

NEW ZEALAND SEARCH AND RESCUE

*new zealand search
and rescue council*

annual report
2017-2018



Marine



Land



Aviation



Coordination +
Support



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CHAIR'S REPORT



On behalf of the New Zealand Search and Rescue Council, I am very pleased to present this New Zealand Search and Rescue report for the 2017-2018 year. The New Zealand Search and Rescue (SAR) sector is vital in ensuring New Zealanders and visitors to our country can make the most of the many recreational activities this country offers.

As in past years, your SAR sector has been busy. In the past year 1,857 people were saved, rescued or assisted by dedicated search and rescue people throughout our vast search and rescue region (see the map on the back cover).

This is a remarkable achievement. Saving one life is extraordinary but saving 181 lives affects a huge number of families, communities and workplaces throughout New Zealand and beyond. The 11,000 people who make up our SAR sector are dedicated to saving lives, so the Council is pleased to be able to quantify and explain in this report the amazing work they do and the outstanding results they achieve.

While we celebrate these feats, the Council is also keenly aware of aspects which can affect our ability to deliver SAR services in certain circumstances. Factors such as our geography, the vast region we have responsibility for, where people choose to go in that region and the harshness of our weather can all play a part in making successful search and rescue a difficult proposition. By recognising and addressing these difficulties, we continue to improve our understanding of the challenges and make improvements to the on-going health and effectiveness of the sector.

Peter Mersi
Chair
NZSAR Council

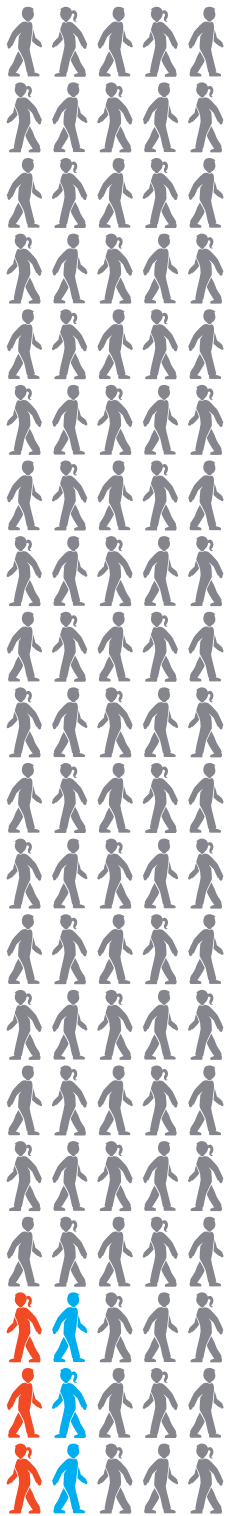
Over the past year the sector has made considerable progress in working cooperatively and collaboratively together, in developing our organisations and in improving our processes and responses. The Council was pleased to have a role in this evolution through sponsoring a number of SAR workshops, developing SAR specific skills training, enabling information to be shared more readily, supporting education and preventative initiatives and by assisting the many SAR organisations achieve their goals.

The Council and I have been particularly impressed by the energy and dedication of the 11,000 people within our SAR sector, over 90% of whom are volunteers. You will note in this report that behind every hour spent on SAR operations, there are many, many more spent training, organising, exercising and otherwise preparing people for when they are needed. This commitment is remarkable, and it is what enables New Zealand to produce a world class search and rescue system.

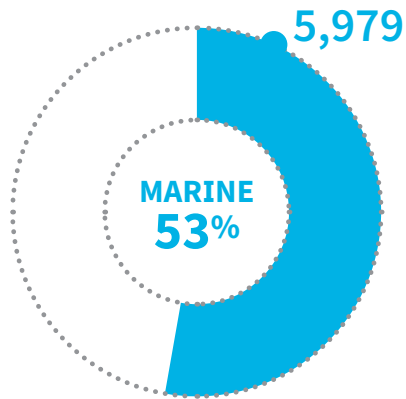
The Council and I are very proud to be involved in this sector and I trust you will enjoy reading more about it and our work in this report.

WHO WE ARE

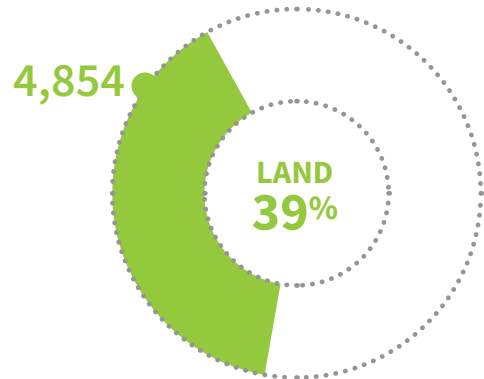
People in the NZ SAR sector



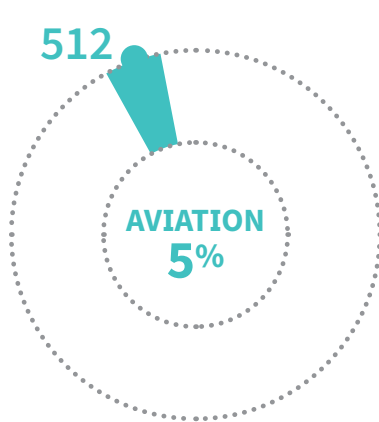
11,742 People are directly involved in the New Zealand SAR sector



Coastguard NZ
Surf Life Saving NZ
Dunedin Marine SAR



Amateur Radio Emergency Communications,
Antarctica NZ, Department of Conservation,
LandSAR: Alpine Cliff Rescue, Cave SAR,
SAR Dogs, Tracking



Coastguard Air Patrol, NZ Defence Force,
Emergency Medical Service Helicopters



Antarctica Unit Incident Command,
Maritime Operations Centre
NZ Police, RCCNZ,
Organisation Support, Training

VOLUNTEERS

make up 94% of the people providing operational SAR response

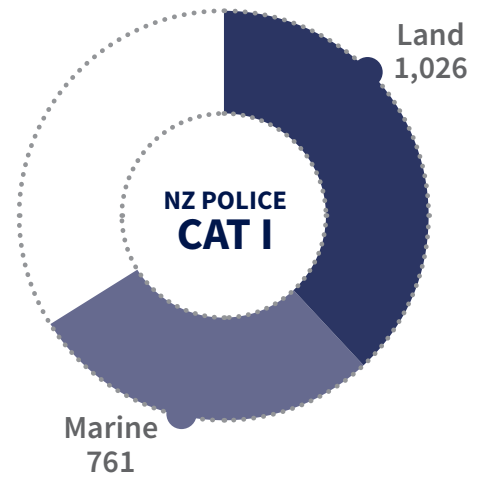
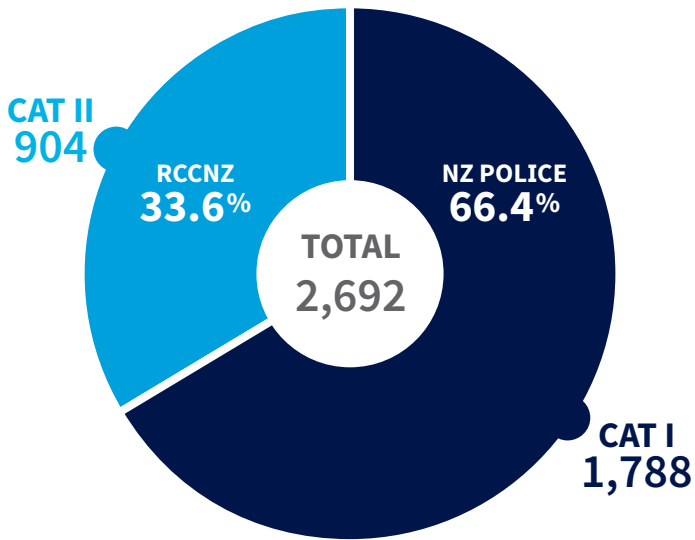
3% paid full time
3% paid part time



WHAT WE DO

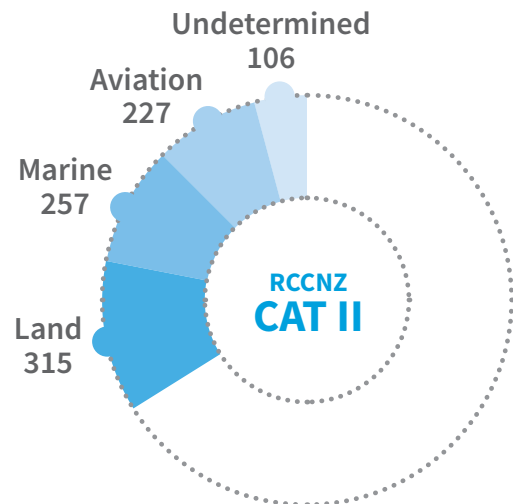
SAR incidents in 2017-18

Category I and II search and rescue operations 2017-18



COORDINATING AUTHORITIES

The two coordinating authorities responsible for search and rescue operations (SAROPs) throughout New Zealand are the New Zealand Police Category I and Rescue Coordination Centre New Zealand (RCCNZ) Category II.



New Zealand has one of the highest rates of volunteer SAR involvement in the world.



WHAT WE ACHIEVE

2,058 people were at risk during 2017-18



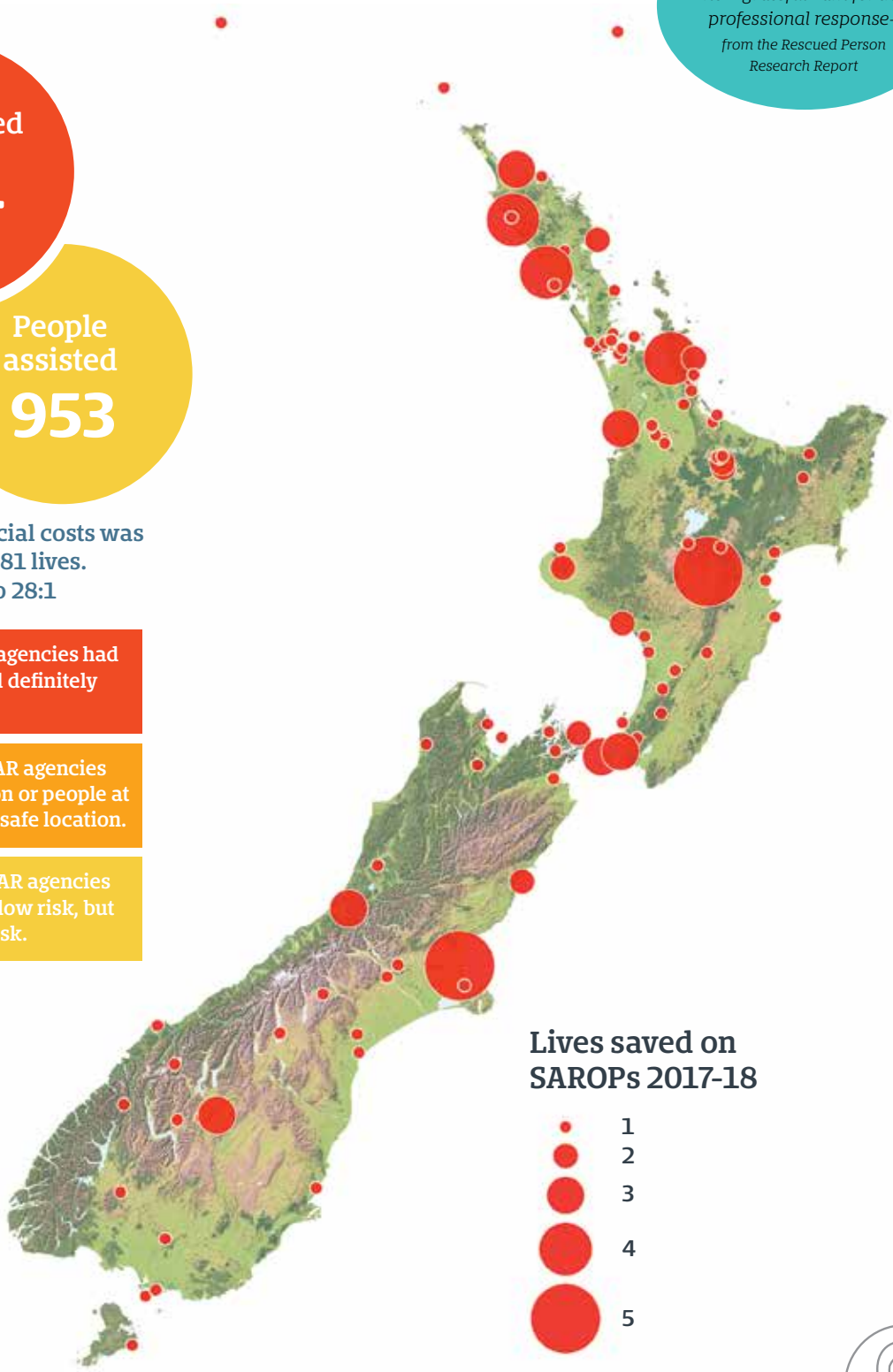
686 million dollars in social costs was averted by saving 181 lives.
Cost benefit ratio 28:1

Life saved: where, if SAR agencies had not intervened, life would definitely have been lost.

Person rescued: where SAR agencies locate and rescue a person or people at risk and return them to a safe location.

Person assisted: Where SAR agencies aid a person or people at low risk, but who, if left, would be at risk.

*I cannot express enough how grateful I am for the professional response—
from the Rescued Person
Research Report*



*Thank you for the fantastic job you are doing by making our trips safer –
from the Rescued Person
Research Report*

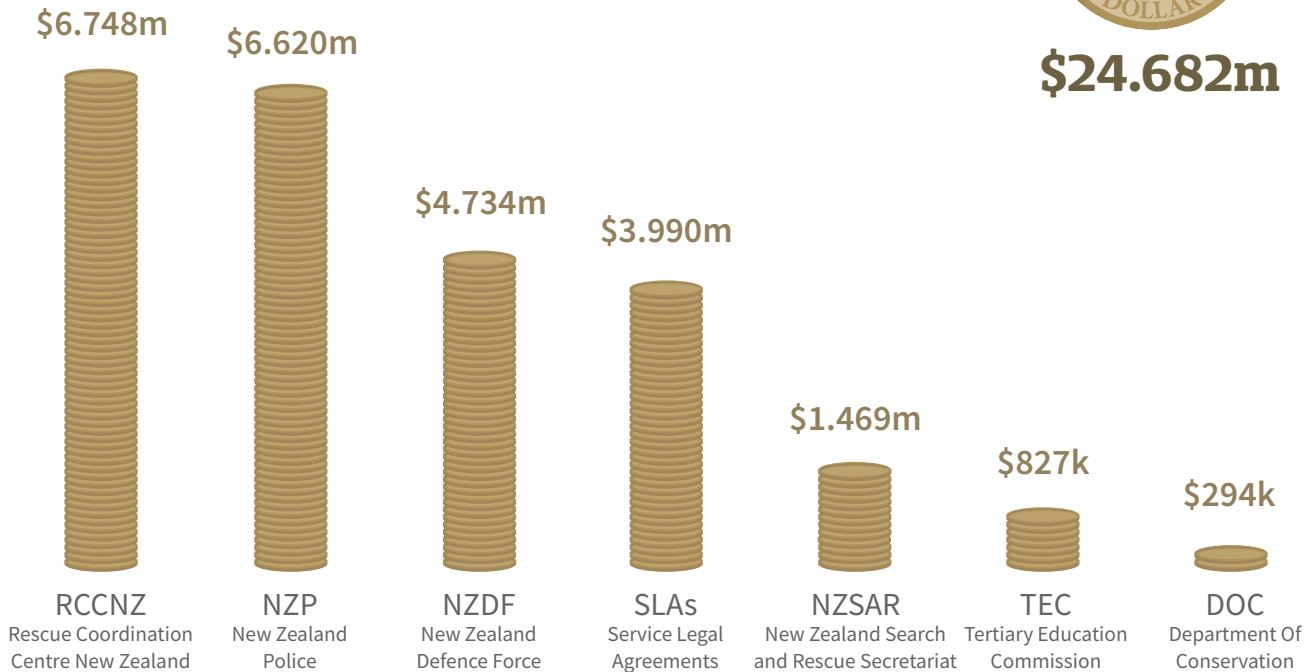


WHAT IT COSTS

Government expenditure on SAR 2017-18



\$24.682m



NZSAR estimates that New Zealand averted \$686 million in social costs as a result of the 181 lives that were saved.

The social cost of a premature fatality is measured using the Ministry of Transport's Value of Statistical Life formula (VOSL). It includes intangible costs such as emotional costs to family and friends. The intangible benefit-to-cost ratio is estimated to be approximately 28:1 and can in part be attributed to the continual financial efficiency and operational effectiveness of the sector.

Fuel excise duties paid by recreational boat users funded the NZSAR Secretariat, the five Service Level Agreements and some elements of the Rescue Coordination Centre New Zealand's (RCCNZ) activities.

The total cost of SAR to the Government varies year on year, as operational costs change according to the number, length and type of SAR operations. Significant overhead and capital costs are not fully represented, as it is difficult for some organisations to capture this information. The SAR system responded to a total of 201 fatalities during the year.

You run a fabulous organisation. Thank you for your help – from the Rescued Person Research Report

Thank you to the search and rescue organisations, especially the volunteers – from the Rescued Person Research Report



WHERE WE DO IT

New Zealand: Cat I and II SAROPs 2017-18

2017-18 Rescue Operations

- Category I: SAROPs coordinated by NZP
- Category II: SAROPs coordinated by RCCNZ

Thank you NZ SAR
you saved my life.
– from the Rescued Person
Research Report

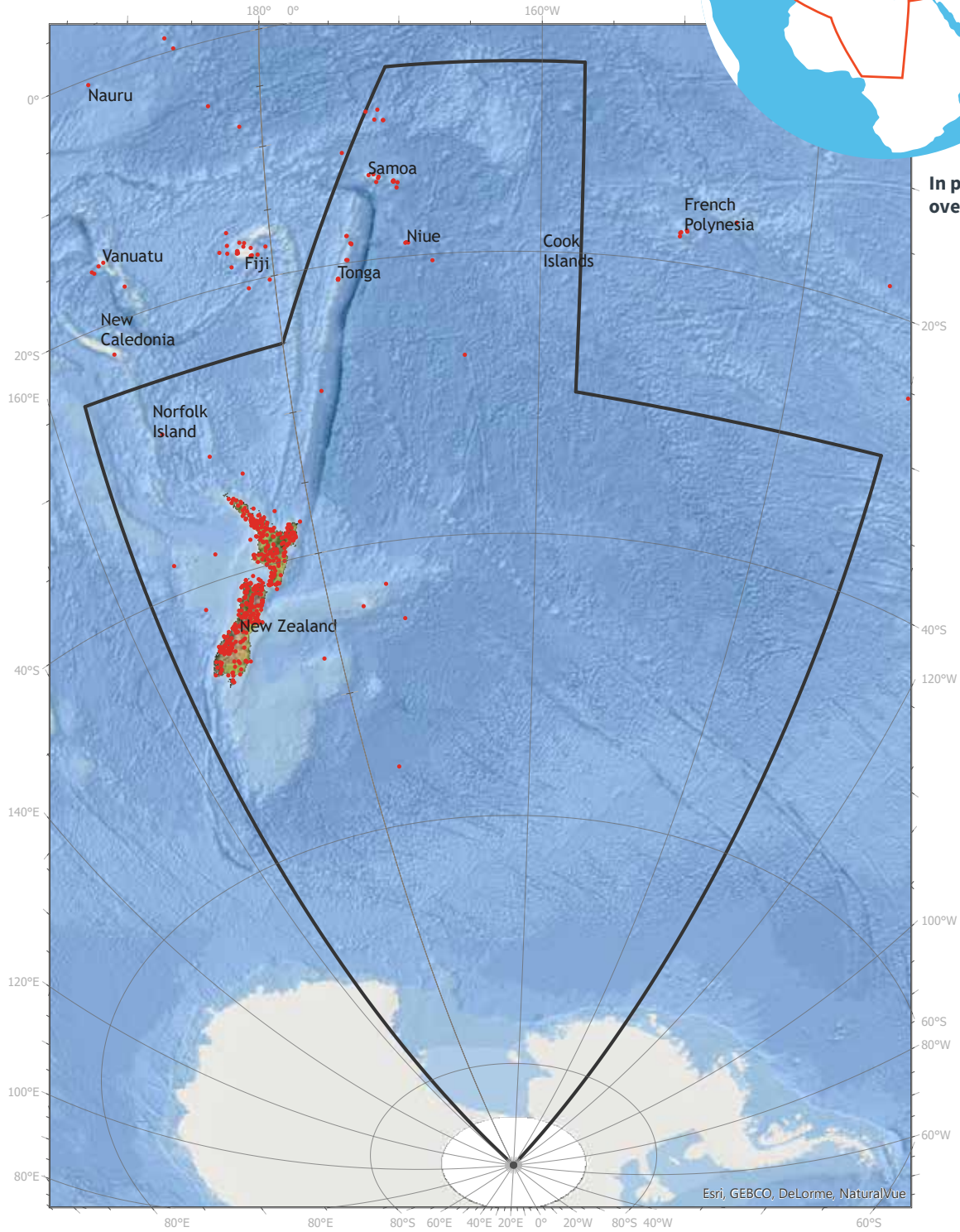
Our team lost the track on
Mt. Taranaki, but got an excellent
rescue team to help us to get down
safely. Thanks a lot guys!
– from the Rescued Person
Research Report

Was very grateful to the rescue
crew, they were awesome.
– from the Rescued Person
Research Report



GIS

NZ's Search and Rescue Region





In perspective: NZSRR overlaid on Europe






WHAT WE USE



- Antarctica Scott Base


- Auckland & Wellington International Airports



- Cape Egmont Sea Rescue Trust


- Coastguard New Zealand Units






- LandSAR New Zealand Groups







Cave





Alpine
- New Zealand Defence Force






- Milford Emergency Response Team

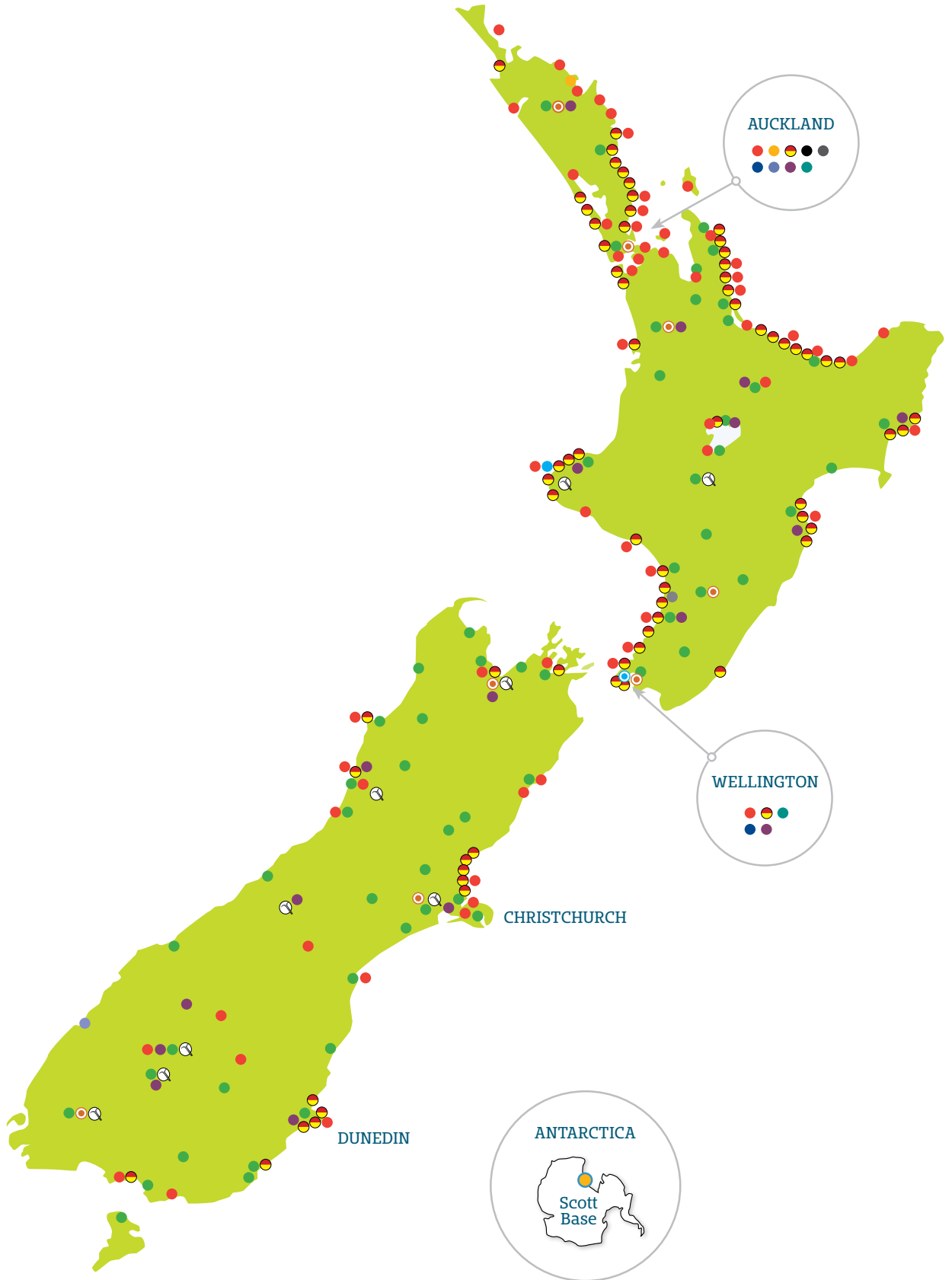

- New Zealand Police



- RCCNZ Rescue Coordination Centre New Zealand


- Rescue Helicopters


- Surf Life Saving New Zealand



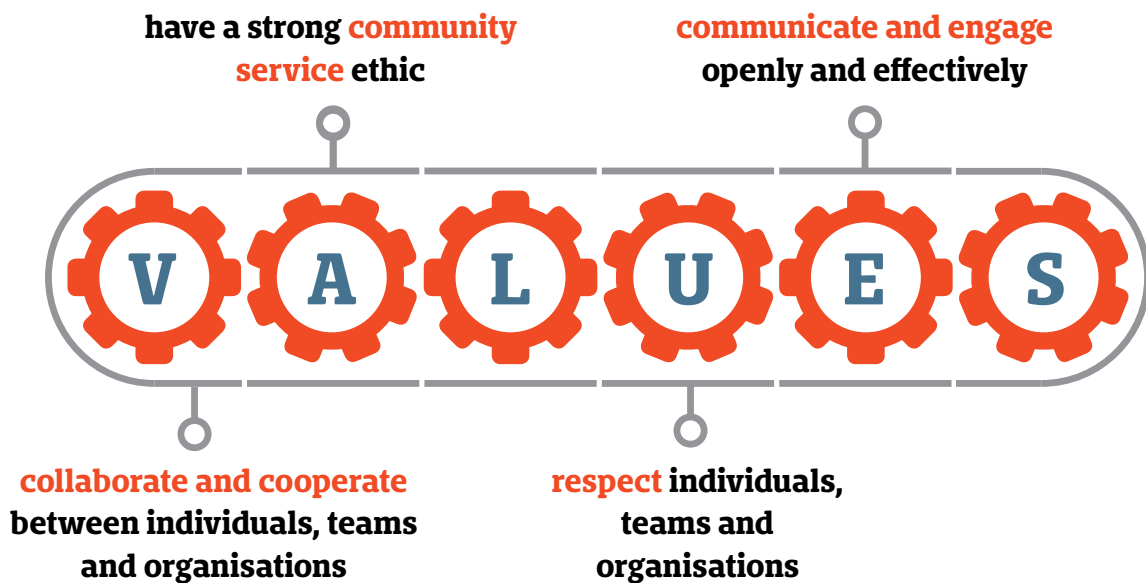
OUR STRATEGY

OUTCOME

NZSAR will ensure New Zealand has effective search and rescue services for people in distress throughout New Zealand's search and rescue region in order to save lives.

VISION

A cohesive community of capable people in sustainable organisations, finding and rescuing people in distress, operating collaboratively within a robust SAR system.



A robust and integrated SAR system

We seek a collective, cross sector culture of being “one SAR body” within an integrated SAR sector. Our policies, processes, procedures and documentation will be coherent, aligned and support effective, efficient and safe SAR practice. We will undertake SAR activity cooperatively and learn from our experiences. We will continue to improve our understanding of the SAR Sector, our performance, our people, our operations and external influences so that we can improve our services, strengthen our resilience and mitigate our risks. We will also promote and support SAR innovations and showcase good practice.



Efficient and sustainable SAR organisations

We seek high performing, efficient and sustainable SAR organisations with adequate, secure funding. Our capabilities will be fit-for-purpose, appropriately located and adequate to address known SAR needs. We will make affordable, evidence based investment decisions supported by good quality information. We will adapt our organisations and arrangements in response to changes in our environment and ensure we continue to deliver effective SAR services throughout the NZSRR.



Capable SAR people

We seek to maximise the potential of our SAR people. We will work to ensure our people have access to appropriate training and ensure we conduct SAR activities safely. We will collectively coordinate our standards, training, exercises and documentation. Knowledge will be shared without restriction and we will learn from each other. We will also recognise and celebrate the dedication, courage and commitment of our people.



SAR Prevention

We seek an informed, responsible, adequately equipped and appropriately skilled public who are able to either avoid distress situations or survive them should they occur. A large number of organisations have a role to play with SAR prevention. Collectively, we will enhance personal responsibility through information, education, regulation, investigation and enforcement. We will collaborate with, inform, and contribute to partner organisations and when required, enable, coordinate or lead public focussed SAR preventative strategies and actions in order to reduce the number and/or the severity of SAR incidents within the NZSRR.

SAR SUPPORT

NZSAR supports a wide range of organisations to help us realise our strategic goals



Project **SARdonyx** JOINT SEARCH AND RESCUE OPERATIONAL INFORMATION SYSTEM

SARdonyx – Bringing together “one SAR” data

If you can’t measure it, you can’t improve it.

Tracking and measuring data can give organisations a better understanding of the populations they serve and how to better serve them.

SARdonyx is a project to establish a data system that replaces existing single-agency data stores with a multi-agency solution which brings together information on all SAR operations.

The aim of the project is to provide an “all of SAR” understanding of the data collected by the different agencies, including information on the use of resources, on outcomes and effects.

Bringing together the new data system is the largest and most complex project led by NZSAR, involving multiple organisations and requiring considerable SAR and technical expertise.

Historically, data from SAR operations has been collected to meet the needs and requirements of individual organisations. Consequently data collection across the SAR sector has been fragmented, making it difficult to analyse and identify trends or risks.

SARdonyx meets the need for reliable information about the sector to help identify strategic changes and opportunities for the SAR community. It also recognises the difficulty of accessing data held by different agencies as a limitation to responding to identified trends or risks.

When completed the joint SARdonyx project data will be used in support of SAR prevention and to assist SAR agencies to better understand the needs of people requiring SAR services.

Information from the new data system will be able to generate a variety of tailored reports for leaders and decision makers across the sector. Longer term it is envisaged that the system will be able to identify changing patterns in social activities and demographics that will have an impact on SAR needs and resources. Data gathered in the new system will also help inform and support research undertaken in other parts of the sector.

The project is funded by the NZSAR Council and directly involves the NZSAR Secretariat, New Zealand Police, RCCNZ (Rescue Coordination Centre New Zealand), and Land Search and Rescue.

The system will replace existing Police, RCCNZ, and Land Search and Rescue’s post SAR operation information collection and reporting systems.

The project is expected to be completed mid-2019.

SAR INFORMATION TECHNOLOGY

SARTrack

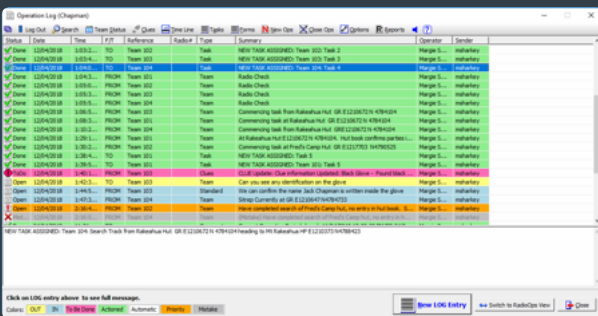
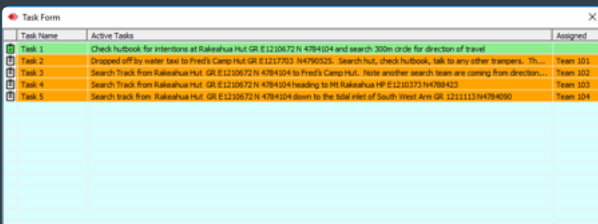
SARTrack is the incident management system software tool for land search and rescue in New Zealand.

The software was developed in New Zealand for land-based search operations to support Incident Management Teams during SAR operations.

Training people to use SARTrack is underway around the country, establishing a core of capable LandSAR people within each police district who can operate the software to support SAR operations.

As an operation develops, SARTrack can be used to provide a wide range of management support capabilities, including initial team tasking, clue registration, live search tracking and production of NZSAR forms.

A memorandum of understanding between Police, RCCNZ, LandSAR, NZSAR and SARTrack Limited establishes and promotes collaborative working relationships for using, supporting and maintaining the SARTrack software.



NZSAR Resources Database

The NZSAR Resources Database helps emergency services and those involved in SAR operations easily locate resources. Accompanying each resource is information on the capabilities and equipment that could assist them to run SAR operations.

There are over 700 resources listed on the New Zealand and South Pacific database, provided by approximately 300 operators.

More than 150 agencies, groups and resource providers have access to the database.

The database began as a ring binder with SAR assets listed in the physical file. It was converted into an interactive resource in 2007.

It has evolved into a map-based tool showing the resource location and the capability of assets.

Recent upgrades to the resource database include a greater level of detail about the assets available and clearer divisions between the types of asset offered in each category.

The database also provides the ability to audit information it holds to make sure it is up to date.

Access is typically permitted to agencies, groups and resource providers involved in search and rescue.



Images from the updated Resources database website



Category I Land-based SAR Process:

An example of how a typical Police led Category I land-based SAR Operation unfolds.



Two friends have gone tramping over Labour Weekend. When they don't arrive home at the agreed time, a trusted contact rings 111.



The Police Communications Centre enters an event based on the information provided, and contacts the on-call Police SAR Coordinator for the area.



The Police SAR Coordinator forms an Incident Management Team (IMT) to plan the search and rescue operation (SAROP).

Search teams of Police and volunteers start searching the areas that have been assigned to them, while other teams wait at the ends of nearby tracks in case the trampers arrive.



Intentions Process

Although most trips into the outdoors go without a hitch, you need to be prepared so if there is a problem, there is a plan in place to alert authorities and enable rescuers to find you quickly.

The New Zealand Outdoors Intentions process provides 3 simple options to tell a trusted contact about your trip. www.adventuresmart.org.nz



As clues (such as intentions left in hut log books) start coming into the IMT, the search area and tactics are adjusted.



Search Teams

In New Zealand there are many specialist teams that may be involved in land based SAR operations. Search teams are often made up from people from more than one organisation.

Examples are:

Police SAR

LandSAR volunteers

DOC

FENZ

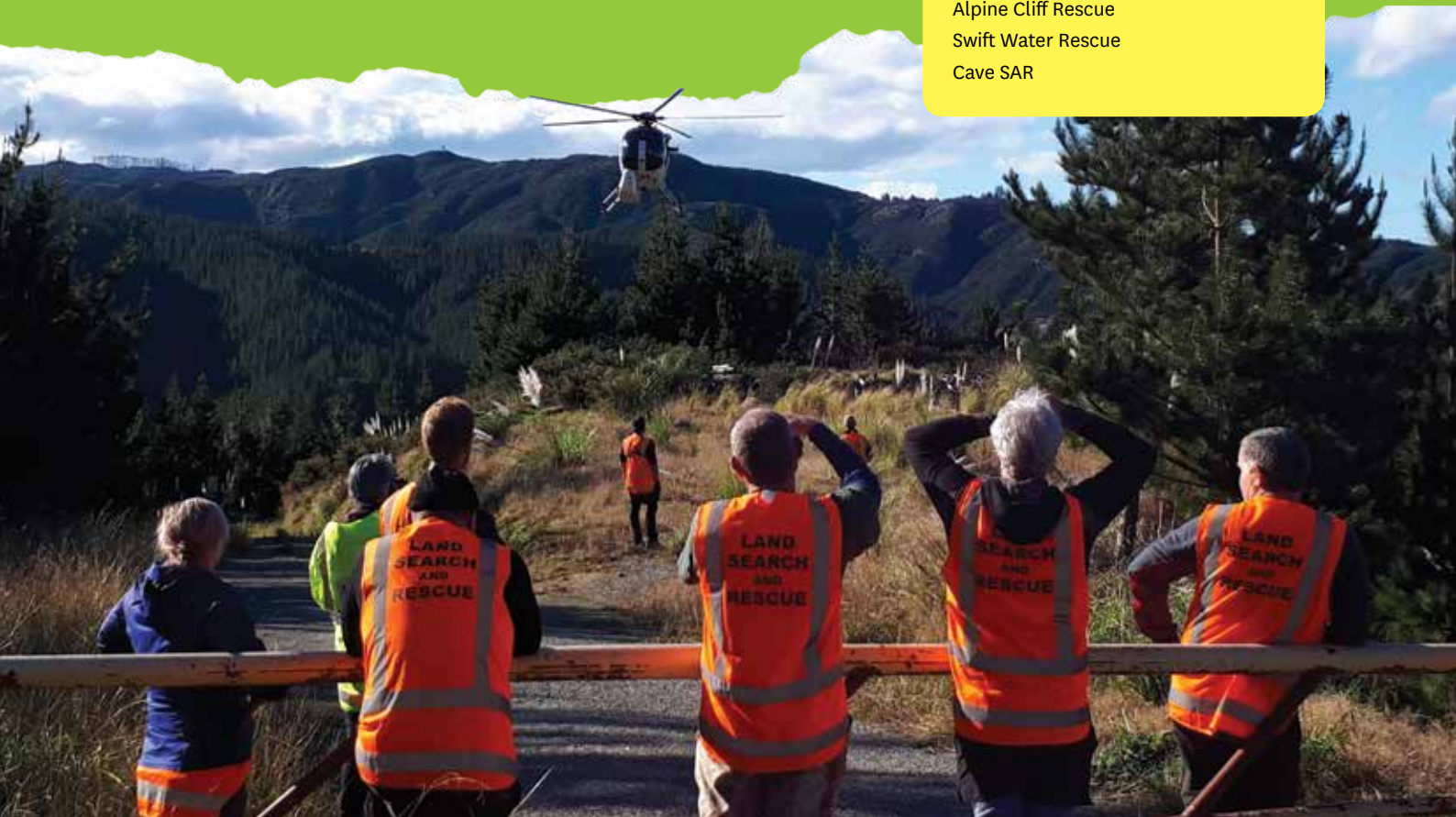
Search Dogs (Police or LandSAR)

Alpine Cliff Rescue

Swift Water Rescue

Cave SAR

The missing trampers are found. One has a broken ankle. The search team makes sure that the injured trumper is stabilised. An Air Ambulance (rescue helicopter) is called to winch the two trampers from the bush, and take them to the closest hospital.



WANDER SAR SYSTEM

The Safer Walking Framework

Over the last eight years there has been a steady increase in the number of land incidents related to people with cognitive impairment who get lost or go missing. Collectively, these people are known to search and rescue agencies as ‘wanderers’.

Wanderers include people living with conditions such as dementia-related illnesses, autism disorders and intellectual disability that impair their capability to find their way home.

Currently 23 per cent of all Category 1 land searches are for those in this category.

The New Zealand Search and Rescue (NZSAR) Council expects the number of wander incidents will continue to rise as the New Zealand population ages.

It is predicted that by 2026 there will be 74,000 people with dementia-related illness in the New Zealand population, with that number expected to more than double by 2050.

To respond to the expected increase in these types of incidents, the NZSAR Council is supporting the Partnership Framework – Safer Walking, the Framework for “supporting, educating and reducing the risk of people that, potentially or actually, get lost or go missing due to cognitive impairment”.

The Framework is a partnership between search and rescue and agencies not typically involved with the search and rescue sector. The aim is to forge

relationships with agencies such as Alzheimers New Zealand, IHC and Autism NZ, with the goal of helping individuals, whanau and communities address the growing needs of those in the wanderer category.

The Council has provided funding to LandSAR through the service level agreement for them to lead the implementation of the Framework.

The Framework has a number of objectives; among them is the aim to reduce the likelihood that people with cognitive impairment will move from a safe environment, to ensure the readiness of whanau, carers and response agencies should a response be required and to help locate and return the affected person to a place of safety as quickly as possible.

Another key outcome for LandSAR is working with agencies to provide the support and guidance they need and provide leadership to assist with research and development for those in the wanderer category. LandSAR

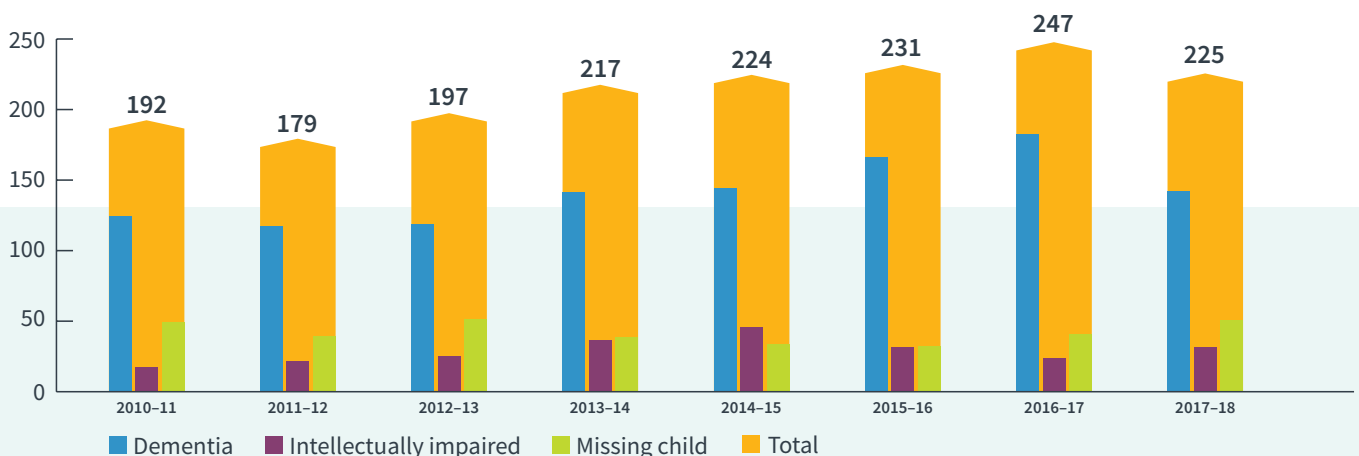
is also working to enhance the pendant tracking service and equipment provided for people living with cognitive impairment.

Partnership Framework – Supporting ‘Safe Walking’



Supporting, educating and reducing the risk of people that, potentially or actually, get lost or go missing due to cognitive impairment

Wander Incidents



WORKSHOPS & SEMINARS

Police SAR Coordinators Workshop

The police district SAR coordinators meet annually to look at sector developments and undertakings and to discuss issues and experiences.

NZSAR supports this meeting to facilitate sector updates and case study discussions that offer operational experiences and insights of value across the sector.

Case Study – Operation Kirribilli

At about 5.30am on 19 March 2018 the two occupants of the 12m yacht Kirribilli were winched to safety from rocks near Taiharuru, north of Whangarei.

The crew had raised the alarm 35 hours earlier when facing difficulties in gale-force winds and waves nearly six metres high.

Coastguard and Northland Rescue Helicopter were involved in several rescue attempts and provided safety advice to the crew prior to the yacht going aground. Crew were rescued from the yacht after it grounded on rocks.

This case identified some key issues for SAR personnel:

- Severe weather conditions may restrict crew access to radio equipment in a yacht and/or their ability to hear radio messages.
- The need to consider the impact the weather and the duration of events may have on the crew and their ability to process information and make decisions; crew exhaustion and stress will affect those being rescued.
- The importance of continual risk assessment and forward planning is vital for all agencies involved.
- Having an existing relationship with the responding rescue members can provide a level of comfort and appreciation of decisions, particularly in situations where conditions have the potential to impact on the safety of rescuers.

Technology Workshop

Over 40 people from the SAR sector gathered in Wellington in March to look at the new and future technology trends in their sector.

The two-day SAR Technology Workshop focused on advances in relevant technology since the last gathering in 2010.

Those at the workshop heard 20 presentations on technologies, how they are being used and suggestions on improving their use.

There were also reports on new and emerging technologies, with discussion centring on the opportunities and limitations these technologies offered.

Technology is fast-moving and this offers a range of challenges. SAR organisations want to adopt technology that is effective but do not want to waste scarce resources testing devices that ultimately fail to perform.

There were several consistent themes across the presentations:

- Limitations of battery life in new technology.
- Issues around connectivity.
- The need to consider privacy issues when trialing or implementing new technologies (for example, drones).
- The need for proper training.
- Hidden costs associated with some technology.
- Difficulties identifying what new technologies may be ‘game-changers’ for SAR.



Category II Marine-based SAR Process

An example of how a typical RCCNZ Category II Marine-based SAR operation unfolds.

A yacht with 4 people on board sailing from Tonga to Whangarei encounters a storm and is badly damaged. The skipper activates the yacht's EPRIB



Cospas-Sarsat

The International Cospas-Sarsat programme is a satellite system that detects alerts from distress beacons (ELTs, EPIRBs, and PLBs) and notifies the appropriate organisation that there is a distress alert in their region.



The EPRIB signal is received by the Rescue Coordination Centre New Zealand (RCCNZ). A Search and Rescue Officer (SARO) checks the Beacon Registration database and finds the number of a contact person. That person provides information about the yacht, its crew and voyage intentions.

A second SARO has started plans for a search and rescue operation (SAROP). An Air Force Orion aircraft is sent to the location of the EPRIB to conduct a search. A nearby container ship is contacted. It agrees to head to the distress location.



The Orion finds the badly damaged yacht. They talk to the crew who are in a liferaft attached to the yacht. There are no injuries but the crew needs to be rescued as the yacht is breaking up. The container ship arrives and safely recovers the crew.

On Scene Coordinator

Once the yacht is found the Orion stays on and the crew act as On Scene Coordinator (OSC). The role of an OSC is to coordinate the activities of search and rescue units which are working together on the same mission.

The rescued crew members are cared for by the container ship staff until the vessel reaches Auckland, where they are checked over by ambulance staff.

Reconciliation Workshop

International experience shows that one of the biggest challenges in responding to a mass rescue event is accounting for all the people in distress. This is often called reconciliation.

When the Italian cruise ship *Costa Concordia* sank off the coast of Tuscany in January 2012, the process of reconciliation for the over 3,000 passengers and 1,000 crew took three days.

The International Maritime Rescue Federation (IMRF) has identified three problems that responders can face in reconciliation during a mass rescue incident. The first is knowing, *for sure*, how many people were originally at risk. The second is (conversely) putting too much effort into reconciliation and counting at the early stages of a response, when the effort still needs to be focused on those people still in distress. The third is the risk of complacency if responders have an over-reliance on head-counting alone.

Our series of Rauora mass rescue exercises have highlighted reconciliation as an area that needs systemic improvement.

In November 2017, the Secretariat held a workshop to consider international good practice for reconciliation. It reviewed current

work by the Ministry of Civil Defence and Emergency Management (MCDEM) and New Zealand Police for the inquiry, registration, and needs assessment processes of the welfare function in a Coordinated Incident Management System (CIMS) led response.

The workshop also sought to identify what information various agencies need from a reconciliation process (e.g. the Ministry of Foreign Affairs and Trade will want to know about the nationalities of people involved) and clarify the roles and responsibilities of various agencies in a reconciliation system (e.g. ambulance services will conduct triage at the landing areas).

Another focus was to provide clear guidance for a reconciliation system and processes to be included in Mass Rescue Operation (MRO) Readiness & Response Plans. The reconciliation process was then tested and refined at a desktop discussion exercise in June. A practical reconciliation exercise is being planned for next year to further validate the reconciliation systems and process.



New Zealand Hosts Joint Working Group

In October 2017 New Zealand hosted the twenty-fourth meeting of the Joint Working Group (JWG) of the International Maritime Organisation (IMO) and the International Civil Aviation Organisation (ICAO).

Sixty-four people from 22 countries attended the five day conference at Te Wharewaka, on the Wellington waterfront. The conference, organised by Maritime New Zealand with the support of the New Zealand Search and Rescue Council, was the first time New Zealand has hosted a global gathering of search and rescue leaders from the JWG.

Participants considered amendments to the International Aeronautical and Maritime Search and Rescue (IAMSAR) manual, including mass rescue operations, procedures for developing search plans for signal data from mobile telecommunications, the use of tracking and locating 'apps' for cell phones and mobile devices, as well as addressing the problem of LED-fitted safety and lifesaving equipment being near-invisible to night vision equipment.

There was also discussion on amendments to the IAMSAR manual reflecting the implementation of the Global Aviation Distress Safety System (GADSS) which will ensure 'tracking' of aircraft, following the Malaysian Airlines MH370 incident. From 2021 new aircraft will have Autonomous Distress Tracking (ADT) to identify the location of an aircraft in distress with the aim of establishing the location of an accident site.

Another focus of the JWG was developing better ways to share lessons identified in SAR incidents, accidents and exercises so that SAR personnel can learn from others' experiences and improve their own preparedness. Part of those discussions included agreeing to a revised format for national self-assessment on search



and rescue, which is seen as great value in the development of the global SAR plan.

There were 38 papers considered in Wellington, most very detailed and some requiring consideration by break-out groups during the meeting.

New Zealand had a strong interest in the discussion around search and rescue guidance to SAR authorities and rescue coordination centres in areas remote from SAR facilities.

The JWG works to harmonise aeronautical and maritime SAR response. The working group meets annually to deal with matters referred to it by its two parent organisations with the overall aim of making improvements to global SAR arrangements.

The IAMSAR manual is re-published every three years. This meeting of the JWG was contributing to the edition due to be published in mid-2019.

SAREXs Search and Rescue Exercises

Police District SAR Exercises

Search and Rescue Exercises (SAREXs) are an integral component of SAR training. They are highly regarded by all participants, providing a valuable opportunity to practise operational and management skills. The exercise scenarios are designed to test the objectives identified from operational reviews and/or people capabilities.

The NZSAR Council provides funding to support each police district's annual exercises, including the provision of trained SAR evaluators. NZSAR publishes the evaluation reports on our website so insights can be shared and the whole sector can benefit from what is learnt.

Exercise Rangiora – Cold Case Scenario

This Canterbury exercise involved approximately 120 participants operating within three incident management teams (IMT). The exercise revisited the unresolved search for Emma who went missing in December 2017. This SAREX had the best result possible, with the discovery of Emma's body and providing closure for her family.

Exercise Motutapere – No Duff

This multi-agency land SAREX was undertaken in the Kaimai Range, west of Tauranga, in May 2018.

The area was chosen because of the number of recent extended search operations undertaken there. During the search phase of this exercise a No Duff (a term indicating that an incident was not a drill) was called when a search team found a group of four trampers who had become lost. The trampers had been relying on their cell phones for navigation and were unable to raise an alarm. The group were not due out for another 24 hours and, given the weather conditions, would have been in difficulty by the time an alarm was raised.

Avalanche Exercise – Canterbury

An Avalanche Search and Rescue response is time critical and contains many factors that increase the complexity, risk and safety of an operation.

Running a realistic large scale exercise increases the level of experience and proficiency of the various response agencies, as well as improving their ability to work together. This exercise was based on a backcountry avalanche incident involving multiple people, providing a close to real-life scenario.



Insights from recent SAREXs:

- Provide opportunities for IMT members to undertake relevant training prior to exercising, and support them with an experienced mentor.
- Populate all IMT cells with local people wherever possible.
- Follow the Ground, Situation, Mission, Execution, Administration and Logistics, Command and Communications (GSMEAC) format for briefings and handovers.
- Ensure key information is readily displayed in the IMT.
- Field teams need to ensure they are self sufficient with equipment appropriate and suitable for the search terrain.
- Ensure all field teams are fully debriefed for feedback into the intelligence and planning process.
- Computer-based management systems often add great value to operations, but care needs to be applied to ensure functional managers are not overly engaged in detail and can be fully supported to enhance situational awareness.



Nationally Significant SAR Exercises – Rauora II

New Zealand has a very large search and rescue region of 30 million square kilometres including large areas of ocean, much of it remote, which presents challenges for rescuers responding to those in distress.

In recent years there has been an increase in tourism in our region, including more cruise ships visiting New Zealand, as well as other destinations within the search and rescue region.

The challenges that this provides to New Zealand SAR authorities in the event of Mass Rescue Operation (MRO) have been recognised by the New Zealand Search and Rescue (NZSAR) Council.

A mass rescue is one that involves the need for immediate assistance to large numbers of persons in distress. In this situation the capabilities normally available to search and rescue authorities are inadequate and search and rescue services are overwhelmed by the sheer number of people or the complexity of the event.

A mass rescue is a low-probability high-risk event that needs preparation and planning to ensure an effective and efficient response.

The responsibility for developing and maintaining MRO readiness plans lies with the two SAR coordinating authorities, the Rescue Coordination Centre New Zealand (RCCNZ) and the New Zealand Police.

In order for an MRO response to be carried out effectively it is vital that all agencies involved are aware of the role they are expected to play.

The NZSAR Council directed that a series of exercises be conducted around New Zealand to ensure the mass rescue operation strategic policy and rescue plans were fit for purpose.

A series of tabletop exercises were run to test the command and control structures around New Zealand. The Rauora I series of exercises were completed in 2016.

The next phase, Rauora II, are exercises currently being carried out around the police districts. The scenario for these exercises involves evacuating passengers and crew from a cruise ship close to New Zealand.

The aim of the exercises is to test the interagency response to the lifesaving aspects of a mass rescue operation. The aim is to assist agencies to work together and integrate their systems, people and knowledge to produce a collective result. The exercises recognise that a mass rescue event will overwhelm individual agencies, so those groups need to work together to produce a positive result.

The Rauora II exercises use a format from the military. They are 'walk-level' tabletop exercises that simulate a mass rescue. The key agencies involved are Maritime New Zealand, New Zealand Police, Civil Defence and Emergency Management, Fire and Emergency New Zealand, St John and New Zealand Defence Force.

Each exercise is delivered using dynamic simulation, in which a map and pieces are used to simulate the timeline of an event. The exercises are dynamic in the sense that the exercise controller can change the scenario, depending on the decisions made by the incident management teams.

The Rauora exercises are a learning activity designed to educate agencies on the assembly of appropriate management groups, the application and management of available information, the allocation of scarce resources, and decision making on response actions.



CELEBRATING SUCCESS



NZSAR Awards

“As a sector that encompasses so many different organisations, New Zealand Search and Rescue is a wonderful example of how working together increases effectiveness.”

Those opening comments from Her Excellency, The Rt Hon Dame Patsy Reddy, GNZM, QSO, Governor-General of New Zealand, set the scene at the ceremony to honour recipients of the New Zealand Search and Rescue Awards held at Wellington’s Queens Wharf in April.

Her Excellency said how pleased she was to have the opportunity to personally congratulate the recipients for their service, noting the hundreds of thousands of hours given willingly and generously by volunteers each year.

“It’s that commitment and community service that makes our search and rescue sector something to be proud of. The skill base involved is immense, the hours spent on training are huge. That dedication should be valued by all New Zealanders.” In recognising the evening’s award winners, Her Excellency said their service had gone above and beyond the call of duty. “Search and rescue is generally all about teamwork, but this evening some of you will have the spotlight shone on you. I’m very pleased to be here, on behalf of all New Zealanders, to thank you for your service.”

“It’s that commitment and community service that makes our search and rescue sector something to be proud of. The skill base involved is immense, the hours spent on training are huge. That dedication should be valued by all New Zealanders.”

Steve Orr from St John who, along with Joe Adam and Mandy Jackson from the Bridge to Nowhere Lodge, received a Gold Award for a prolonged and complex rescue from the Whanganui River said he was humbled to receive the award and was quick to acknowledge the range of other agencies that supported the successful outcome. That sentiment was echoed by the evening’s other Gold Award winner Dave St John. “If there’s one thing I’ve learned it’s that you can’t do any of this stuff by yourself.” The award ceremony honouring eight members of the SAR sector was held on the 50th anniversary of the *Wahine* disaster. The anniversary was commemorated with a range of events in the capital city, including a SAR display on Queens Wharf.

Operational Gold Award

Steve Orr – St John
Joe Adam
Mandy Jackson

For the rescue of
a person from the
Whanganui River on
8 May 2017



In the early evening of May 6, 2017, the Taranaki Community Rescue Helicopter was tasked to investigate a SPOT beacon activation near the Tieke Kainga campsite in a remote area of Whanganui National Park.

On arrival, an adult male was located with life-threatening vital signs. Intensive care paramedic Steve Orr attended the patient and prepared him for air transport. However, due to low cloud, the flight was aborted. With advice that conditions were unlikely to change in the short-term, alternative action was required.

A plan was developed for Joe Adam and Mandy Jackson, from the Bridge to Nowhere Lodge, to make a night trip in their jet boat to ferry the patient to the nearest road end at Pipiriki.

Using torch light and armed with extensive local knowledge of the river, Joe and Mandy safely navigated the jet boat downstream. They were met by a road ambulance for the two-hour journey to Whanganui Hospital, with Steve hand ventilating the patient all the way.

Without medical intervention, it is highly unlikely the patient would have survived the night. The persistence, teamwork, evaluation of options and lateral thinking of the team, led by Steve Orr, enabled the patient to be transported to life-saving care. The patient was admitted to ICU and discharged three days later.

Thanks to the efforts of Steve Orr, Joe Adams and Mandy Jackson, the patient safely reached hospital in a timely fashion, leading to a positive outcome.

Support Gold Award

Dave St John
Coastguard Marlborough

For his services to
Coastguard and
Coastguard Marlborough



Dave St John is an invaluable member of Coastguard Marlborough and a fundamental part of its team. His many contributions include being one of Coastguard Marlborough's training officers, a Regional Coastguard Instructor (RCI), the unit Operations Officer, a committee member and sharing media liaison duties.

As a Coastguard boating education tutor, Dave's focus is on-water training and, in addition to training his own Coastguard crew, he helps train other Coastguard rescue vessel users, including St John, Fire and Emergency, and LandSAR.

In the past 12 months, he has dedicated 515 hours to Coastguard, including 95 hours on the rescue vessel, 205 on training, 150 on community events, and 65 hours on maintenance.

Dave produced the standard operating procedure and safety information for the new high-speed marine ambulance rescue vessel Bluebridge Rescue and trained masters and crew for this vessel. He has helped build good working relationships with St John, New Zealand Police, the harbourmaster, LandSAR and Fire and Emergency. In addition, he is the organiser of the 'Round the Resorts' – an annual visit to resorts and accommodation houses in the Marlborough Sounds to give staff safety advice to help prepare them for the summer season.

With one of the highest responses to callouts of any of the masters, along with his positive attitude and fostering of good morale amongst the team, David is a proud and valued member of Coastguard and a huge asset to the Marlborough region.



While we celebrate these feats, the Council is also keenly aware of aspects which can affect our ability to deliver SAR services in certain circumstances.

Certificate of Achievement – Operational Activity

Methven LandSAR

For the rescue of a trumper from 13 Mile Bush on 2 April 2017



On April 2, one member of a tramping party badly injured his ankle while climbing Big Ben Range near Thirteen Mile Bush in Canterbury.

A helicopter was tasked to assist but could not get to the tramping party due to low cloud and bad weather. A team of 10 people from Methven LandSAR headed in, reaching the injured party in a steep gully at 7.45pm. They found themselves in thick bush and scrub and, due to darkness, the terrain and ground conditions, a decision was made to wait until daylight to carry the trumper out.

At first light Methven LandSAR began the stretcher carry through thick scrub, over steep, slippery ground, in rain. Additional LandSAR members were sent in to assist with the stretcher carry and relieve those becoming fatigued.

SLSNZ Otago Search and Rescue Squad

For the rescue of 9 people from Taieri River flood waters on 21 July 2017



Close to midnight on July 21, Otago's Surf Life Saving SAR team responded to multiple 111 calls from people trapped on the roof of a 4WD vehicle during severe flooding on the Taieri Plains near Mosgiel.

After assessing the situation, the team made a 40-minute detour in darkness, through challenging floodwaters and washed-out roads, to find a safe launching place for their inflatable rescue boats (IRBs).

This was a complex rescue that was made even more challenging by darkness, rising floodwaters and difficult communications.

Without the direct intervention of the lifeguards and other emergency services working together these persons may well have drowned.

Certificate of Achievement – Support Activity

John Thompson – Coastguard Waimakariri-Ashley

For his commitment and services to search and rescue

John Thompson has been a committed volunteer at Coastguard Waimakariri-Ashley since 2006. He has been the unit's president since 2015, as well as a board member and SAR Coordinator. John dedicates well over a thousand volunteer hours a year to Coastguard.



In the 2010 Canterbury earthquake, Coastguard Waimakariri-Ashley's headquarters were damaged beyond repair. John was on the building committee for six years and supported David Johnson, who project-managed the rebuild. He also prepared the manuals necessary to place the unit's rescue vessel into Maritime New Zealand's Maritime Operator Safety System.

As his unit's president, John is highly respected by other volunteers for his outstanding contribution and willingness to support his team. He is also active in promoting Coastguard with young people, mentoring them to reach their full potential, benefitting both Coastguard and the community. His energetic and passionate persona is infectious and he makes volunteers feel valued and supported, appreciating any contribution they make.

Pete Corbett – LandSAR

For his commitment and services to search and rescue

Pete Corbett got involved in LandSAR in the mid-1980s and has been a passionate volunteer in the search and rescue sector ever since.

He joined Southland Alpine Cliff Rescue (ACR) in the mid-1990s, while working as a police officer, and later became part of the Wanaka ACR team. He was active in the LandSAR response to the Christchurch earthquakes.

He has since held various positions in LandSAR, including national operations manager and group support manager, and is currently the training and development manager.

Pete has provided a steady influence through periods of considerable organisational and political challenges within his sector. His deep knowledge of SAR, along with his leadership and ability to coordinate between the various stakeholder organisations, has steered the development of the current New Zealand search management system.

His colleagues and peers admire his resilience and professionalism, and he is regarded as an important asset to his organisation and to the New Zealand search and rescue sector.



Certificate of Achievement – Support Activity

Jeff Sayer – AREC

For his commitment and services to search and rescue

Jeff Sayer gave 54 years of unbroken volunteer service to search and rescue in New Zealand through his work in communications.

Jeff became a leading figure behind many of the SAR communications developments in Wairarapa and Wellington and nationally.

In the late 1970s, Jeff negotiated for Amateur Radio Emergency Communications (AREC) to take over an HF radio aerial at the Masterton aerodrome, which became a major part of the local Search and Rescue (SAR) communications network and is still in use today.

Jeff was a member of the Wairarapa SAR committee and an air search adviser to Wairarapa SAR since the 1970s. In 1988 Jeff was made a life member of Wairarapa AREC.

In 2002, Jeff was appointed national director of AREC and worked hard to obtain funding for a major programme to update HF, VHF and air band radios used for SAR around the country. He was a strong supporter of the roll out of DMR digital radio technology for AREC and LandSAR.

Jeff was the AREC representative on the NZSAR Consultative Committee since 2004. He was instrumental in setting up the arrangements for AREC to receive SLA funding from the NZSAR Council, and has also represented AREC in many sector-wide forums and workshops. He retired from the position of national director in December 2017.

Jeff passed away on 13 September 2018 at Wairarapa Hospital, Masterton after a short period of ill health.



David Pontin – SLSNZ

For his commitment and services to search and rescue

As well as 20 years of service as a surf lifeguard, patrol captain and senior leader, David Pontin is recognised as an outstanding educator. His ability to pass on his skills and mentor lifeguards was recognised by the movement in 2007, when he was named the New Zealand Surf Lifeguard of the Year.

At a club level David helps instruct new lifeguards, IRB operators and crew, emerging senior lifeguards, and mentors instructional teams. He is a long-time member of the Capital Coast Callout Squad and also an instructor and patrol captain facilitator for the Central Region, passing on his experiences and skills to the next generation of leaders.

David was appointed to the National Lifesaving Committee (NLC) in 2012 and served for five years. He was responsible for writing an educational philosophy that now drives all course development in the organisation.

He was a national lifeguard school instructor and is also a veteran member of the National Event Lifeguard Squad, providing an on-water lifeguarding service at SLSNZ competitions.

David's ability and passion to pass on his skills makes him truly exceptional in the SLSNZ movement.





ENVIRONMENTAL SCAN

The Environmental Scan has been produced for use by the SAR sector as a resource and a stimulus for strategic planning and risk management.

The scan was commissioned by the NZSAR Council to examine the range of external and internal factors that may have an impact on the ability of NZSAR to provide effective SAR services.

It was released in January 2018 as part of NZSAR Council's aim to provide effective search and rescue services throughout New Zealand's search and rescue region. It explores the potential effect of external trends on SAR services and capability.

The scan focusses on six key areas: demography, technology, economy, politics, legislation and the environment.

The document also looks at internal factors that may affect our ability to provide services; in particular it examines funding, volunteering and training.

The scan suggests that population growth, tourism, ageing and climate change are all likely to increase demand for search and rescue services. By contrast, growing levels of disability (with the exception of dementia), urbanisation, increased sedentary activity and ethnic diversity will likely offset the demand increase.

While underlying or 'normal' demand for SAR services is likely to continue to stay steady (or grow) in the next five years, the scan also identifies a range of sources that might result in higher demand.

There are multiple sources identified, including:

- population growth
- more wandering activity as a result of population ageing (a significant driver)
- increased numbers of tourists, particularly those venturing into the outdoors unprepared – with more in the 'shoulder seasons' and more going into less travelled locations

- continued growth in people spending time outdoors unprepared
- extreme weather events or flooding caused by climate change.

The scan used key questions to explore the potential impacts of SAR-specific trends on the ability of the SAR network to operate effectively to save lives.

With respect to 'Demand for SAR Services' the scan posed the following questions:

- How might this trend impact on the overall number of people who end up needing SAR?
- Are more people likely to participate in recreation (by land, sea or air)?
- Are new outdoor activities more or less risky than the existing ones?
- How might the trend impact on the effectiveness of prevention activity?
- How might the trend impact on the ability of people to get out of trouble without assistance from SAR?

Questions for reflection:

- What impact might more tourists coming to New Zealand have on demand for SAR services?
- Do you think the increase in tourists coming during the shoulder season might increase SAR demand?
- How do you think the SAR sector should plan for more tourists coming to NZ for the outdoors, tourists coming on the shoulder season and going to more remote locations? If so, what should it do?

SAR PREVENTION

Changing people's behaviour is complex. It involves growing an understanding of what motivates positive action. NZSAR, in line with the SAR prevention goal, supports partner organisations to provide data and research to lead and enable SAR Prevention campaigns.

NZSAR carried out three pieces of research with the intent of broadening our knowledge and building on the expertise of those working to prevent search and rescue.

Land Observation Survey

During 2018, 134 people who were participating in land activities across New Zealand were surveyed across nine sites.

Based on Maritime NZ's On the Water survey, the research is designed to show the observed behaviours of those undertaking outdoor activities. A combination of DOC staff and LandSAR volunteers collected the surveys via an online app.

Findings include:

- Most people seek information on their intended hike/tramp before setting out.
- Nearly half of day walkers did not leave intentions about their trip.
- International tourists were much more likely to seek information on their intended hike/tramp than New Zealanders.
- Only 13% of respondents were carrying distress beacons.
- There is little difference in general equipment carried between those who were in poor weather compared to those in fair weather. This indicates that people may not be adjusting the equipment they are carrying for poor weather conditions.

Rescued Persons Survey

This survey was conducted with people who had been rescued as part of a search and rescue response to find out more about common triggers of search and rescue operations.

The research is supported by the two coordinating authorities – the Rescue Coordination Centre and New Zealand Police.

People who have required SAR response either on land or in the water have been contacted and asked to complete an online survey.

The survey covers questions about:

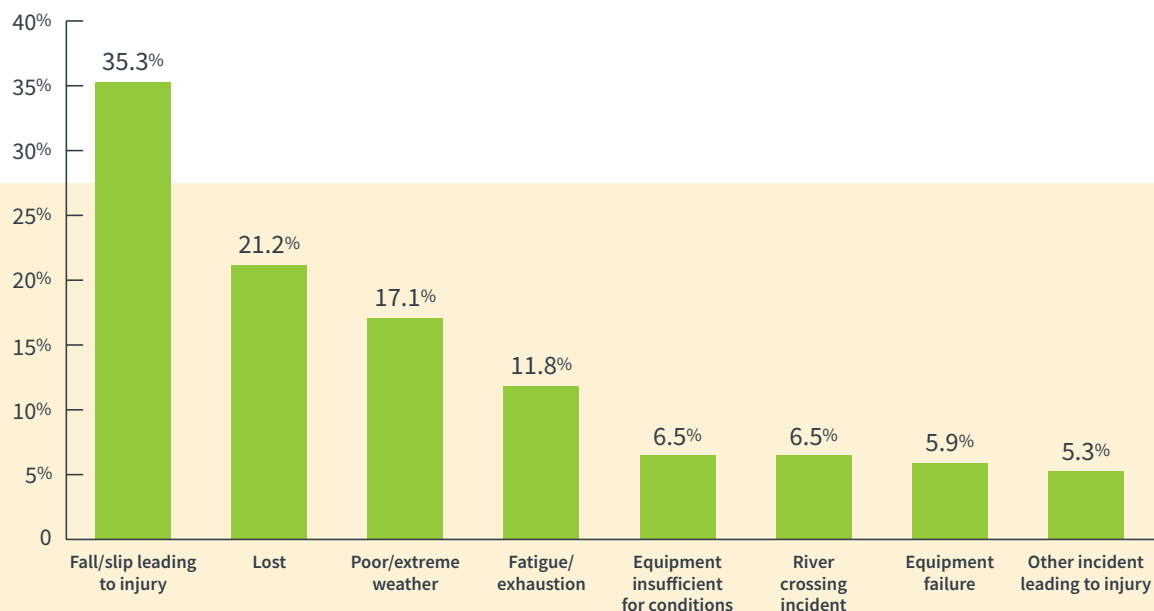
- Preparedness of rescued person.
- Behaviour leading up to and during the incident.
- Where they accessed information before undertaking the trip.
- Expectations of rescued person of SAR.
- Overall satisfaction with SAR response.

It is hoped that this information will support SAR prevention and reduce the number of people who end up in need of search and rescue services.

Rescue Person Research Report: Type of event that led to SAR land response

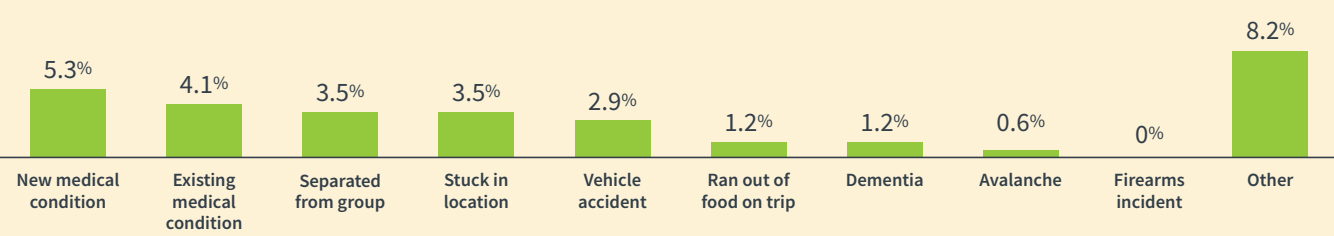
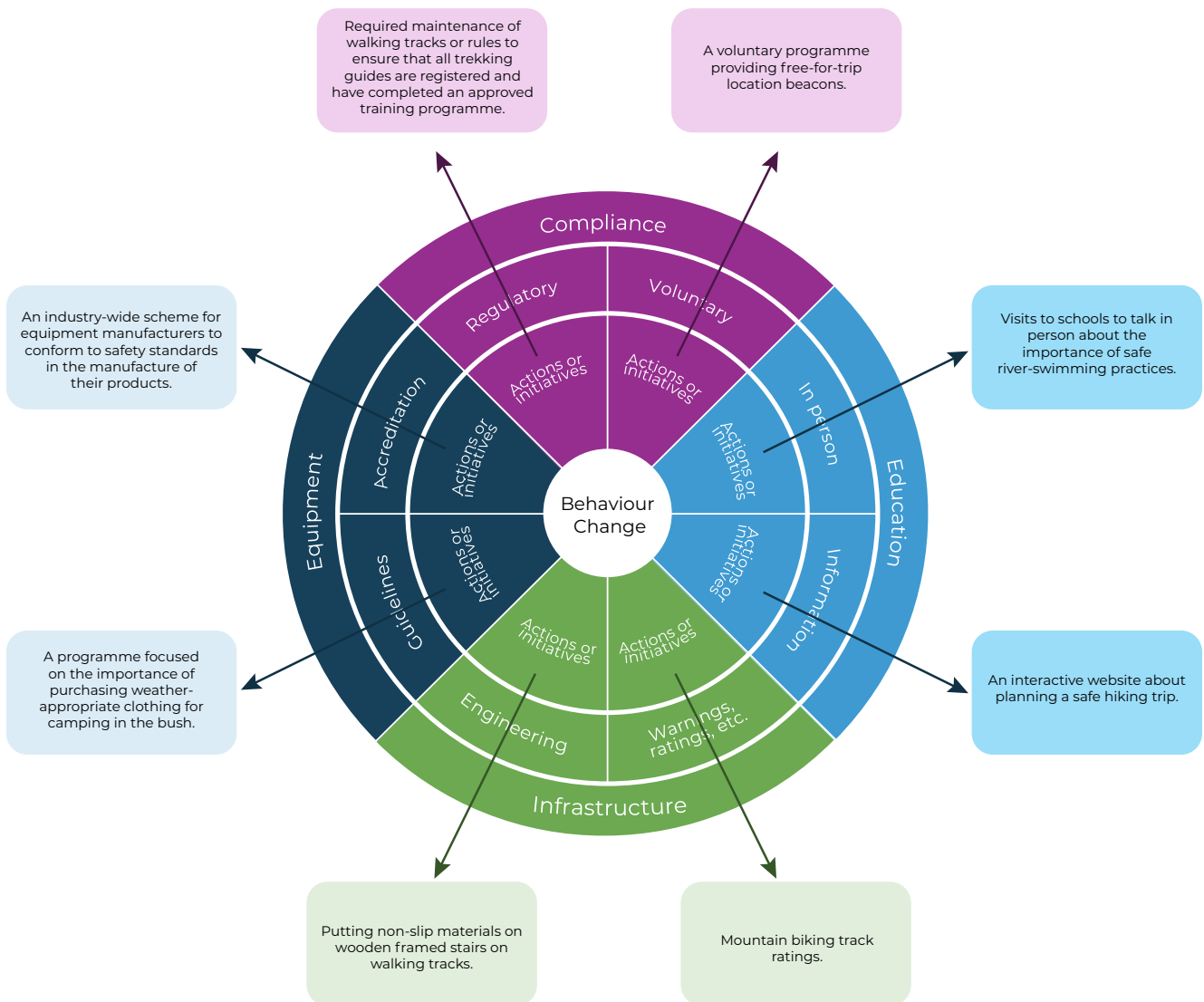
A fall or slip leading to injury (35.3%) was the most common type of event that led to SAR response. This was followed by becoming lost (21.2%) and poor or extreme weather (17.1%)

All respondents n=170



Benchmarking Preventative Activities Report (“BePA” Report)

The purpose of this report was to establish a baseline of consistent information across the SAR sector which would “capture and report on sector performance, highlight key areas which require focus and showcase sector best practices [relating to recreational safety]”. The report proposes a model for benchmarking initiatives and actions (BePA) that has behaviour change as the central goal.



SECRETARIAT'S REPORT

The past year has been both rewarding and challenging for the NZSAR Secretariat. We leapt into the year with a new strategy, additional responsibilities, more people, increased funding and of course, the weight of higher expectations. These are good challenges to have and as I look back upon the year, I'm pleased with what we have achieved.



The new NZSAR Strategic Plan 2017 – 2020 is an extensively updated version of the previous plan which defines our collective vision, values and goal. As the foundation document for the NZSAR Council it sketches out a work plan, lays out the things we are trying to achieve and the risks we are trying to mitigate. To gain greater understanding of our thinking into the broader NZ, Pacific and global environment we also undertook an environmental scan in late 2017. These documents can be found on the www.nzsar.govt.nz website.

Project SARdonyx, the creation of totally new, joint operational search and rescue information system is the largest project NZSAR has ever undertaken by quite a margin. As such, it has been a significant focus for the Secretariat and senior representatives from LandSAR, NZ Police, RCCNZ, and the Ministry of Transport plus an array of expert consultants. We are now well into the build of the new system. There is quite a bit more to sort out, but the early indications are that by early 2019, the new system will be in operation and able to report on operational SAR in a very useful and sophisticated way.

Over the year, we ran a further five nationally significant search and rescue multi-agency exercises. These exercises have been very useful to build relationships, clarify issues, evaluate capabilities, teach people about how the system might be required to operate and to identify areas of systemic strength and weakness. The four key areas we have identified we need to improve are: the quality and harmonisation of our plans; our ability to gain and maintain situational awareness; our familiarity with CIMS for multi agency, multi response incidents and our process for reconciling large numbers of people (i.e. people rescued versus those we still need to keep looking for). Resolving these issues is taking a lot of work by people inside and outside the SAR sector and I'm encouraged by the progress made to date.

Our search and rescue guidelines project is now well underway. It will establish a commonly agreed doctrinal and operational base for search and rescue in New Zealand. This too, is a large project which requires extensive input

from a wide range of subject matter experts from across New Zealand and overseas. Once completed in mid 2019, these 'SAR guidelines' will be the prime reference for SAR training and operations of all types. On top of these initiatives we undertook a range of research projects, including SAR fatalities research, observed land behaviours, SAR student research and a study of rescued persons. These have all been designed to increase our knowledge base, be shared with partner organisations and improve our decision making. We added a framework for benchmarking prevention activities which will help us to better evaluate the relative effects of prevention activities (page 25).

We started a variety of projects to enhance SAR processes or provide assurance that the system is as effective as possible. Included in this mix was the development of SAR-aviation standardised documentation, independent reviews of certain SAR operations, improvements to our health safety and wellbeing arrangements and our telecommunications for SAR in the land environment.

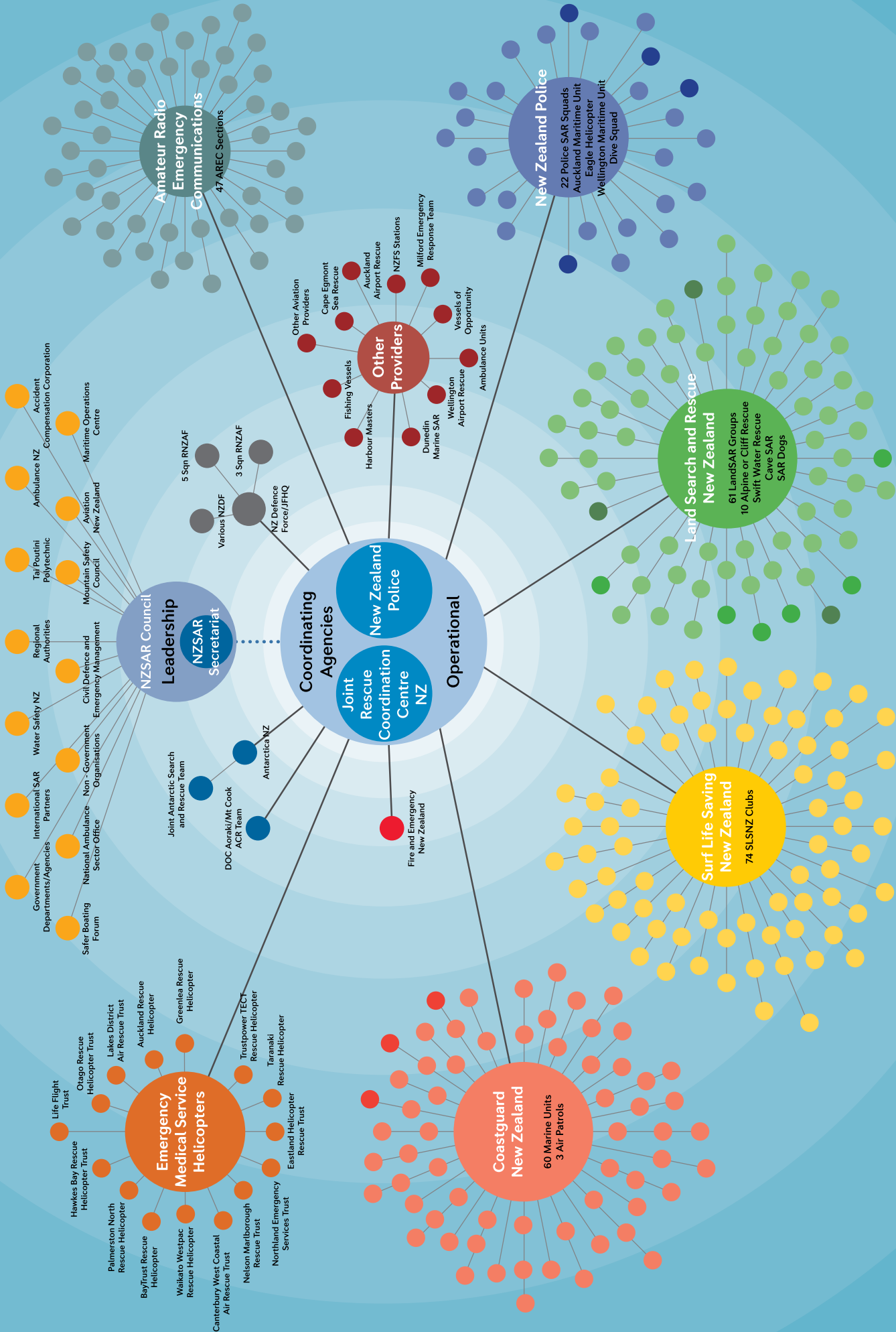
As you may have seen on page 19, we coordinated our annual NZSAR Awards function to fit with commemorations for the 50th year since the Wahine disaster. Our sector learnt a huge amount from that tragedy and it was the genesis of the Wellington Recue Helicopter and the Wellington Coastguard unit. The commemoration included a series of events marking the disaster amongst them a static display by SAR and other public safety organisations.

I want to end this piece by thanking the great many people who have assisted us over the year. We (Carl, Steve, Rhett, Alannah, myself – and Leanne for a while) are a small team and we are hugely reliant on the advice and counsel of others as we do our best to assist NZ's SAR sector to thrive. In particular – the members of the NZSAR Council and the NZSAR Consultative Committee have all given us huge amounts of time, thought and effort. We appreciate your guidance, trust and confidence in the work we do.

Ngā mihi
Duncan

OUR SECTOR

Partners





**Coordination +
Support**



