



Connecting the search and rescue sector

Link is a quarterly publication of  
New Zealand Search and Rescue



# Markers on Mauao: Improving SAR outcomes at Mount Maunganui

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## Websites

[nzsar.govt.nz](https://nzsar.govt.nz)

Search and rescue sector resources and information, including a PDF of this newsletter

[adventuresmart.nz](https://adventuresmart.nz)

Safety information and tips for people planning outdoor activities

[beacons.org.nz](https://beacons.org.nz)

Information about 406 beacons, including where to purchase, rent and register a distress beacon

[nzsar.govt.nz/nzs-sar-guidelines/nzs-sar-guidelines-overview](https://nzsar.govt.nz/nzs-sar-guidelines/nzs-sar-guidelines-overview)

New Zealand's Search and Rescue Guidelines

[tpp.ac.nz/study-options/search-and-rescue](https://tpp.ac.nz/study-options/search-and-rescue)

SAR multi-agency training

[landsar.org.nz](https://landsar.org.nz)

Land Search & Rescue

[mountainsafety.org.nz](https://mountainsafety.org.nz)

New Zealand Mountain Safety Council

[coastguard.nz](https://coastguard.nz)

Coastguard New Zealand

[surflifesaving.org.nz](https://surflifesaving.org.nz)

Surf Life Saving New Zealand

[arec.nz](https://arec.nz)

Amateur Radio Emergency Communications

[maritimenz.govt.nz](https://maritimenz.govt.nz)

Maritime New Zealand

[watersafety.org.nz](https://watersafety.org.nz)

Water Safety New Zealand

[saferwalking.nz](https://saferwalking.nz)

Safer Walking NZ

The NZSAR Annual report for 2021-2022 is now available on our website: [nzsar.govt.nz/about-us-2/annual-reports/](https://nzsar.govt.nz/about-us-2/annual-reports/)



## International Maritime Rescue Federation Awards 2022

**Congratulations to Rosie Musters, of Nelson Coastguard, who received the individual achievement award.**

The award recognises her 20 years of dedicated and talented service to maritime rescue in New Zealand. Announced in October, there are five categories of award, with nominees from across the globe. The NZSAR Secretariat congratulates Rosie, as well as all the other winners and finalists at the IMRF Awards 2022.

### COVER IMAGE

John Svendsen and Mauao ranger Josh Clark displaying the rescue markers during the installation project at Mount Maunganui. Courtesy Jamie Troughton/Dscribe Media



## The virtual Maritime Operations Centre

**A fully remote capability borne from COVID-19 has created extra levels of redundancy and resilience to an essential national communication capability.**

**Advances in remote** technologies and more social licence to work from home have been a silver lining of the COVID-19 pandemic for many. But the task to bring 80 different elements from the Maritime Operations Centre into your home office was an entirely different order of magnitude to most people's experiences.

The Maritime Operations Center (MOC) is located at Avalon in Lower Hutt. Run by government communications company Kordia, the MOC is operated on behalf of Maritime NZ to provide safety of life at sea communications. During search and rescue operations, the MOC provides the communication horsepower for the team at the Rescue Coordination Centre NZ, who are just down the hallway.

It is a 24/7 operation, employing 17 people for all its functions. The team constantly monitors distress channels across NZ's enormous Search and Rescue Region, as well as providing routine weather information and navigation warnings. Their list of communication equipment is impressive: domestic marine VHF radio, covering 30 networks across the country on distress channel 16, international HF radio voice networks, Digital Selective Calling (data via radio) networks, Inmarsat and Iridium satellite networks plus the humble telephone. On top of that are a suite of systems for event logging, recording and automated weather forecast delivery.

"As essential workers, during the lockdowns we had more certainty of continuity in our operations," says Brendan Comerford, MOC Manager. "But when the traffic light system was coming in, home isolation requirements and the virus circulating widely, we knew we could be vulnerable to staff illness."

Normally, staff in the MOC operate the various hardware systems via a series of remote servers. The challenge was reproducing the same effect from home locations, with 16 laptop-based workstations in a highly reliable and completely secure way. But in the first four months of operating the hybrid system, the MOC dealt with over 130 incidents without interruption.

"The system worked surprisingly well when we first tested it, proving highly adaptable and reliable," says Brendan. "Now our operations are even more redundant and resilient: if someone is taken out with COVID-19, we can stand up an on-call replacement from their home. Or if a disaster strikes Avalon, we can keep the MOC running remotely with little to no disruption."

Running a hybrid shift means the staff are connected by a closed loop intercom system, in place of turning and talking to the person in the chair next to you. The system allows remote workers to keep the same situational awareness, and use all the same tools, as MOC based staff. "When the COVID-19 home isolation requirements were longer, many people reported feeling well enough to work on day four or five. This allowed people the option for more control over when they used their sick leave, as well as easing the strain on our roster."

Despite the withdrawal of the traffic light system and reduced isolation requirements, the staff still have regular hybrid shifts to maintain currency, and ensure remote systems stay up to date.

Although the system is highly effective, it is seen as a powerful tool for operational continuity, rather than a potential replacement for the MOC based in Avalon.



## Markers on Mauao

### A new rescue marker system allows the local surf club and other SAR agencies to respond faster and more efficiently to incidents at 'The Mount'.

**Directly adjacent to** one of the Bay of Plenty's most popular beaches, is one of its most popular day-walking destinations. When the sun is out, the slopes and summit of Mauao / Mt Maunganui are busy, with visitors enjoying the many track options.

Located at the start of the main track, the Mount Maunganui Lifeguard Service has been responding to incidents on Mauao for 40 years. This proximity, and the fact that lifeguards are often patrolling the beaches in season, makes them the natural first responders for search and rescue operations there.

John Svendsen is the training coordinator for the Western Bay of Plenty Surf Life Saving SAR squad. "For years our club has been assisting people with rolled or broken ankles, dehydration or cardiac problems," says John.

The tracks on Mauao are well marked and named in te reo Māori, but often visitors calling for help struggled to correctly pronounce them, even if they were able to correctly identify which track they were on.

"Even though Mauao is a relatively small place, we usually received poor or confusing information about the location of the injured person, which resulted in delays to them being rescued," John explains. "The lifeguards knew the tracks like the back of their hand, so used local knowledge to narrow down the search areas, but everyone knew the situation was far from ideal."

John came to the Surf SAR squad about 18 months ago, and drove a project to create a rescue marker system. The idea wasn't new, but it hadn't ever had enough momentum to be brought to reality. "Our first step was to present to iwi and local council, to explain the urgency to introduce the system. The proposal was very well received, and we worked with iwi on suitable types and quantities of markers on the tracks."

A total of 75 markers were strategically placed, on existing signs or other man-made structures. Each was reflective and large enough to be seen when needed, but not so large that they were obtrusive.

There is a 4WD track leading directly to the summit, and the sea-level base track is accessible by a 'mini All-Terrain-Vehicle'. For incidents on the foot tracks, pre-plans detail the most suitable vehicle locations for patient transfers, as well as sections of track which require support from other agencies or capabilities. Helicopters are sometimes required, as when a gentleman in his 80's fell over a significant bank, needing winch extraction.

"Markers 42 to 47 and 61 to 63 are sections with steep steps, and we know we require LandSAR teams to assist in a stretcher carry from there," says John. The system means any extra assets required can be confidently activated earlier, improving response times and providing better outcomes for those in distress.

TOP

John Svendsen displaying the rescue markers during the installation project at Mount Maunganui. Courtesy Jamie Troughton/Dscribe Media



John recalls a recent response, which involved LandSAR, Fire Emergency NZ, St John and Surf. “The caller said someone had a broken ankle near marker 61. When our teams got there, no one was to be found, and as it was getting dark, LandSAR teams assisted us in making a full sweep of Mauao’s track network. It turns out the patient had decided to hobble his way down, but no one told the authorities!” These collaborations have been very positive according to John, with more combined training activities in the pipeline for the future.

A key part of the system has been getting the emergency comms centres on board. “Craig Madden from Police and Mat Delaney from Hato Hone St John helped us develop the procedures and follow the right process to get them approved and used by the authorities,” says John. When receiving a 111 call from someone who says they are on Mauao / Mt Maunganui, an automatic procedure is triggered, with specific questions asked by the operator. They instruct the caller on how to find the nearest rescue marker, and pass that information to the Police SAR coordinator, regardless of which agency takes the initial call. From there, police contact surf comms, who then pass the message to the local lifeguards. The system was first in place in November 2021, and after initial refinements, “we ironed out all the kinks by about August 2022,” says John. “The last four or five call outs have worked just like we originally intended.”

Each rescue marker’s GPS coordinates are collated on a private Google map, which is available to responders. They in turn, can share their current location, to aid situational awareness for the Incident Management Team. There is a small area of no cellular coverage on the north side of Mauao, but LandSAR or Fire and Emergency NZ are able to drive up to the summit to set up portable VHF radio repeaters if they are needed.

John has been working to extend the system to the beach. “There’s kilometres of great beach, with many beach access points. We have also added these to our response map. If a member of the public needs help, they’ve often struggled to explain exactly where they are. By referencing the council beach markers we can see the patient’s location on our Google response map. Coordinating our team or St Johns on to that location becomes far easier.”

Beyond Mauao, there are the usual surf lifeguarding duties and patrols, as well as SAR responses. “Sometimes people are reported as last seen on the beach, so we’re tasked to deploy inflatable rescue boats or rescue water craft [Jet skis] to search the surf zone and coastline, whilst other lifeguards assist in searching the shore and nearby land area.” As training coordinator, John is looking at ways to keep improving the capability for his club to assist in the area. “Other agencies are really excited about working with Surf to work and train together.”

There aren’t many locations where a Surf club has a land feature so close by with so many incidents to respond to, but John thinks the concept of rescue markers could have merit in other situations around the country. “We just needed to have the right conversations with the right people, and we got the system up and running. In essence it is really simple, and it has made a huge difference to the response speed and efficiency of the local SAR organisations, which can only be a good thing for those who need our help.”

**John’s work on the Mauao marker project was formally recognised as Surf Life Saving NZ Eastern Region’s “Innovation of the Year” in 2022.**

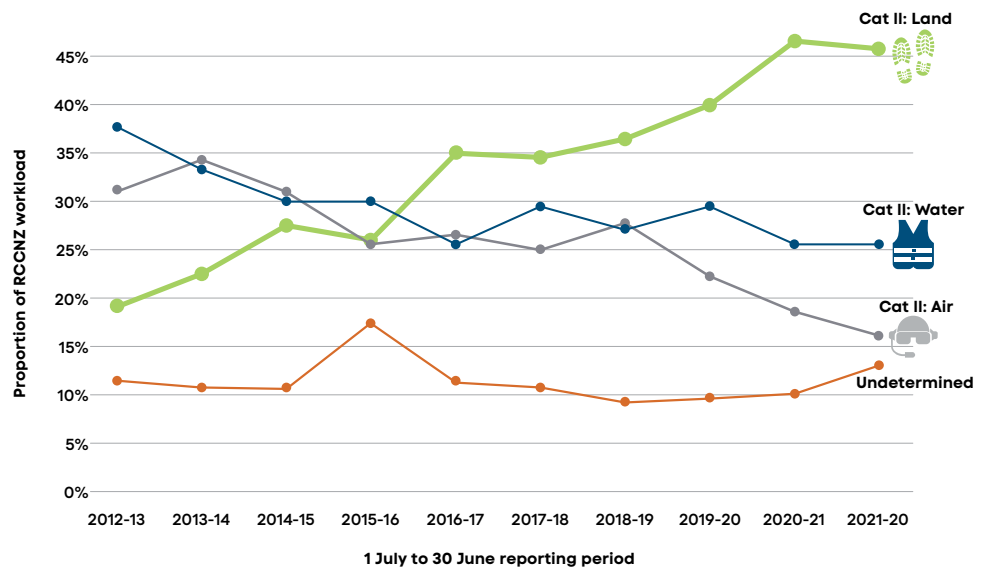
# More Category II land incidents

Over the last decade, the proportion of land-based incidents that Rescue Coordination Centre NZ has managed (Category II incidents) has risen from just 19 percent, to 45 percent of their total workload.

Whilst Category I (NZ Police coordinated) land incidents have remained fairly consistent, at around 1000 per year, Category II land incidents have more than tripled from 147 to 511.

This trend is largely caused by an increase in beacons being carried and activated on land.

## Cat II Land incidents growth



## Farewell Rhett



**Rhett Emery has traversed a range of work areas during his seven years with the NZSAR Secretariat and is looking forward to traversing more mountain ranges in his retirement.**

**Rhett joined the** Secretariat in August 2015. Previously he'd spent 15 years as a secondary teacher, 10 years working at the NZ Qualifications Authority and five more managing the training and assessment programmes for doctors at the Royal NZ College of General Practitioners. With this training and assessment background, his first task was to review the delivery of the SAR training programme, ultimately leading to a change to the funding mechanism. Now NZSAR can directly manage the outcomes of over \$1.3 million worth of annual SAR training budget.

As the Secretariat grew, Rhett was able to diversify his involvement – including supporting Safer Walking, coordinating the SAR Coordinators annual workshop and projects such as developing NZ's SAR Guidelines.

Organising the NZSAR Awards was an annual highlight, especially calling recipients to advise them of their award. The 2019 Awards were particularly memorable as COVID-19 meant these were delivered in special presentations around the country – “a logistical challenge, but allowed more local people to attend and support award recipients.”

Another key project was his work in lessons management, particularly with SAR Exercises. “We would get SAREX reports, but the usefulness was hit and miss,” he recalls. “We were able to create a framework with consistent SAREX objectives, report templates and trained evaluators, which meant we could better assess the sector's capability and more easily identify options for improvement.”

With retirement ahead, Rhett reflects that the Secretariat has been a great place to work. But what he enjoyed the most was connecting with the people who make this sector work, at exercises and workshops. “The commitment and dedication of everyone involved was magnificent. It is a really positive and supportive environment, which was a pleasure to work in.”

Finally, with a wry grin, Rhett explained his two main retirement goals to us. Spend more time outdoors fishing and in the mountains, and “hopefully avoid ever being the subject of a search and rescue operation!”



## Mass rescue expertise from overseas

Andy Greig recently attended the International Mass Rescue Conference and came home with some insights for the upcoming Nationally Significant SAREX series in New Zealand.

**Learning from international** lessons and best practice is an important enabler for the NZSAR Council's goal of a robust and integrated SAR system. This year, attending the International Mass Rescue Conference in Gothenburg, Sweden was of particular relevance, with planning for New Zealand's own Nationally Significant SAREX series well underway.

Andy Greig, NZSAR Principal Advisor, attended the conference, which is organised by the International Maritime Rescue Federation and hosted by the Swedish Sea Rescue Society.

The environmental context was maritime, often set in the Mediterranean, involving the ship industry and also illegal migration incidents. In 2021, just over 6,000 people were confirmed to have perished during those migration incidents, which gives a sense of scale of mass rescue in the region.

Some key themes emerged from the Mediterranean presentations: the importance of strategic pre-planning, ongoing relationship building with the cruise industry, and mental welfare support for rescuers.

Discussions around pre-plans involved identifying and enhancing national locations which can function as reception centers: sized for large numbers of people, with helicopter access, good communications, 24-hour access and medical triage available.

Several presentations addressed the mental health of the rescuers. Preventative programmes Trauma Risk Management and Sustaining Resilience at Work were covered by a delegate from the United Kingdom's Royal National Lifeboat Institution (an entity comparable in scope to our national Water Safety, Coastguard and Surf Life Saving organisations combined).

Research was presented about post rescue interventions including psychological first aid for rescuers, which the researchers say reduces the development of post-traumatic stress disorder symptoms. Experts recommended higher priority and more comprehensive support, both as a moral issue and to reduce the longer-term social cost of mental illness in the search and rescue sector.

The conference was an excellent information gathering and relationship building activity which will feed directly into the success of New Zealand's Nationally Significant SAREX series, currently being planned for 2023 and 2024.

### TOP

Tactical mass rescue exercise in progress: two vessels have collided, one has sunk and one is badly listing. Courtesy Andrew Greig



## New beacon and SENDs guideline available

**The NZSAR Beacons and Satellite Emergency Notification Devices Guideline aims to support suppliers, retailers, hire agencies and all end users of beacons and SENDs.**

**The aim is** to get everyone on the same page, with an authoritative statement which addresses key issues facing the New Zealand SAR system regarding emergency location technologies.

The international Cospas-Sarsat system provides a world-wide distress beacon system, enabled through standards and legislation. Meanwhile, the commercial sector has organically developed a range of satellite emergency notification devices (SENDs). Although many of these have functions for use in an emergency, they are not subject to any comparable standardisation or legislative frameworks. The public, in general, regards these two technologies as one and the same. But in the SAR sector, we know there are significant differences, and the guideline aims to make these clearer for everyone involved.

The Guideline provides information to support users and suppliers of both beacons and SENDs. This includes the responsibilities of hirers and employers when supplying beacons or SENDs, and for event organisers supplying these to participants.

The range of communication and SENDs available is beginning to grow exponentially, with some technologies (such as cellular capable wrist-watches) claiming to offer the user a way to contact emergency services. The guideline provides a starting point to support the public (and industry) on selecting and using the most appropriate form of emergency device. Likewise, better public education will help end-users to be properly informed about what each device can and cannot do.

Although the rapid growth of beacons and SENDs provides the opportunity for more people to be able to call for help when they really need it, there has been a corresponding increase of inadvertent activations. These place an increasing strain on the SAR system, especially the Rescue Coordination Centre New Zealand. In turn, these strains can bring increased risk to SAR personnel and the success of genuine operations amongst the many false alarms. The public-facing part of the guideline aims to reduce the main causes of false activations through education.

Ongoing liaison is happening through the entire sector involved with beacons and SENDs, to push the messages and the guideline out to those who need to know it.

Whether retail staff receiving training to better inform customers, or end-users being able to find the right information, everyone will benefit from an authoritative statement from the SAR sector.

The Beacons and SEND Guideline is available for download from [nzsar.govt.nz/governance/governance-documents/policies/](https://nzsar.govt.nz/governance/governance-documents/policies/)



# Public knowledge and carriage of distress beacons

Research to benchmark the NZSAR Secretariat's work in support of distress beacons.

**SAR statistics suggest** large proportions of the public don't take a beacon when away from the urban environment, despite their availability and usefulness.

Alongside other beacon initiatives such as the NZSAR Beacons and SEND Guideline, the NZSAR Secretariat is working to improve public awareness of beacons, and measure change in behaviours over time.

A digital marketing campaign was launched in late 2020 with intensive advertising running over the two subsequent summer seasons.

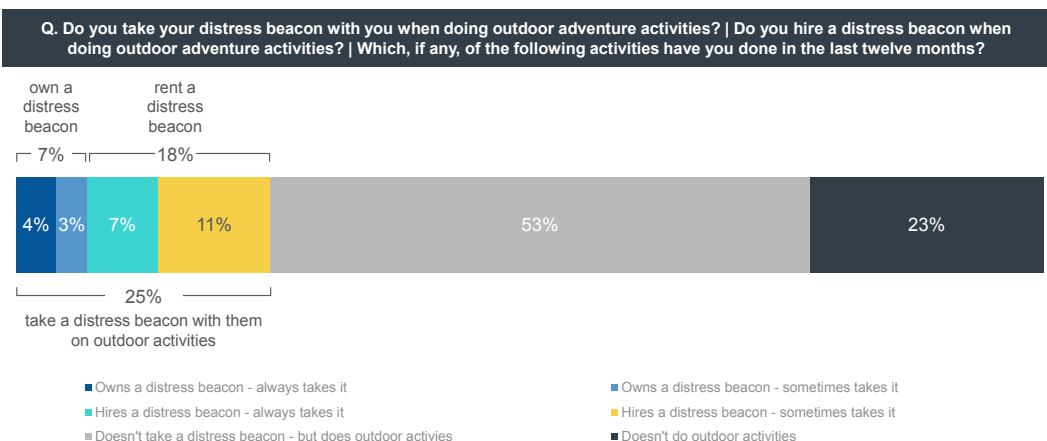
A reference group, composed of staff from the NZSAR Secretariat, Department of Conservation, NZ Mountain Safety Council, LandSAR, Police and Maritime NZ worked with ad agency Hemisphere on the campaign. As well as paid search result listings on Google, a series of four short videos were featured on Facebook, Stuff.co.nz and NZ Herald. In conjunction, a suite of seven still ads were placed across social media and tramping apps, as well as on weather and retailer websites.

Altogether, beacon ads were displayed over 12 million times last summer, with nearly 800,000 completed video views, and all advertising metrics improved on the first years' campaign.



An example of the digital ads running this summer.

**A quarter of New Zealanders take a distress beacon with them on outdoor activities. However, just over half don't despite taking part in outdoor activities.**



The full details of the distress beacons knowledge, ownership, and usage and digital marketing campaign evaluation is available on the NZSAR Website: [nzsar.govt.nz/sar-system-support/sar-research/](https://nzsar.govt.nz/sar-system-support/sar-research/)

The NZSAR Secretariat commissioned a quantitative survey by Kantar Public (formerly Colmar Brunton). 878 New Zealanders were interviewed, and asked questions from three key areas: Do people know what distress beacons are, and are they using them? How effective has the distress beacons digital marketing campaign been?

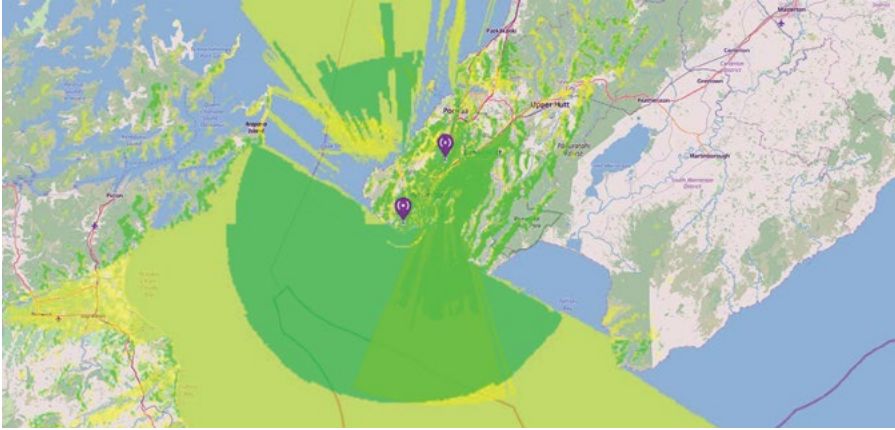
The full results are available on the NZSAR website, but a few key findings are of immediate interest to the SAR sector. A quarter of the survey respondents take a beacon on their outdoor activities, but over half do not, despite knowing what a beacon is. The remaining 24 percent don't know what a beacon is.

Among many insights, the survey explored the thinking of those

who choose not to take a beacon in certain situations, despite having one available. Questions also covered public understanding and action regarding beacon registration with the Rescue Coordination Centre NZ. Finally, valuable feedback was recorded on whether the ads and videos in the marketing campaign achieved the intended actions or changes in behavior.

This feedback has been incorporated into this year's beacons marketing campaign, which launched in November. Filmed at Red Rocks on Wellington's South Coast, the campaign features volunteers from Wellington LandSAR.

# Major upgrade to Wellington maritime radio coverage



## Coastguard Central Region and Amateur Radio Emergency Communications work together to vastly improve coverage in the Harbour and in Cook Strait.

**Ringed by the city**, and as the gateway to the South Island, our capital has a very busy harbour. There are windsurfers, jet skis, recreational boaties, commercial fishing fleets, five yacht clubs, interisland ferries and ocean-going cargo vessels, all voyaging out into the region's notoriously changeable weather. It is a rather dynamic body of water to patrol.

Geoff Layton has volunteered for Coastguard Wellington for nearly 50 years. "There wasn't a radio network back in the day, but over time various repeaters were installed to improve coverage," he recalls. Over the years, finding theoretically suitable locations which were also practically suitable with landowner permission, access and funding has been difficult. The result is that coverage in the area has been less than desirable for quite some time.

The Wellington Coastguard had used a VHF repeater which was owned by the yacht clubs but it was less than ideal. "They race in the centre of the harbour, and their repeater is situated well for that. But at our base, and many other places we need to access, there's barely any comms at all," says Geoff.

Similarly, the entire south coast to Sinclair Head and beyond remained a VHF blind spot, especially in the inshore area used by divers and small craft. This exposed stretch of water leads to Cook Strait and is subject to wild weather and sea conditions. For decades, sailors and Coastguard volunteers in the area would be out of radio communication for hours. Although there is some cellphone coverage, the severe limitations of that technology for safety and rescue purposes are well understood. This was a significant safety risk which has been known for some time.

Building on relationships formed through the NZSAR Consultative Committee, Ian Hutchings from Amateur Radio Emergency

Communications (AREC) and Lesley Sliker, Central Region Manager for Coastguard NZ were able to lead a project to solve the problem.

"Ian and his AREC team of four had the unique combination of landowner contacts, technical expertise and passion to complete the project," says Lesley. "We were able to secure the funding and ensure the system met the specific needs."

The AREC team looked for sites that gave both inshore and wide area coverage and were able to utilise existing radio sites at Newlands and Te Kopahou. With new maritime repeaters at these sites, and a link system, the harbour, South Coast and Cook Strait now have great coverage. This project was only possible with equipment and funding from Coastguard, support from the Harbourmaster, site access from Wellington City Council and Kiwirail, and radio expertise from the AREC team.

The coverage will allow direct communications from vessels on search activities to both Coastguard HQ and the Police SAR base. A future addition will be the addition of remote access from the 24/7 Coastguard base at Auckland.

Carrying two forms of waterproof communication is a core element of the Boating Safety Code. "Now we have excellent VHF coverage, boaties will have more faith in their radios. It will also keep our volunteers safer and enable them to save more lives at sea," says Lesley.

"We [in the SAR sector] know we need to be working better together at every level. This is a perfect example of two SAR organisations collaborating to make a real difference to safety at sea, through the passion and expertise of our members."

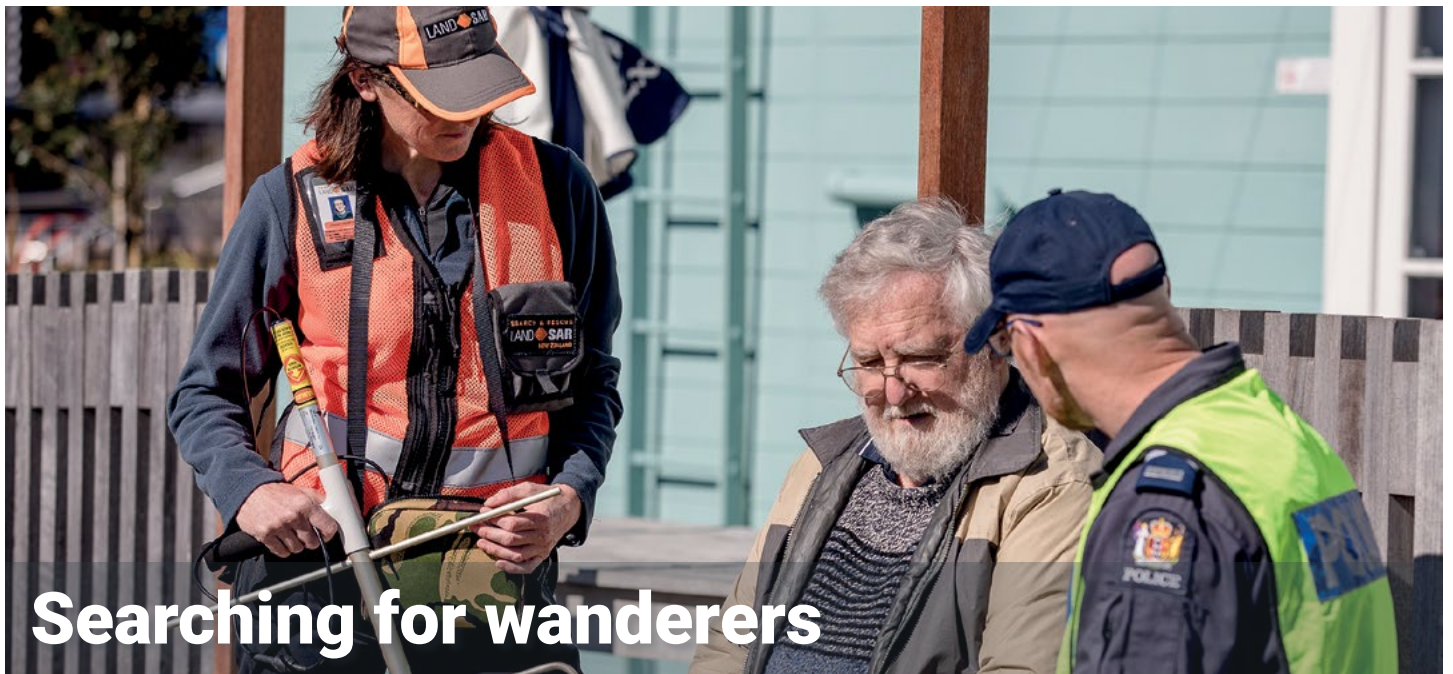
[View the Boating Safety Code at saferboating.org.nz](https://saferboating.org.nz)

TOP LEFT

Combined coverage map of the new system. Courtesy Ian Hutchings

TOP RIGHT

Installing the Newlands repeater. Courtesy Ian Hutchings



# Searching for wanderers

**The number of New Zealanders with a cognitive impairment is forecast to treble by 2050 – meaning the SAR sector can expect a significant increase in searches for those with cognitive impairment who go missing.**

**But it is** not just a future problem. Last year, 23 percent of all Police-led search and rescue operations on land involved lost or missing subjects with cognitive impairments.

Since 2017, LandSAR has been providing national coordination for the Safer Walking Framework, liaising with stakeholder agencies to improve outcomes for those people at risk. One of the key initiatives is public education, through the SaferWalking.nz website.

“We’re providing a suite of strategies, ideas and technologies which can be adapted for each person’s situation,” says Liz Henderson, the National WanderSearch Coordinator for LandSAR. “The aim is that people can retain a degree of independence, and access the health benefits of walking, whilst mitigating the risks of becoming disoriented and lost.”

A key resource is the Safer Walking Profile. Similar to leaving intentions with a trusted person before heading to the mountains or out in the boat, the profile confidentially records key information about the person at risk, their memories, favourite places and any other helpful data. “All this information can be gained from family and caregivers, but when the person wanders off in the middle of the night, the profile can help speed up the initial part of the information gathering process,” explains Liz. “This especially helps when there is high turnover of caregiver staff.”

One of the specialised technologies is the WanderSearch system. The devices are small radio transmitters, encased within a pendant, which a person can wear, that can be located by trained personnel with special receivers. Altogether, there are about 1000 pendants issued by 33 groups across Aotearoa; 22 LandSAR groups, six Alzheimer’s organisations and seven Trusts. However there are an estimated 6500 people who would currently benefit from a device; a sector of society which is forecast to double in size by 2030.

Effective search operations for wanderers with a cognitive impairment requires a knowledge of Lost Person Behaviour. This provides tailored statistical guidance for higher probability search areas and

## Learn more about searching for wanderers

SaferWalking.nz has a range of resources, including the Safer Walking Profile form and WanderSearch information.

LandSAR has produced short YouTube videos to help responders approach a person with autism or dementia who may have got lost. <https://bit.ly/YouTubeWanderers>

Resources for Lost Person Behaviour include the book *Lost Person Behaviour* by Robert J. Koester, the *Lost Person Behaviour* app for Android and iPhone, plus the *LandSAR Field Guide*.

patterns, alongside practical tips on how to deal with people when they are found. This is a key part of LandSAR field training, but the knowledge comes in handy for other parts of the SAR sector.

In 2021, a four-day SAR operation for a man with dementia in Northland involved coastal searches by Surf lifeguards and Coastguard rescue vessels, as well as urban and bush searching by LandSAR teams, Fire and Emergency NZ and local helicopter operators.

“Often a person with dementia will go to a familiar area, or to something which they like,” says Liz. “In New Zealand, this is often the coastline and there is a growing need for on-water search teams. Plus, with the forecast increase in dementia, there may be more experienced boaties and sailors who will start to become forgetful or disoriented out on the water. Having a working knowledge of the techniques and considerations when searching for people with cognitive impairment is helpful for everyone in the SAR sector.”

Dementia currently represents the largest proportion of searches for individuals at risk due to cognitive impairment. But there are a wide range of other situations such as people rehabilitating from a stroke or a traumatic brain injury. Other conditions could include autism and some intellectual disabilities.

“We encourage people to tell their family and friends about SaferWalking.nz, so that as many of those people who could benefit from the framework are aware of it. Also we want to remind everyone in the SAR sector to be aware of the techniques, tools and considerations that come with searching for wanderers.”

### TOP

WanderSearch is one technology which can be used to find people who go missing. Courtesy LandSAR



# The evolution of AREC

**Hard work and NZSAR investment is transforming AREC into an integrated organisation, with modern governance and systems.**

**When Don Robertson** stepped up as National Director of Amateur Radio Emergency Communications in 2019, the whole organisation was voluntary from members to the leadership roles. “AREC had evolved relatively organically over the years, but after a while in the role, I realised that we needed a boost in resources and professional systems to keep AREC delivering as the SAR sector grew in size and complexity.”

A huge amount of voluntary work had gone into AREC’s systems over the years, but some systems were becoming outdated, others had limited documentation and gaps were appearing as legislation changed. He started work on a business case, to provide for a small staff who could back-fill the gaps and help the organisation come up to speed with its governance, systems and procedures.

AREC signed a Joint Service Level Agreement with Police, Maritime NZ and NZSAR, effective 1st July 2020, and from that moment, a small professional staff set about realising the business case. Don became the full-time CEO, leading a part-time staff comprising an Administrator, Training & Project Coordinator, Health & Safety Officer, Treasurer and a number of national functional specialists. Together they support approximately 350 volunteer members, from 40 AREC groups across New Zealand.

Going from the top down, the project started with establishing and improving governance documents. Touring the country, a series of weekend-long governance training courses were delivered to around 60 people in leadership positions. “After COVID-19 delayed the launch in 2020, we began rolling out the training in the latter half of 2021,” says Don. “Unfortunately, the following COVID-19 resurgence slowed things down. Many of our members are from the more senior part of society, so we needed to be extra cautious about the disease risk from in-person events.” Building on governance training, specific courses for leadership in voluntary organisations are now being planned.

Service delivery was next on the list: building competency frameworks, identifying training gaps and implementing digital membership and learning systems.

“When I first started, it was a little challenging to know who exactly our members were. We ran a ‘request for proposals’ process and selected the Friendly Manager software from a Tauranga company.” The system allows for comprehensive member communications, with direct emails, invites to training and events. “Members can respond directly from the email, which keeps it as simple as possible for them.”

Integration was key with software systems. The Bracken learning management system (also from a New Zealand company) is home to the e-learning modules AREC has developed, and feeds information on course results and competencies directly into the membership software.

Getting all AREC’s members into the system has been a challenge, but they are supporting those who are less savvy with IT systems to get set up.

“Now that we know better who our members are and what competencies they hold, we’re in a much better place to plan how we can build teams for any given SAR operation, as well as make sustainable call-out rosters and training programmes. Plus, it enables better record keeping which in turn means easier reporting, via our partners, to systems like NZSAR’s SARdonyx database.”

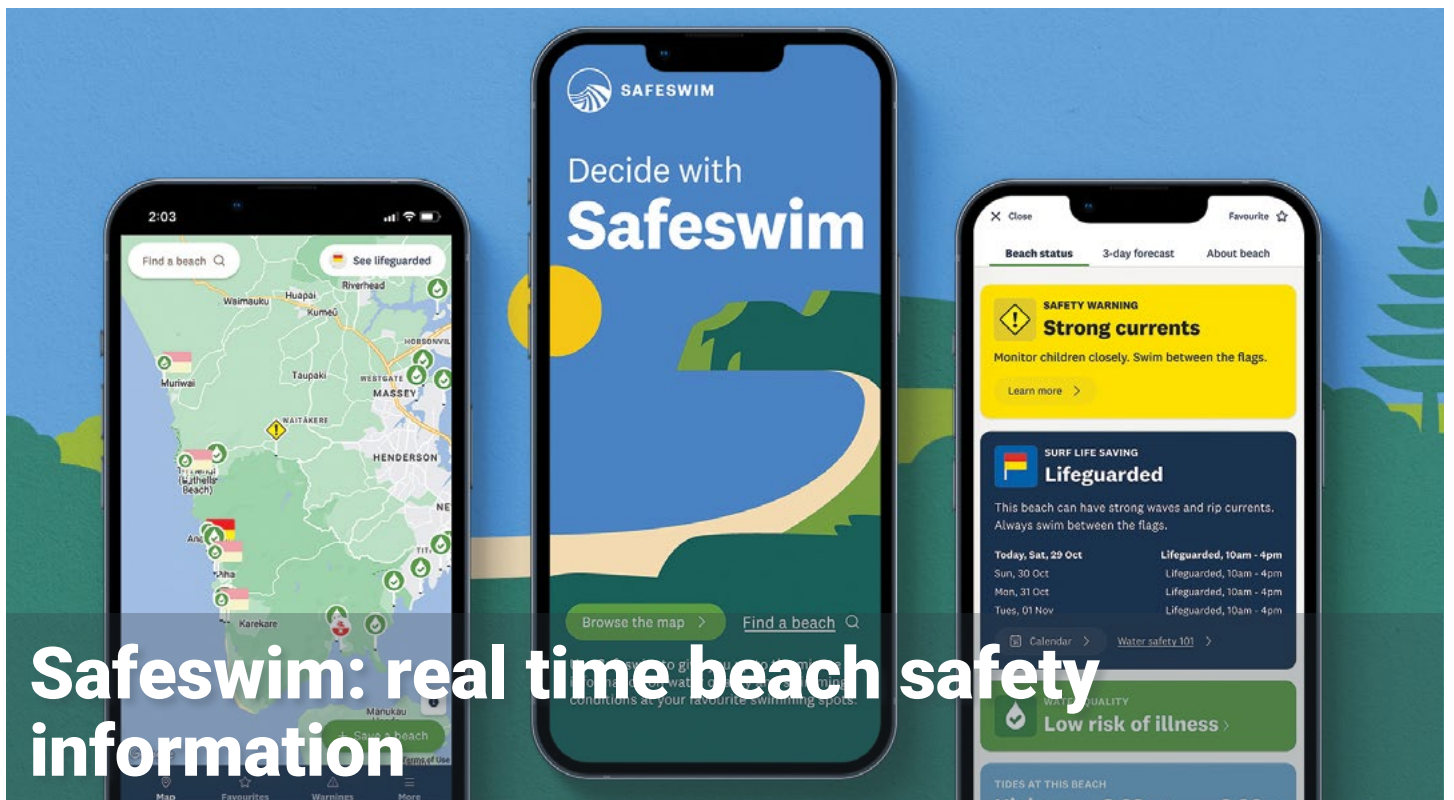
A new project for an AREC mobile app intends to enable simpler callout and activity data collection, easing the administrative burden on the volunteers. Likewise, a transition to Xero accounting software has enabled better accountability for the increased funding, and ease of financial management.

Now with help from funding and staff resources, AREC is building on the legacy of the many volunteers to ensure the organisation keeps pace in a dynamic SAR sector.

**AREC celebrates nine decades of service: 1932-2022**

NZSAR congratulates AREC on 90 years of service to emergency communications in New Zealand.

TOP  
AREC Governance training in Otago, October 2021. Courtesy Lindsey Ross



# Safeswim: real time beach safety information

Since its launch nearly five years ago, the Safeswim website has provided thousands of swimmers with comprehensive water safety information. New developments are now in the pipeline.

**The Safeswim website** was developed by Tāmaki Makaurau/Auckland Council to communicate water quality and safety information to beach goers.

Auckland Council invited Surf Life Saving Northern Region to partner in the project, which launched for the summer of 2017-18. Adam Wooler was the Operations Manager at the time. “There was a reasonable amount of safety information available to the public, but it was in several places, and some key information was missing,” says Adam. “But through Safeswim, with its backing from local government, we saw the opportunity to collect it all under one brand and one website.”

As Safeswim developed, they continued to liaise with councils, communities, iwi and other government organisations such as NIWA and MetService to bring a comprehensive set of data to the site.

Each swimming location displays basic site information and whether the beach is currently patrolled. A site hazard analysis is presented through international standard warning symbols. Information on rāhui / temporary restrictions and pollution events can also be displayed.

The site collates meteorological forecasts such as tides, weather, wind, and water temperature. Water quality is predicted at certain sites, using models underpinned by targeted water sampling and historical water quality monitoring results. Altogether, this information allows the public to make better decisions when planning their visit.

And finally, the provision of real time water quality and swimming conditions allows the public to make an informed decision on whether it’s currently safe to swim at a specific beach or if it would be better to head elsewhere.

When conditions change, Surf Lifeguard Patrol Captains can send updates to the site in real time, using a bespoke ‘Patrol App’. Updates

range from convenience issues like hot sand, high winds, and crowding, to safety warnings for hazardous surf, rips or dangerous marine animals, such as sharks. Taking down the red/yellow flags at the end of a patrol or raising a red flag because conditions have become too dangerous to swim are also immediately reflected online.

In January 2022, a NEMA tsunami warning was given for the whole east coast of New Zealand, and through SurfCom, the Surf Life Saving NZ national operations centre, beach closures could be instantly communicated to the public. The Patrol App is integrated with the patrol captain’s daily log, making it a seamless part of each shift’s routine.

As the scope of the project grew, Surf Life Saving NZ joined as a partner. Adam, now Surf Life Saving NZ’s Special Projects Manager, says there are many new improvements and developments in the pipeline due to collaboration with project partners. “We’re working with the Universities of Auckland and Plymouth in the UK as well as NIWA and MetOcean to create a beach safety forecast, combining rip, current, swell, wave and wind forecasts.”

Elsewhere in the Safeswim partnership, Drowning Prevention Auckland and Water Safety New Zealand are working on hazard analysis for commonly used inland swimming locations, to be shown on the website.

Work is ongoing to reinforce the expanded coverage of the tool beyond its Tāmaki Makaurau origins. Plus, with a Safeswim app due to launch early 2023, it is well on its way to achieve the vision to be the trusted and valued national source of information for water quality and public water safety.

Visit [safeswim.org.nz](https://safeswim.org.nz) to explore the website.

# Entries welcomed for NZ Search and Rescue Awards

**Nominations for the 2022 NZ Search and Rescue Awards are open until 31 January 2023.**

Since 1999, the NZSAR Awards have acknowledged outstanding achievements by individuals, groups and organisations throughout the New Zealand Search and Rescue Region.

The nomination process is coordinated by Tania Seward, NZSAR Senior Advisor Communications and Prevention. "Every year I'm blown away by the calibre of nominations we get in," she says. "It's actually quite emotional reading about volunteers who have headed into the mountains at midnight, or helicopters operating towards the limits of the machine, or the reaction of the person who was rescued from a sinking boat."

Achievements are recognised across two categories: operational activity and support activity.

The operational category is open to SAR operations that took place between 1 January and 31 December 2022 and were coordinated by either Police or the Rescue Coordination Centre New Zealand.

Last year, the search and rescue sector responded to over 2,800 incidents. Each year, there are around 15 to 20 nominations in the operational category, generally representing the most challenging or technical operations that demanded the very best from the people involved.

"The standard of nominations makes the job of the selection panel very difficult indeed," says Tania.

The support category is open to individuals, groups or initiatives which have made a significant contribution to search and rescue in New Zealand.

"We're looking at the impact that has been made on the search and rescue sector, whether through exemplary technical skills, transformational leadership or a programme that saves lives. It doesn't matter whether it is over years or decades, it is the impact that counts."

"If you're unsure if you should write a nomination, we encourage you to go ahead and put one in."

The official ceremony is a fitting way to recognise and celebrate the efforts of those who receive awards, and at the same time, promote the work of the entire sector to the public of New Zealand.

"We want to continue to tell the country what an important role the sector plays in society. Seeing the NZSAR Awards on the TV, online or in a newspaper could be just the extra nudge that someone needs to donate money to the sector, or finally apply to volunteer and contribute themselves."

Entries for the 2022 NZSAR Awards close on 31 January 2023, and the award ceremony will take place in Wellington in May.



## Top tips for NZSAR Award nominations

### Operational nominations:

- Facts and figures are useful: What was the temperature, wind speed, or altitude at the time of the rescue?
- Make sure you've listed all the agencies involved in the rescue.
- Focus on the action/s which had the most impact on how the rescue unfolded.
- Photographs which help illustrate the facts are helpful, but not essential.

### Support nominations:

- A short biography covering the person or organisation's history in SAR can be useful
- If the person's activities, or the community initiative, affect more than one organisation, consider a joint nomination.
- Clearly illustrate the impact of the person or organisation on the local community, organisation, or wider SAR sector.

### Next steps

- The nomination form, NZSAR Awards policy and details of previous winners can be found on the NZSAR website: [nzsar.govt.nz/awards](https://nzsar.govt.nz/awards)
- Completed nominations should be sent to [info@nzsar.govt.nz](mailto:info@nzsar.govt.nz) or posted to the NZSAR Secretariat, PO Box 3175, Wellington 6011.
- Early nominations are welcomed and encouraged. NZSAR is happy to assist with writing nominations.

TOP

His Excellency Dr Richard Davies and the Hon Michael Wood with the 2021 NZSAR Award recipients at Government House.



# 10 questions with ...

## Phoebe Fang

**A mishap in the mountains led to Phoebe Fang volunteering for LandSAR, which in turn led to paid employment in emergency management and public health.**

### **How did you first learn about LandSAR?**

I had been tramping for a while when I attended a Bushcraft course run by the Taranaki Alpine Club. Both instructors were LandSAR volunteers, and whilst we learned about being lost or injured, they discussed lost person behaviour and how SAR works. It sounded really interesting, and planted the seed for me to join up.

### **Can you tell us about your first-hand experience of being rescued?**

It was St Patrick's Day 2018. I was shortly to move to Wellington and hadn't yet climbed the western side of Taranaki Mouna. Everyone else was in town partying, but I was determined to go, and went alone. After a successful ascent, I was hurrying down and tripped. I was struck on the head by falling rocks, and with blood all over the place, it was lucky I could call 111. I was grateful for the bushcraft course which taught me to keep warm in a pack liner until the helicopter arrived. Afterwards, I went and bought a beacon as soon as I could.

### **How did that lead to volunteering for SAR?**

After moving to Wellington, it made sense to give something back, because I had the interest and the time to commit to the role.

### **Can you tell me about a memorable SAR job??**

In Eastbourne Regional Park, there's so many trap lines and unofficial tracks that people often get lost there. It was a still night, and conditions were textbook for doing a sound and light line search. The missing party walked out by themselves, but it was really satisfying applying the techniques we'd learnt on courses to real-world searches.

### **How did your involvement progress to Incident Management Team (IMT) roles?**

I wanted to know more about the bigger picture and how a SAR operation is managed, so I went along to IMT training to learn. I also wanted to understand more about the psychology of lost person behavior, which had started my interest back in Taranaki. Then in late 2021 I broke my ankle, so it made sense to transition to IMT to keep contributing. I guess I would have moved to IMT eventually; the ankle just sped up

the process a little! I particularly enjoy the Geographic Information Systems work and writing taskings in a fast paced environment.

### **What is your professional background?**

I was a kindy teacher, but it wasn't really a job you could do remotely during the pandemic. So with my free time in lockdown, I was able to volunteer at the Wellington Regional Emergency Management Office (WREMO). The work was structured with the Coordinated Incident Management System (CIMS), just like a SAR IMT, so I could learn the specifics of the new role pretty quickly.

### **How did that lead on to paid employment?**

I decided to go back to university to study Geology and Data Science, and when looking for summer work, saw that my SAR and WREMO colleagues had shared a job opportunity in COVID-19 response management at the Hutt Valley District Health Board. The good references and relevant experience allowed me to get the job.

### **What is the best part about being involved in SAR?**

It's the people! The Wellington group is a really diverse, super talented and proactive team. There's a fantastic community spirit, and everyone looks out for one another.

### **What challenges have you faced during your volunteering?**

The people are so awesome that I have a bit of 'imposter syndrome' like I'm not worthy of being in the team. But the group is so supportive, and I know that so much of their time and effort has been involved in training me, so there's no reason to think "I'm not good enough, so I won't go out."

### **What is your advice to other people who'd like to be involved in SAR.**

They let me in so you'll be fine! [Laughs]. Give it a go, and take every chance to learn more. Be patient; training and experience comes with time and if you have the commitment to the role you'll get back what you put in.



## Duncan's desk

### Kia ora koutou

Jandals and beach towels now seem to outnumber beanies and jumpers. Could this mean that summer has arrived? Hopefully it's not just a blip.

The last three months of any year are always busy ones for SAR people, teams, and organisations. Equipment is checked and maintained, skills are refreshed through training sessions and exercises, and plans are made to ensure SAR coverage during our busy period. It is also peak SAR exercise season, with SAR teams up and down the country coming together to hone their skills and learn new ones.

We have also been running exercises in partnership with Police and have just concluded the fourth Rauora III Nationally Significant Exercises. Each of these bring together representatives of every agency who would potentially be involved in a mass rescue event, from health agencies to SAR responders to local iwi. It's a great time to test knowledge, make new connections and rekindle old ones.

It's been great to see so many prevention-related initiatives going live over the last couple of months, and I'm hopeful that we'll see the fruits of that labour over the coming summer.

Safer Boating Week was once again held in October and started off with a human chain on an Auckland beach to remind everyone of 'Kia mataara' – know the ways of the water before you let go of the land. Closer to shore, there have been updates to the Safeswim platform (see story page 13) and the NZ Mountain Safety Council's Plan My Walk app ([planmywalk.nz](http://planmywalk.nz)), which aim to help people make good decisions before they leave home.

For those active on social media, you might have seen a series of ads encouraging you to hire a beacon before you head out on a hunting or tramping trip (see story page nine). This is the third summer in a row we have run a campaign like this, but this year our focus has switched to encouraging people to hire beacons. Hiring a beacon is an option that many people are unaware of, and has a much lower upfront cost than buying, which we felt was an important consideration in the current economic environment.

Inspector Craig Rendel (Police) and I recently returned from attending the annual meeting of the Australia National SAR Council (NATSAR). Our cousins across the ditch have some striking similarities and differences in how their SAR sector is organised, equipped, and funded. They were highly complimentary of the amount of data we have available through SARdonyx, and how we're able to use it to identify long term trends in things like beacon usage, helicopter time and the average length of searches, among others. On the other hand, we were very impressed by the quantity and quality of Australian SAR capabilities.

Our Senior Advisor Matt Wheble recently spent some time in Reykjavik, Iceland, attending the ICE-SAR conference, along with a contingent from LandSAR. He's come back with valuable knowledge about the use of drones, mapping systems, stress management, and how to manage SAR operations in volcanic areas, as well as how intelligence can be used to support a search.

As you would have read on page six, Rhett Emery is retiring from the NZSAR Secretariat at the end of this year. He is a familiar face to many in the SAR sector, having run Rauora exercises, organised the NZSAR Awards and managed our National SAR Support Programme. Rhett - you've been great to work with and you will be missed from our small team – have a bloody good retirement.

Rodney Bracefield from the Rescue Coordination Centre NZ is also retiring at the end of this year. Rodney's contribution to SAR in New Zealand has been immense, and his technical knowledge of all things distress beacons is vast. Thank you, Rodney, for your thoughtful advice and dedication to search and rescue across our vast search and rescue region over many, many years. I wish you and Viv a very long and happy retirement.

Stay safe,  
Duncan Ferner  
NZSAR Secretariat Director



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The launch of Safer Boating Week in Auckland, October 2022.

[www.adventuresmart.nz](http://www.adventuresmart.nz)

[www.beacons.org.nz](http://www.beacons.org.nz)

[www.nzsar.govt.nz](http://www.nzsar.govt.nz)