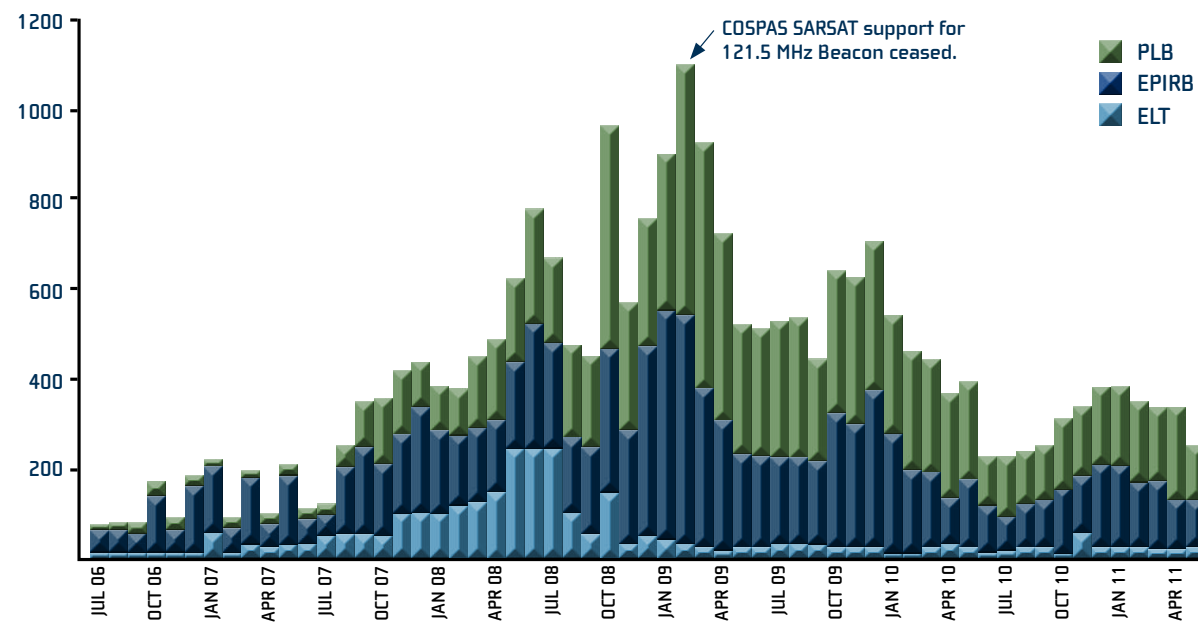
Most of the assets shown perform other roles on a day to day basis and only undertake SAR tasks when requested by the coordinating authorities. In addition, there are a wide range of assets in the community which are utilised infrequently for SAR operations. Examples include fishing vessels, non emergency helicopters, and vessels and aircraft of opportunity.



The Effectiveness of Beacons

406 MHz beacons are proving their worth by taking some of the 'search' out of search and rescue and, in many cases, saving lives.

406 MHz Beacon Registrations by Type per Month 2006-2011



It seems the adventurous public are also realising their value. The Rescue Coordination Centre New Zealand (RCCNZ), which manages the distress beacon system for New Zealand, reports that in the 2½ years since the switch to 406 MHz the number of beacons registered has doubled and now stands at over 30,000.

RCCNZ's General Manager Nigel Clifford says it is extremely pleasing to see more people carrying distress beacons and using them more responsibly.

"Beacons are helping us to save more lives. It is a no-brainer now: a trapper takes a beacon with him on his four day tramp into the back of beyond. He trips, falls over and breaks his ankle. He activates his beacon – best case scenario is he is carrying a GPS Beacon and he has registered it with us – and under optimal conditions it will be detected by the satellite system in a matter of minutes. Once detected and processed, we receive the alert and get a position reading. We are then able to call his contacts and gain vital intelligence. We find out the type of activity, his experience, numbers in his party, equipment he has, etc. This trapper has given himself the best chance of rescue, as quickly as is possible."

Nigel says beacons are integral to the technologies that are changing the face of SAR. "25 years ago searches were frequently large-scale, based on little initial information and involving significant numbers of people, often out in the field having to put themselves at considerable risk while braving the elements for long periods of time. Positive results could be very hard to come by.

Technology improvements in alerting and locating – including distress beacons – have helped to change the nature of a lot of searches. On many occasions now there is a lot less 'search' in a search and rescue operation, reaction times are reduced and operations are quicker and simpler. Not always, of course, so one of the new challenges is to keep up all the skills required for the large and complex searches when they are less frequently needed for real."

He does caution: "It also doesn't necessarily mean that effective beacon use makes it cheaper to search for and rescue people – the cost of helicopters is just one example of increasing costs."

But there are savings to be made. RCCNZ statistics show that the ability to register 406 MHz beacons has meant that many of the false or inadvertent beacon activations can now be resolved with a simple phone call to the registered contact. This avoids the need to task expensive assets, saves money and keeps resources available for the real events.

An interesting offshoot from the registrations is that RCCNZ can now see that it is not only outdoor recreation people using beacons. They've also seen an increase in the number of beacons registered by government, commercial or industrial agencies. "Organisations like DOC, power and forestry companies as well as farmers are all purchasing and registering beacons. These groups and organisations want to find the best possible ways to keep their employees and themselves safer."



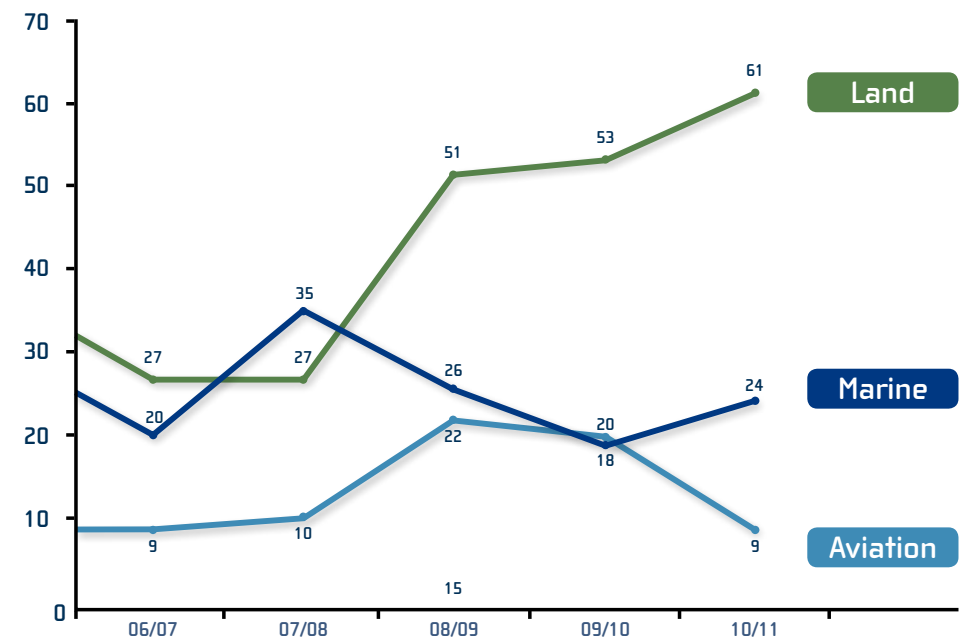
Personal responsibility remains vital to beacon effectiveness – as it does for the activity being undertaken. Nigel says getting people to register their beacons and then keeping the details up to date can be a struggle. "We don't know exactly how many beacons are out there unregistered, but we do know from the alerts we get that there are quite a few; we suspect as many as 10,000. People are not giving themselves the best chance if they don't register their beacons. We would like to encourage all SAR agencies and individuals to get the message out in their communities that beacons must be registered. It's easy to do and it's free – another no-brainer."

Taking personal responsibility also means knowing how to use a beacon. Nigel talks of cases where people have just not understood how to use their beacon properly.

"Another message we'd like help getting out there is don't move from the beacon location unless it is unsafe to stay there. It is pretty simple stuff, really. Just like you understand what you require from your boat, kayak, rucksack or ropes, you need to understand how the beacon works and how it will save your life."

Nigel says although, overall, the total number of alerts has risen in the past year it is a small increase. "Given the rise in the number of beacons out there this suggests that the rate of use is actually reducing because there are more beacons in circulation. We'd like to think that the messages about preparation and taking personal responsibility are having some effect. And as SAR people, we need to keep on spreading those messages."

Real Beacon Alerts by Mode



Beacon terms

Emergency Distress Beacons come in three general types, all have the same purpose but the different types have slightly different features because of the environment they are designed to be used in.

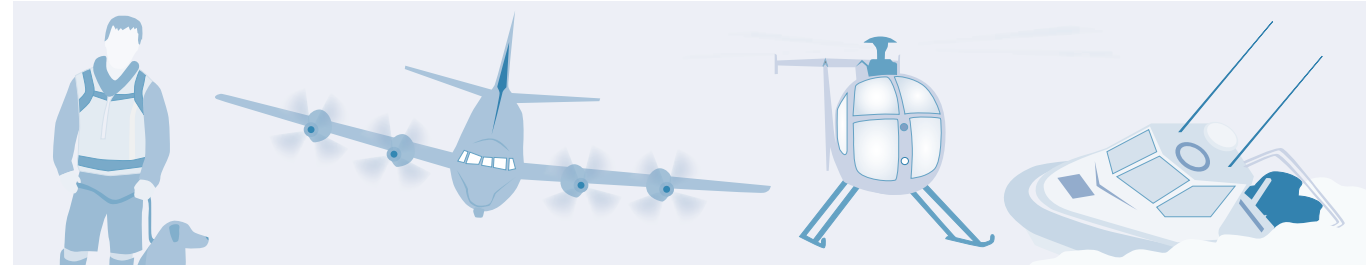
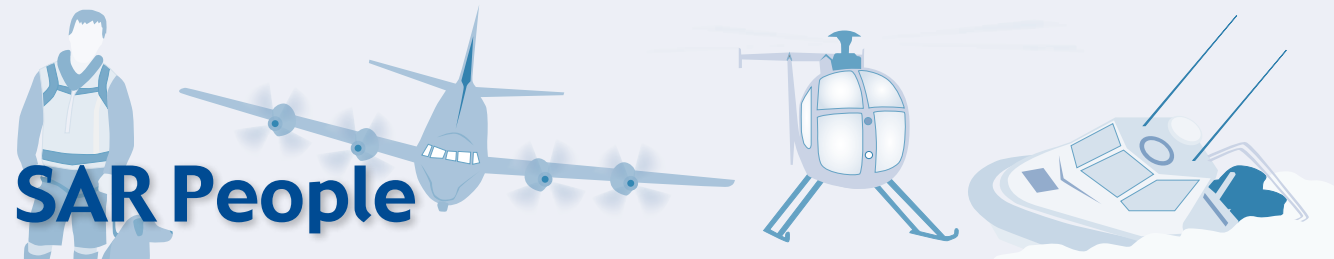
PLB – Personal Locator Beacon – commonly used for small boat and land activities. PLBs are typically small, lightweight and easily portable, but they may not be fully waterproof.

ELT – Emergency Locator Transmitter – commonly used in aircraft. ELTs are specifically designed for installation in aircraft and may have a crash switch activation system.

EPIRB – Emergency Position Indicating Radio Beacon – commonly used in larger boats. EPIRBs are typically fully waterproof and designed to float.

Real beacon alert is one where the person setting off the beacon was in genuine distress. Typically these require sending out a response asset - aircraft, helicopter, boat or land team.

COSPAS SARSAT – The international system that provides distress alert and location data.



Learning From Each Other

Given the importance of saving lives, SAR organisations are always looking for the opportunity to work more effectively and accurately. In other words, they are striving to continually improve.

The primary focus of SAR is saving more lives and minimising adverse outcomes. The SAR sector takes the approach of learning from their experience very seriously. This attitude flows from the strategic training programmes put in place to teach the right practical skills, all supported by the NZSAR Council, through to a post incident, hot debrief on the side of the lake.

Ross Browne is LandSAR's National Training Coordinator. He believes being the best we can be – or continuous improvement – involves making the most of the opportunities to work and train alongside other SAR agencies.

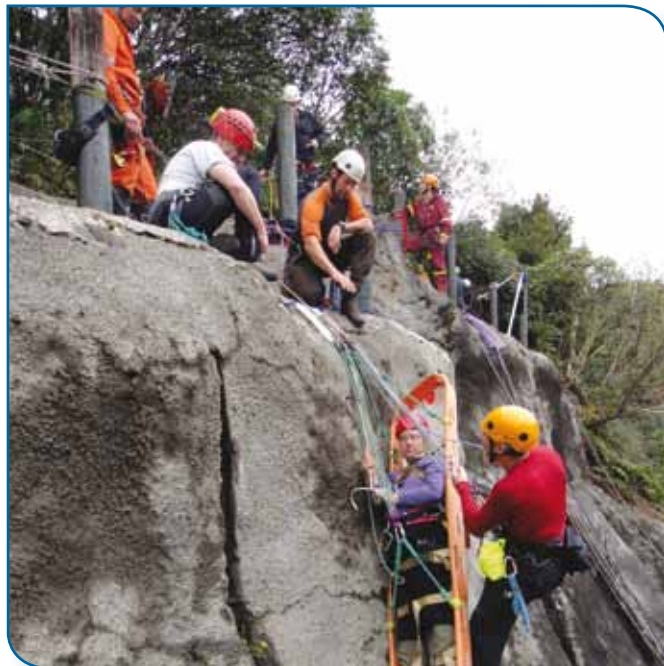
LandSAR, along with SARINZ, has developed an Incident Management Training Exercise (IMTEX) programme across the country to ensure the strategic goals flow down to the volunteers doing the hard graft on the ground.

"Part of each exercise includes elements specifically designed to deal with operational issues that have been identified as areas where we can improve."

Ross says the multi-agency, multi-unit nature of the exercise programme has had a number of spin-offs, such as being more aware of the range of SAR resources available to them.

"Our members are now more conscious of additional assets other SAR organisations can bring to the search. This includes things we might not normally think about using, such as Coastguard Air Patrol and handheld direction finding equipment."

One of the two Coordinating Authorities, the Rescue Coordination Centre (RCCNZ) is a strong advocate for sharing information across the sector to improve what they do. Their Operational Support Officer, Paul Craven, says RCCNZ also sees the benefits Ross talks about. In fact they go a step further, sharing their search and rescue exercises both nationally and internationally with other RCCs: "It is such an effective way to learn, to test our tools and to amend our processes as required."



Paul says another great way for them to spread good practice is liaison visits.

"We love to get out amongst the SAR communities to talk through problems and share ideas. It's like a honey bee spreading the pollen. You get one good idea in Christchurch and share it on the next liaison visit in Auckland," he says.

Police National SAR Coordinator Senior Sergeant Bruce Johnston says all personnel involved in SAR are passionate about helping those in need, hence their commitment to doing their best for the missing person/s and going the extra mile. The two Coordinating Authorities: NZ Police and RCCNZ are no exception.

"Everyone's focus, whether they are Police, RCCNZ or SAR volunteer support agencies, is to locate and rescue the missing party as soon as possible and safely each time. Sadly, not all outcomes are the ones we would like and that is difficult for one and all to deal with. SAR people are continuously looking at how to do things better and learn from the collective experience to get that best outcome. It is vital that when a lesson is identified it is shared across the sector to benefit everybody."



Bruce Johnston adds the NZSAR goal of 'One SAR Body' is vital: "When we train, or exercise together we get to know each other on a first name basis. So when it comes to the real event, the established relationships are there and we work cooperatively toward the common goal."

Coastguard New Zealand CEO Bruce Reid understands the value in sharing what we learn.

An incident in 2007 in which their rescuers became the victims in distress, and consequently exposed some of their operating procedures, taught them a lot. He wants to share these lessons with others so it doesn't happen again.



"This is not the type of event you ever want in your organisation. People injured, the rescuers having to be rescued. Although the outcome was the best we could have hoped for with everyone back on land, injured but safe, the event was unprecedented for Coastguard. It is one we never wish to happen again, but one that reinforced how we train and what we train. The subsequent reports into the accident highlighted some areas that could be improved as well as Standard Operating Procedures (SOPs) that needed to be changed to cover a Coastguard 'in distress' situation."

Since this event Coastguard has developed a "Black Book", which provides a fluid structure that can be applied. Bruce Reid considers the key to this plan is having people and resources allocated early in the event, a structured hand over and tracking of communication and contacts.

"As a volunteer organisation the level of people contact – the injured, the family, the crew, the other Coastguard volunteers – is an extremely high priority and, from my experience, is a greater challenge than dealing with employees."

Paul Craven says the lessons RCCNZ learnt from the crashed helicopter ZK-HTF have also led to changes in the way they work, which has benefited a wide range of SAR agencies.



"NZSAR and the Coordinating Authorities recognised there was a gap in the number of trained Air Observers and revamped and increased the number of Air Observers courses. As a result, we now have a larger pool of trained Air Observers nationwide that have been used in a large number of successful searches."

To better coordinate SAR in the field during large-scale searches, RCCNZ worked with the NZ Police and, funded by NZSAR Secretariat, have developed the On Scene Coordinators (OSC) course.

"This has enhanced a pool of trained Coordinators that know how to work with each other and the Coordinating Authorities during a large SAROP. It also has the added benefit of bringing SAR managers together so they can not only train together but also learn from each other's strengths and ideas, ensuring good practices are shared across the country."

Bruce Reid says learning from our experiences will continue to be the cornerstone to doing things more efficiently and better.

"The practitioners of search and rescue may read about what happened to us and wonder why Coastguard didn't have a substantive post incidence plan in place already. I'd like to say to them, this is like many things we encounter in our business and organisations: 'you only know what you know'. It is sometimes only when the unthinkable happens that you realise you don't know as much as what you thought." ■





Bringing SAR People Together

Three workshops held across the country during the year were sponsored by the NZSAR Council. Each one focussed on specific issues that have concerned the SAR sector. For the most part, the participants were either from the sector or experts in their field, but others were invited to ensure all the necessary voices were heard. Facilitated discussions and working groups tackled problems, worked through practical solutions and agreed upon plans to deal with any unresolved issues.



Technology Challenge

This workshop identified and shared knowledge about existing, new and future technologies that may be applicable to our SAR environment. Held in Wellington in December, it hosted 35 people from throughout the NZSAR sector, as well as one Australian representative. It focused on technological trends and sought to identify the opportunities and limitations that these technologies represent. After initially looking at procurement, sustainability, life cycle costs and benefit cost analysis issues, the workshop discussed a wide range of technical topics broadly grouped under: 'Searching, Detecting and Locating'; 'Alerting Systems'; and 'Planning, Command, Communications, Control and Organisation'. It was a great place to gather a range of information about trends and ideas and to test assumptions that may affect SAR services in the future.



Training and Education

A workshop was held in Wellington during March to discuss training and education issues with 58 participants. The New Zealand Qualifications Framework was discussed in depth with a close look at what it is and how it works as well as its potential benefits and downsides for our sector.

Ross Browne, LandSAR's National Training Coordinator, discussed moderation and assessment, examining how we might improve these skills. Next, RCCNZ's Paul Craven presented: 'keeping SAR skills current'. The discussion that followed suggested that this may be something we could improve on, as well as ensuring continuation/refreshers training is fair and consistent. Dene Duthie from the NZ Police also moderated a group discussion focussed on whether the SAR sector is ensuring its trainers are adequately trained.

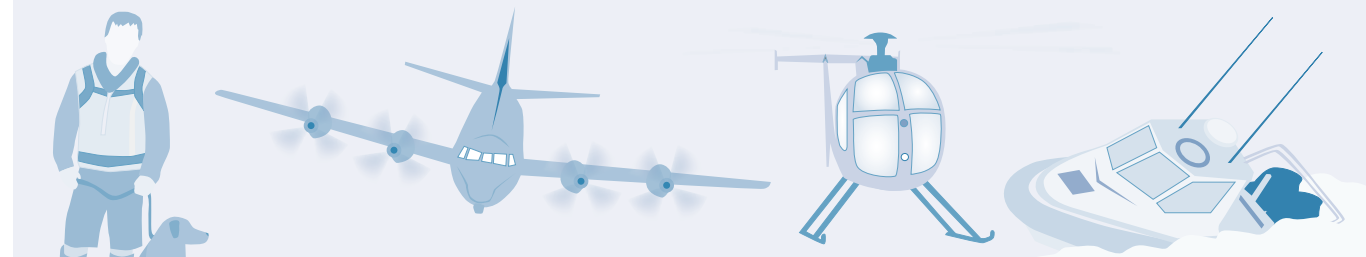
Other topics discussed included: progress on incident manager/controller training development, training our trainers, limited literacy and other learning issues, training needs and training design, delivery methods and assessment techniques, and getting the best from search and rescue exercises.



Air Operators

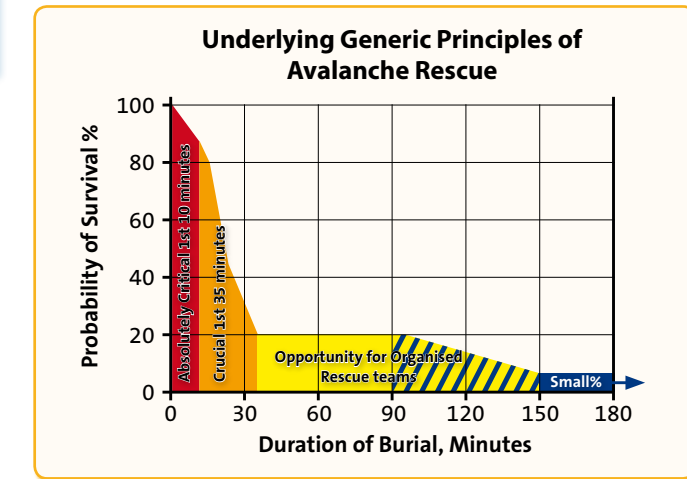
This workshop began by revising what has been done since the previous hoist and air operator's workshops. The 58 people gathered in Wellington in May received updates on air observer/refreshers training along with other SAR training issues. Air tracking systems were discussed and the group was briefed on the latest NZDF air assets. A range of SAR and air-related technologies were talked about, including SARMAP, GPS, distress beacons, Cospas-Sarsat, MEOSAR, 406MHz DF tracking and executing search patterns by aircraft.

Conversations also took place around operational topics such as the chain of command, crewing, tasking, briefing & debriefing, CAA draft guidelines to first responders at aircraft accidents, and the recently published Air Ambulance Standard. The workshop proved to be a positive progression from previous ones and served to reinforce and build upon existing knowledge and relationships. ■



Planning an Avalanche Rescue

It is described as being like a wave of snow coming at you VERY fast – people are buried immediately. As this graph shows, time is the critical factor in avalanche rescue.



NZSAR, in consultation with experts from New Zealand and international avalanche and search and rescue agencies, has developed guidelines to help agencies to pre-plan for an avalanche search and rescue operation.

The guidelines are flexible to allow regions to design pre-plans that suit their circumstances, but they aim to enhance the quality and consistency of avalanche rescue readiness, response and recovery in New Zealand. ■

The guidelines spell out a series of principles that pre-plans can work to:

- Safety
- Avalanche rescue is exceptionally time critical – minutes matter
- Avalanche Site Command is essential and pre-identified personnel should be transported to site as soon as practicable
- All efforts must focus on the first response team(s) getting to the site. This includes trained avalanche rescuers and certified avalanche dog team(s)
- All avalanche burials should be considered medical emergencies and appropriate resources applied as such
- Effective communications are vital to a successful avalanche rescue.



NZSAR Awards

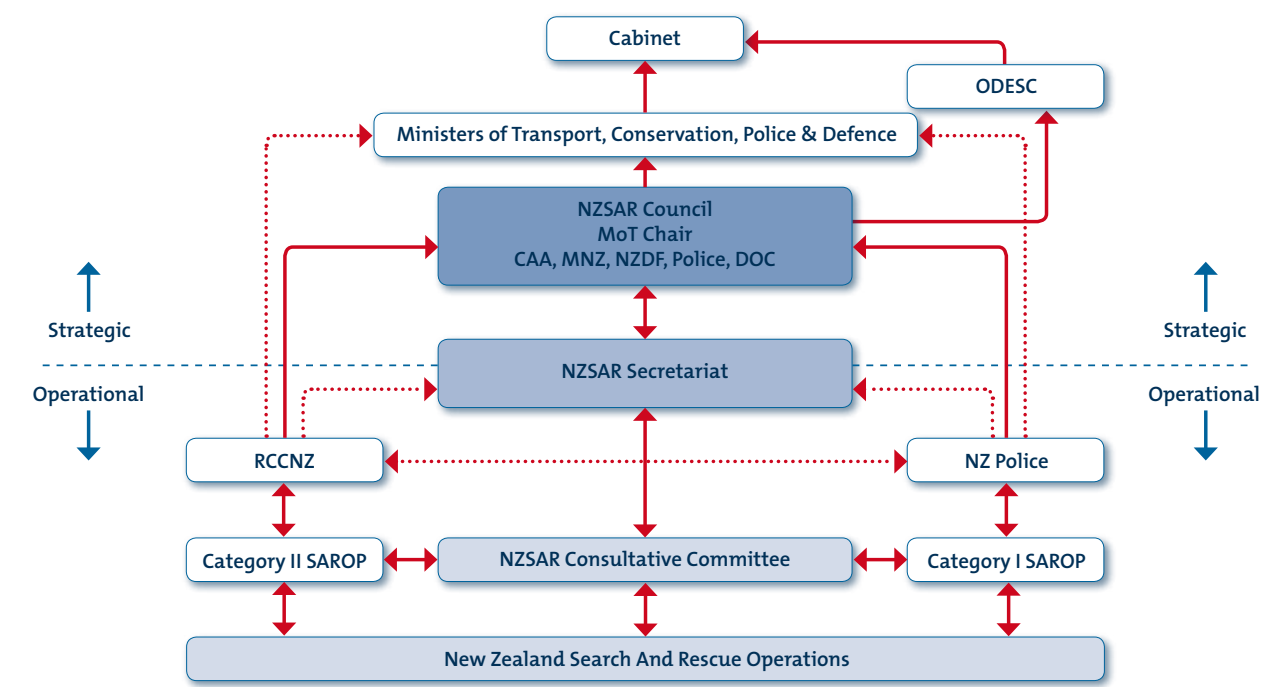
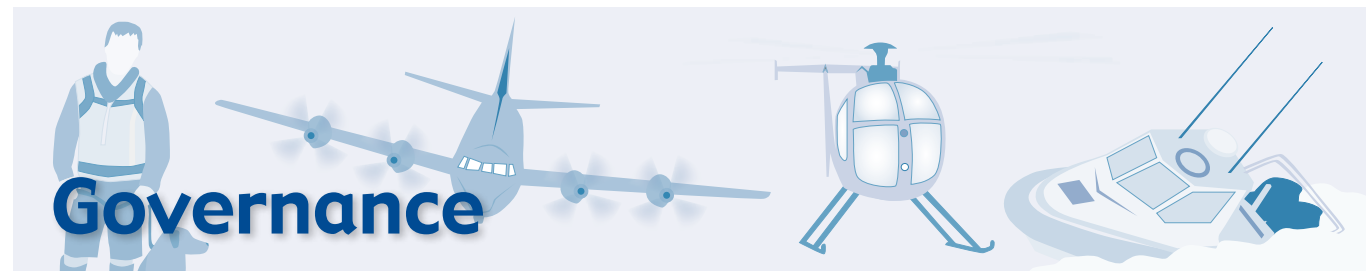
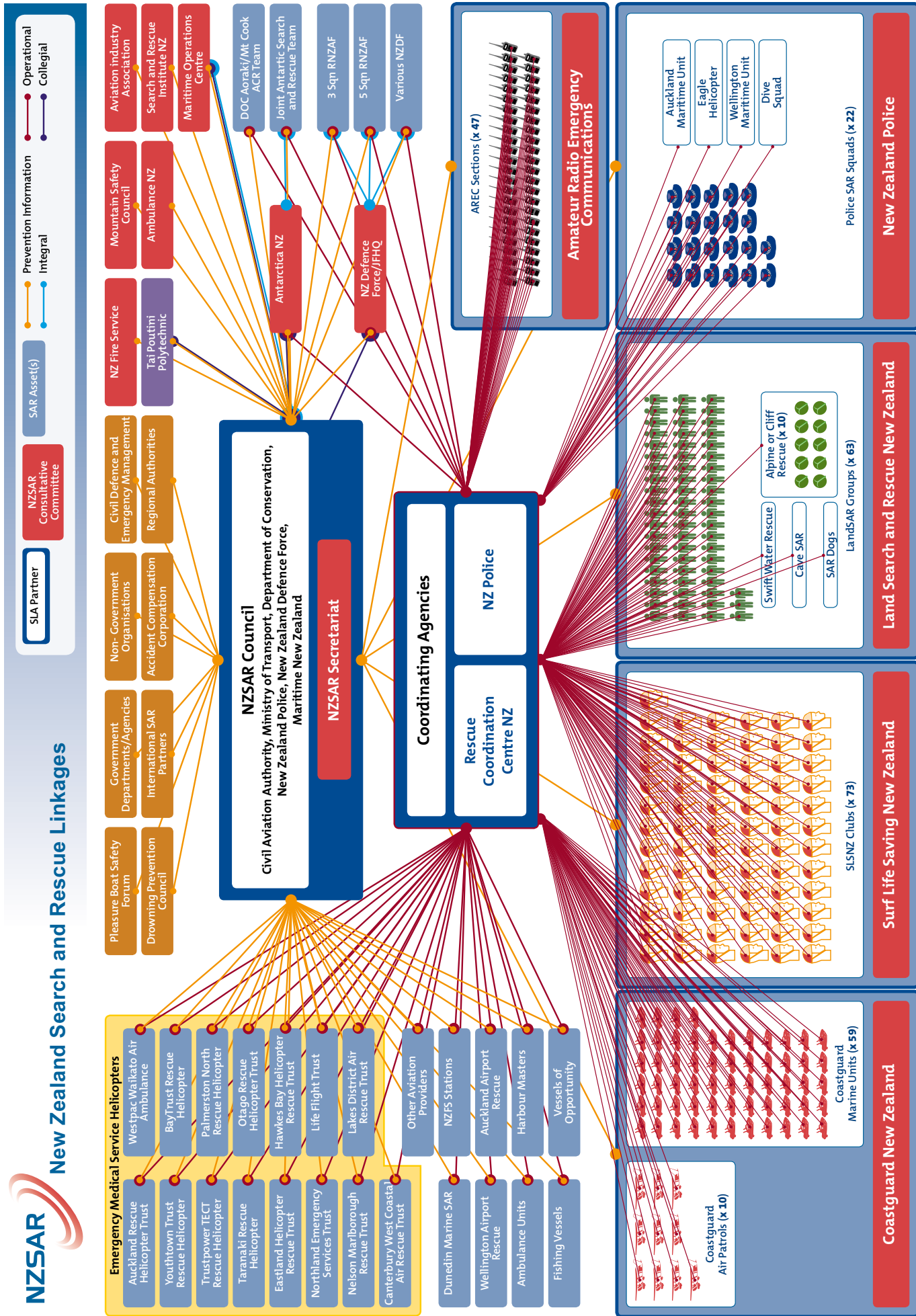
"Search and rescue experts, whether in a uniformed service or as volunteers, showed an outstanding level of professionalism, preparation, courage and commitment when the people of Christchurch needed their help (on February 22). The deeds of USAR are well known, but I want to acknowledge the tremendous response by other members of the search and rescue (SAR) sector."

The Minister for Transport, Steven Joyce, recognised the major contribution from SAR organisations to the Christchurch earthquake during his speech at this year's NZSAR Awards in April.

Teamwork was the common thread spun throughout the award ceremony as speakers and guests alike reflected on the events in Christchurch. And as the recipients stepped forward to receive their awards it became obvious that working together is what brings success.

The NZSAR Gold Award was awarded for the most significant contribution to search and rescue in the New Zealand Search and Rescue Region during 2010.

- Captain Greg Lyall and the crew of the fishing vessel Amalati Atlantis
For the rescue of crew from the Oyang 70 on 18 August 2010
The NZSAR Certificates of Achievement were awarded for an important contribution to search and rescue in the New Zealand Search and Rescue Region, either during 2010 or over an extended period.
- For the rescue of the yacht Marguerite on 18 June 2010. From Coastguard Kaikoura:
 - Alasdair Lean - Daryl McMillan
 - Dave Cox - Geoff Pollard
 - Ian Blackler - Murray Paul
 - Richard Craig
- The Helicopter Line for services, leadership and dedication to Alpine Search and Rescue at Aoraki/Mt Cook
- Larry Charles From LandSAR NZ Dogs for services, leadership and dedication to Search Dogs in New Zealand
- For RNZAF Iroquois Rescue Operation at Pukerua Bay on Anzac Day 2010
 - Harry Stevenson, Life Flight Trust
 - Dave Greenberg, Life Flight Trust
 - Peter Collins, Wellington Free Ambulance
 - W/O Darren Smith, RNZAF ■



SAROP: Search and Rescue Operations
 CAA: Civil Aviation Authority
 MNZ: Maritime New Zealand
 RCCNZ: Rescue Coordination Centre New Zealand

MoT: Ministry of Transport
 ODESC: Officials Committee for Domestic and External Security Coordination

NZDF: New Zealand Defence Force
 DOC: Department of Conservation

NZSAR Council

The Council's role is to provide national strategic governance to New Zealand search and rescue. In keeping with the Council's high level strategic function, its membership is drawn from the chief executives (or delegated to a person from the senior executive level) of the Ministry of Transport, New Zealand Police, New Zealand Defence Force, Department of Conservation, Maritime New Zealand and the Civil Aviation Authority.

- Aviation Industry Association
- Civil Aviation Authority
- Department of Conservation
- Federation of Commercial Fishermen
- Land SAR New Zealand
- Maritime New Zealand
- Maritime Operations Centre
- Ministry of Transport
- New Zealand Defence Force
- New Zealand Police
- NZSAR Secretariat (Chair)
- Rescue Coordination Centre New Zealand
- Royal New Zealand Coastguard Federation
- Search and Rescue Institute New Zealand
- Surf Life Saving NZ
- The New Zealand Mountain Safety Council
- The New Zealand Fire Service

NZSAR Secretariat

The council is supported by the NZSAR Secretariat. Its purpose is to provide a national forum for all New Zealand SAR stakeholders including voluntary groups. It provides the Council with support services, policy advice and implements agreed measures to effectively coordinate strategic SAR in New Zealand.

Consultative Committee

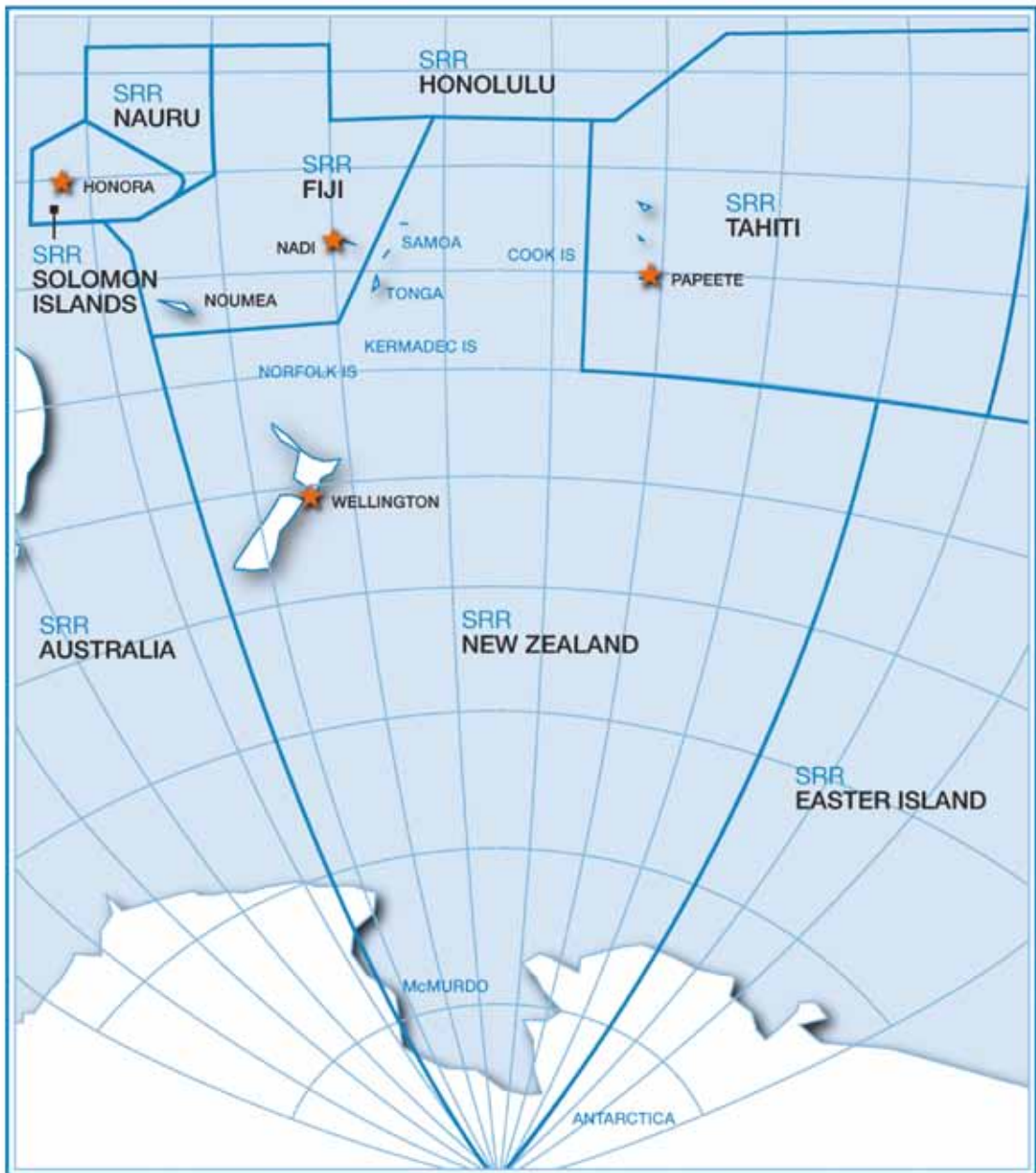
The Committee provides advice to the Council and informs the strategic decision making process. Consultative committee members include:

- Amateur Radio Emergency Communications
- Ambulance New Zealand
- Antarctica NZ

The Council, Secretariat and Consultative Committee operate cohesively to ensure their objectives are successfully delivered.



New Zealand Search and Rescue Region



- ★ Rescue Coordination Centre
- Search and Rescue Region boundary of SSR

New Zealand Search and Rescue Council

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www.nzsar.org.nz

www.adventuresmart.org.nz

www.beacons.org.nz

