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Approval and naming convention

This is the edition of the Training Framework for New Zealand Search and Rescue.

This edition will come into effect with the endorsement of SAR Training Governance Group.

Version control

Minor edits or changes to this Framework are the responsibility of the Programme Advisory Committee.

Any changes that have systemic impacts or implications will require the approval of SAR Training Governance Group.

The Training Framework shall be reviewed in the second quarter of each calendar year by the Programme Advisory Committee.

This document is uncontrolled if printed or saved. The current version can be found on NZSAR website www.nzsar.govt.nz

Glossary

Terminology and definitions

Terminology and definitions used throughout New Zealand's SAR system will be standardised to the extent possible and be as consistent as possible with usage within search and rescue training context.

The following key terms and definitions are used within this Framework.

Agency

Any entity that contributes to search and rescue activity and is part of the New Zealand search and rescue community.

Search and Rescue Exercise

A Search and Rescue Exercise (SAREX) is an inter-agency training activity.

Search and Rescue Operation

A Search and Rescue Operation (SAROP) is an operation undertaken by a Coordinating Authority to locate and retrieve persons missing or in distress.

The intention of the operation is to save lives, prevent or minimise injuries, and remove persons from situations of peril by locating the persons, providing for initial medical care or other needs, and then delivering them to a place of safety.

SAR Multi-Agency Training

The suite of SAR courses made available by the independent provider contracted to deliver training under the management of NZSAR Secretariat.

SAR personnel

Any person who contributes to search and rescue operations, either activity or by providing support.

Search and rescue region

An area of defined dimensions, associated with a rescue coordination centre, within which search, and rescue services are provided.

Tertiary Education Commission

The Crown Agency responsible for the distribution of funding to support search and rescue training managed by NZSAR Secretariat.

Abbreviations and acronyms

CIMS	Critical Incident Management System
DOC	Department of Conservation
FAA	Federal Aviation Administration
FENZ	Fire Emergency New Zealand
GG	Governance Group
IMT	Incident Management Team
IAMSAR	International Aeronautical and Maritime Search and Rescue
IMTEX	A tabletop exercise designed for an IMT
KPI	Key Performance Indicator
LMS	Learning Management System
NEMA	National Emergency Management Agency
NZ	New Zealand
NZDF	New Zealand Defence Force
NZSRR	New Zealand Search and Rescue Region
PAC	Programme Advisory Committee
PAC SAR	Pacific Search and Rescue Steering Committee
PTE	Private Training Establishment
RCC	Recognition of current competency
RCCNZ	Rescue Coordination Centre New Zealand
SAR	Search and Rescue
SARO	Search and Rescue Officer
SAREX	Search and Rescue Exercise
SAROP	Search and Rescue Operation
SMC	Search and Rescue Mission Coordinator
TEC	Tertiary Education Commission

SAR Training Framework

1. Context

The New Zealand Search and Rescue Council provides strategic leadership and direction to the many organisations that make up New Zealand's Search and Rescue sector. The sector aims to provide effective search and rescue services throughout New Zealand's Search and Rescue Region

SAR training ensures personnel are suitably trained and skilled to provide safe and effective operational capability to meet SAR outcomes, and to have pathways for improving all SAR skills.

This SAR Training Framework (Framework) has been developed to provide strategic guidance for SAR training and to be referenced for training direction. It is intended to promote alignment of learning to meet the needs of individual SAR agencies.

Understanding the training needs, aims, and gaps of all SAR sector agencies will enable a common strategic Framework to be developed and used.

2. Purpose

The Framework will guide and support the wider search and rescue sector to achieve and support training and collaboration and provide direct support to NZSAR Council for managing the investment made into training.

The Framework will:

- Provide agreed sector principles to support an integrated and standardised (where appropriate) approach to learning and development
- Describe the systems and processes required to implement and sustain the Framework operationally, including the responsibilities of relevant governance / management groups.
- Guide NZSAR investment into SAR sector training

The framework will be the core learning framework for the SAR sector, including:

NZSAR Secretariat

Coastguard New Zealand

Surf Life Saving New Zealand

Land Search and Rescue

RCCNZ NZ Police

Amateur Radio Emergency Communications

The Framework will reference and acknowledge other sector agency training e.g., DOC, NEMA, FENZ and NZDF where relevant. Training includes activities designed to address the skills and competencies of individuals, as well as activities targeted at collective (or group) training.

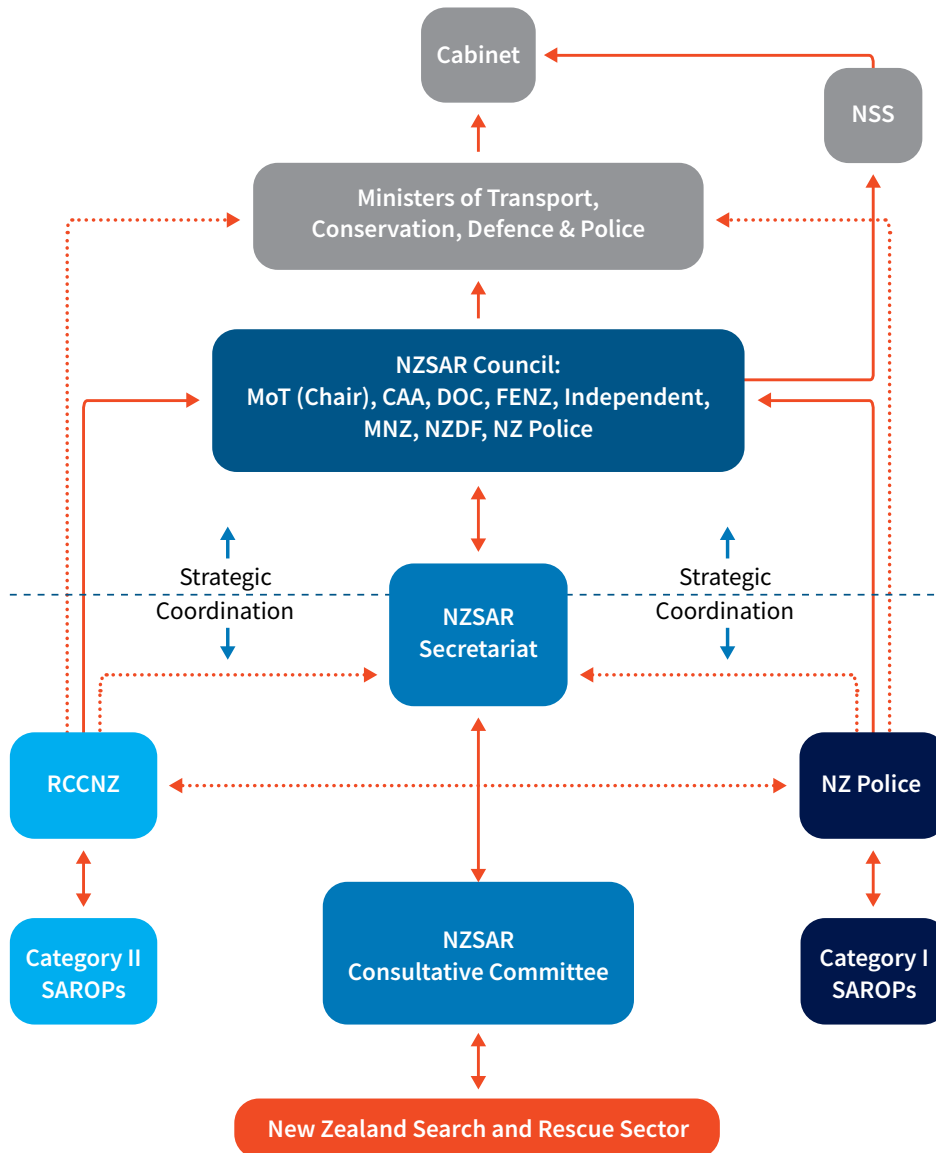
3. SAR Sector – structure and composition

This section provides an overview of the operational framework of SAR and how SAR training fits in.

NZSAR Sector Governance

NSS: National Security System

SAROPs: Search and Rescue Operations



3.1 NZSAR Council

The New Zealand Search and Rescue (NZSAR) Council provides strategic leadership and direction to the many organisations that make up New Zealand's Search and Rescue sector.

The sector aims to provide effective search and rescue services throughout New Zealand's Search and Rescue Region. This shapes SAR training strategy and focus.

Goals

The NZSAR Council seeks to shape and lead the combined efforts of our search and rescue sector by attaining these goals:

- **A robust and integrated SAR system.** We seek a collective, cross sector culture of being 'one SAR body' within an integrated SAR system. 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 within a just culture. 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. We will sustain an inclusive and collaborative environment that enables volunteerism. 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 operating environment and ensure we continue to deliver effective SAR services throughout the New Zealand Search and Rescue Region.
- **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 competently and safely. We will collectively coordinate our standards, training, exercises and documentation. Knowledge will be shared without restriction, and we will learn from each other and our experiences. 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. Many 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. When required we will enable, coordinate, or lead public focused SAR preventative strategies and actions in order to reduce the number and/or the severity of SAR incidents within the New Zealand Search and Rescue Region.

3.2 SAR sector governance

Through the Secretariat, the Council supports a collaborative approach to problem solving and managing sector-based initiatives and programmes of work, including training.

Training governance group structure is covered in the section 8 “Training Governance”.

3.3 Operational framework

The Operational Framework articulates the national framework for overall development, coordination, and improvement of search and rescue services within the New Zealand Search and Rescue Region. SAR training enables the operational framework to achieve goals by supporting the development of capable SAR people.

3.4 Risks

The NZSAR Council maintains a Risk Matrix. At the time this framework was developed, the CC08 NZSAR Risk Matrix identified the following risks and consequences that are relevant to this framework.

Risk	Consequence
<p>SAR Funding</p> <p>The sector experiences funding sufficiency and volatility risks</p>	<ul style="list-style-type: none">· Inadequate funding for part or some of the sector may limit investment in training or equipment and lead to inadequate operational responses.· Volatile funding inhibits long term planning and investment. It also degrades sector effectiveness and efficiency.
<p>Cohesive and effective SAR Training</p> <p>The competence and capability of SAR individuals is dependent on effective training and assessment. SAR training is largely decentralised and varies significantly</p>	<ul style="list-style-type: none">· Training variances can impact on sector collaboration and degrade inter agency and internal cohesion.· Training divergence can lead to incompatible incident management systems, different understanding of language and incompatible expectations, SAR processes and priorities.· These factors can contribute to deficient SAR services, inefficiencies and potentially avoidable loss of life. They can also lead to damage to the reputation of the NZ Search and Rescue community. And harm New Zealand’s international reputation as a safe destination for adventure tourism.

4. Capable SAR people

Training is critical to performance and safety. SAR personnel, who are adequately trained, will be more effective in saving people who are in distress, potential distress, or missing; and they will be able to make sound risk assessments to reduce risks to themselves and people they are rescuing.

All personnel who could be involved in a SAR operation need to undertake relevant SAR training to enable them to adequately perform the role(s) they may be called upon to perform.

The International Civil Aviation Organisation (ICAO) and the International Maritime Organisation (IMO) coordinate, on a global basis, member States' efforts to provide search and rescue services. New Zealand by being Party to the Safety of Life at Sea (SOLAS) Convention, the International Convention on Maritime Search and Rescue, and the Convention on International Civil Aviation, have accepted the obligation to provide aeronautical and maritime SAR coordination services for their territories, territorial seas, and where appropriate, the high seas. Under these obligations RCCNZ is responsible for the establishment of training programmes for their SAR personnel to reach and maintain a high level of competence in the specialised techniques and procedures of search and rescue. Through the provision of joint training and exercises, RCCNZ ensures a high degree of proficiency, in accordance with the IAMSAR manual, for all SAR facilities (SAR partners, aviators and mariners) that take part in coordinated SAROP's with RCCNZ.

Agency specific training is delivered within (or on behalf of) an agency and is focused on SAR related knowledge, skills, and competencies of relevance to the agency's context of operation.

Agencies also deliver technical training to ensure their people have ability to safely and competently operate agency-managed assets, resources, and equipment to facilitate search and rescue operations. This section acknowledges technical areas but focusses on search and rescue specific capability.

SAR multiagency training offers training to develop knowledge, skills and competencies related to search and rescue that are common to all agencies and supports inter-agency capability and SAR incident management.

4.1 Capabilities

A capability framework provides a common language to describe "what good looks like" to help guide future training design and development. Capabilities for the sector have been developed as part of this framework (see the next page).

Capabilities can be used to:

- improve the identification of skills needed now and into the future
- provide a greater capacity for professional development and learning
- provide better career pathways
- allow for cross sector career pathways
- more collaboration across different organisations.

Search and rescue training activity can be broken into three broad areas:

- **Technical:** Specific skills and knowledge that are delivered to meet the needs of an agency's context e.g., outdoor survival, radio operation, seamanship, surf rescue, survival skills.
- **Search and Rescue:** search and rescue skills e.g., search techniques, planning, incident management and SAR management.
- **Non-operational:** support functions e.g., leadership, providing technical advice, committees, finance, and fundraising.

The capabilities below can be used as a blueprint to assess learning needs and focus development activities. There are levels of SAROP activity; technical, execution and management (planning and coordination).

SAR Sector	* Technical	Risk Management	Search and Rescue Operations	Search and Rescue Management	SAR Leadership
Understand SAR structure and the protocols, responsibilities, and partnerships within and across the sector.	Participate safely and effectively within agency's operational context.	Manage psychological and physical risk and impact when undertaking SAR activity.	Plan and execute SAROPs using resources, information, and techniques within context.	Manage SAROPs using systems, structures, and resources to analyse, assess, plan, execute and manage risk.	Lead others by maintaining the motivation and discipline of teams to safely execute search and rescue operations.

For safe and effective search operations, participants need to understand the context and lines of authority that they are operating in. This is not only within their agency or profession, but also to be able to operate together in multi-agency SAROPs.

CIMS is used to organise and manage SAROPs and is the foundational framework that enables agencies to be able to work effectively together.

Agencies are responsible for familiarising their people with their internal systems and structure, the risks associated with their operations and how to execute a safe and efficient SAROP (see Pathways for detail on how this is achieved).

The objective of multi-agency SAR training is to support the development of knowledge and skills so that the sector can work effectively together and so that the technical capability of each agency can be leveraged, by the coordinating authority.

The training also provides leadership development to support an integrated approach to leading teams in a SAROP.

5. SAR sector training

As of June 2022, nearly 11,000 people are involved in the search and rescue sector in New Zealand. Over 90% of these people are volunteers, who come from diverse backgrounds and bring with them a wide range of skills that contribute to the success of an operation. These skills include behavioural and technical.

As noted above, training provides SAR people with a range of skills – some are very SAR specific and not directly transferable. The exceptions to this are first aid, leadership, and training / assessing skills.

Agency pathways are generally role based with a combination of technical and SAR skills and knowledge.

5.1 Purpose

To provide quality training delivery to develop the capability of people involved in SAR operations.

5.2 Responsibilities

This section outlines the responsibilities for training delivery and how quality is managed.

Ideally a quality training system should include:

- **Alignment with overall strategy:** enabling delivery of goals by building people capability.
- **Co-ownership between stakeholders:** being able to collaborate and respond in an agile way to adapt to a rapidly changing environment.
- **Assessment of capability gaps:** taking a deliberate systematic approach to assessment of gaps to identify training and other development needs.
- **Conscious design of learning journeys:** understanding how audiences consume training and designing it in the most effective and efficient way. Courses and development activities should be reviewed when there is a catalyst e.g., changes in legislation, regulation, or the membership of the SAR community.
- **Effective execution:** having support mechanisms in place to sustain training delivery and ensure that delivery is learner centric.
- **Measurement of the impact of training:** using KPI's and other measures to assess training beyond learners' reaction.
- **A blended learning approach:** design and development of interventions that support informal learning after the formal learning event so learning occurs in the right place at the right time.

5.3 Quality control

Quality of content, delivery and systems are the foundation to ensuring training supports the development of capable SAR people. Agencies with control of training must have systems and processes in place to ensure quality training.

5.3.1 Quality of content

The following are principles of managing quality. Content must

- be fit for purpose, reflect established practice
- be informed by subject matter experts and advisory groups
- have an approval process before it is published (Governance group or Sponsor).

Other methods used to ensure quality include development cycles e.g., ADDIE (Analyse, Design, Develop, Implement, Evaluate), SAM (Successive Approximation Model), and moderation of assessment materials.

5.3.2 Quality of delivery

Quality delivery requires the use of tutors who have the experience, knowledge, and skills to create a meaningful adult learner experience.

Providers must have a system for the selection and approval of training personnel (e.g., tutors, moderators, evaluators, assessors) that considers their knowledge and/or experience and their suitability for adult teaching.

Tutors must have knowledge and/or experience beyond the topic they are teaching and be provided with continuing professional development.

5.3.3 Quality systems

Providers must have systems in place to monitor and assure themselves that quality content and delivery occur. Examples of these systems include governance, moderation, faculty peer review, KPI's, review cycles.

The maturity of quality systems varies within agencies; from aspirational and informal to established and highly systematic i.e., LandSAR Training and Coastguard Boating Education (CBE), as registered PTE's have established quality assurance systems which include programme advisory committees.

- Quality systems used within agencies include using subject matter experts to co-create and review content, to ensuring faculty have training and assessment qualifications.
- Training systems, as a minimum, should have rigour around content development and delivery along with good governance to ensure training is addressing learning needs.

The following groups are in place to support quality control of SAR Multi-agency Training:

- The multi-agency governance group – to manage, monitor and provide oversight to multi-agency training inter-organisation relationships and set overall SAR training goals and strategies.
- The multi-agency programme advisory committee – to provide timely and accurate advice to the multi-agency governance group and ensure training meets needs of the search and rescue sector.
- Land SAR Training governance group – to manage, monitor and provide oversight to SAR Land skill acquisition training and set overall SAR Land Training goals and strategies.

5.4 Agency training pathways

5.4.1 RCCNZ

RCCNZ is part of Maritime NZ and has 25 full time equivalent staff. Their Search and Rescue Officers (SAROs) are required to undertake and pass a three-month training course followed by two months of on-the-job training (OJT) to become operationally competent and qualified as a Search and Rescue Mission Coordinator (SMC). SARO's can progress their careers by completing training to become Senior SARO's and Watch Leaders.

Continuation and refresher training occurs throughout the year to further develop staff and ensure currency and competency in the role is maintained. Continuation and refresher training often utilises subject matter experts from other agencies to provide context and depth to the topic.

All SARO and SMC training meets internationally recognised standards as prescribed by the International Maritime Organisation (IMO) and International Civil Aviation Organisation (ICAO) and laid out in the IAMSAR (International Aeronautical and Maritime Search and Rescue) manuals.

RCCNZ uses a blended learning approach and eLearning is hosted on the Maritime NZ LMS Te Waka Ako.

As the coordinating authority, RCCNZ does not access SAR Training formally but does provide subject matter expertise for course development and as tutors.

5.4.2 Police

There are more than 300 sworn Police officers engaged in search and rescue, the majority of whom undertake this as a portfolio within their general duties. This can create a challenge for managing access to SAR training.

The organisation of SAR within Police is at a national, district and area level. Within each Police District, the District Commander appoints a District SAR Manager to administer and supervise SAR.

Police requirements for SAR operational involvement are based on completion of a range of courses:

- **Operational SAR squad members:** completion of the 10-day National SAR Course (held at Dip Flat); selected core training courses (may include LandSAR courses); selected specialist training
- **SAR Incident Controller (Land):** as for squad members, plus: CIMS 4, Manage the Initial Response, and Extended Search Planning
- **SAR Incident Controller (Marine):** as for squad members, plus: CIMS4, Marine SAR Technical, Manage the Marine Response
- **SAR Incident Controller – Extended Search (Land and Marine):** combination of SAR Incident Controller land and marine, plus the 10-day SAR Managers Course.

At a district level SAR competencies and field experience are built up through SAREXs. Any agency specific skill acquisition (technical skill) is completed by mutual arrangement between district coordinator and the agency. For example, courses such as River Crossings and Field Skills are sourced through LandSAR Training. Training records of this activity are kept at a district level, and not in the LMS “My Police”.

Other Police training (which is delivered internally) includes communications, observation techniques, First Aid, search methods, case studies and SAREX’s.

At the time of developing this framework, there is a review of training structure underway, and competency being developed.

5.4.3 Amateur Radio Emergency Communications (AREC)

AREC is a volunteer-based organisation with 350 volunteers and 4 full time equivalent staff. Currently most new recruits will hold at least an amateur radio operators’ licence and begin as an intern. AREC’s membership system does allow for new members to come into the organisation without an amateur radio operators licence, but this does require a higher degree of initial training.

Based on AREC’s competency-based framework, volunteers work through the following pathway: Entrant, Support, Base, Field, Comms Unit, Group Leader, with flexibility to move between levels during their volunteer life cycle.

The skills they need to operate successfully can include knowledge of radio equipment and operating procedures, technical support across radio and other technologies, client structures and systems, good understand of how to work with agencies, and being able to operate in an IMT/EOC under a variety of conditions. Other competency endorsements include: WanderSearch and 4WD.

Competencies/training common across SAR could include radio operation, management tools like SARTrack, CIMS, training for delivery and training for assessment and leadership. Other training like Managing the Initial Response is useful for developing an awareness of operating within the SAR environment at IMT level.

AREC uses a blended learning approach and is developing a competency framework. The LMS they are using is Bracken.

5.4.4 Coastguard

Coastguard is a volunteer-based organisation, with approximately 2000 volunteers and 80 staff.

Most volunteers are crew on rescue vessels (CRVs). The pathway for crew is Recruit, Deckhand, Qualified Crew, Senior Crew, Master of the Vessel. Training for Seamanship, Industry Specific Certification (ISC), marine radio licences, search techniques specific to marine SAR are provided by Coastguard. Volunteer engagement with Multiagency SAR Training includes SAR Leadership (as part of the training programme approved for ISC), training for assessment and training for delivery.

Other pathways include Communications and Aircraft Operations.

Communications pathway is New Entrant, Trainee, Radio Operator, Lead Radio Operator, Senior Radio Operator, Duty Officer. Marine radio licences, marine search and rescue, equipment operation, CIMs, On Scene Command are the responsibility of Coastguard. Multiagency SAR Training includes CIMS 4, Marine SAR Technical and Manage a Marine Response as part of the Duty Officers role.

Aircraft Operations pathway is dependent of whether the person has a pilot's licence, or they have the role of air observer. Oversight to ensure currency of aviation-related certifications is managed by Coastguard.

The CRV crew training programme has been reviewed, redesigned and is available to volunteers who crew Coastguard vessels. Other training methods for crew include intensive "school" weekends where volunteers can finish their training to get ready for a milestone assessment.

A review of the training programmes for Coastguard Aircraft Operations and Communications (radio operations) is currently underway.

Coastguard uses a blended learning approach and the LMS they are using is Cornerstone on Demand.

5.4.5 LandSAR

LandSAR is a volunteer-based organisation with 3200 volunteers and 28 staff.

Most volunteers complete a competency-based pathway based on the following roles: LandSAR Member (Probationary), Field Team Member (Wilderness), Field Team Member (Urban), Field Team Member (Practitioner), Field Team Leader, Administration/MSU Team Member, IMT (Generic).

Land Search and Rescue New Zealand Training Limited, trading as LandSAR Training is a registered Private Training Establishment (PTE).

It is contracted by NZSAR Secretariat to coordinate and deliver a suite of land related search and rescue training courses. Courses include 4 Wheel Drive, Avalanche Awareness, Cave SAR, Canyon SAR, Field Team Leader, Tracking Skills, Navigation, Outdoor Risk Management, Processing Wilderness Clue Sites, Radio Communications, River, and Flood Safety, SARTrack User and Techniques, Sign Cutting and Ageing, Search Techniques, Urban Search, Stretcher Management and Rope Safety, Track and Clue Awareness and Vertical Ropes.

Other agencies can also access any of the training as described in the service level agreement¹.

Courses from Multiagency SAR Training includes: CIMS, On Scene Coordinator, Managing the Initial Response (Land).

Land SAR is focussing on a competency-based assessment model, to identify current competencies and training gaps. Some of the training delivery has been virtual instructor led training using online presentations. LandSAR Training estimate 15% of their volunteers don't have reliable internet and prefer face to face training.

Most of LandSAR competency framework is skill based and not conducive to substantial amounts of on-line learning or assessment. The LMS LandSAR training is using is LMS 365.

¹ 2.2 LandSAR – SLA with NZSAR, NZ Police, Maritime (RCCNZ) of LandSAR competency framework

5.4.6 Surf Life Saving NZ (SLSNZ)

SLSNZ is a volunteer-based organisation with 20,000 volunteers with the primary purpose of being the leading beach and coastal safety, drowning prevention and rescue authority in Aotearoa. Almost 500 volunteers are trained to participate in SAROPs

While search and rescue activity is not the core purpose of SLSNZ, in-house training for search techniques and planning and VHF radio operator's course is provided. This includes river / flood searching, surf/rock rescue, GPS systems, night searches, in conjunction with helicopters for long distance rapid deployments and maritime search patterns and IMT. This training is not mandatory for all volunteers. SLSNZ uses a blended learning model; face to face training, online learning, residential short stay schools, and scenario-based learning.

SLSNZ also facilitate annual "SAR Summits" which are blended development activities which include: reviewing scenarios, new developments, and practising SAR scenarios with other units.

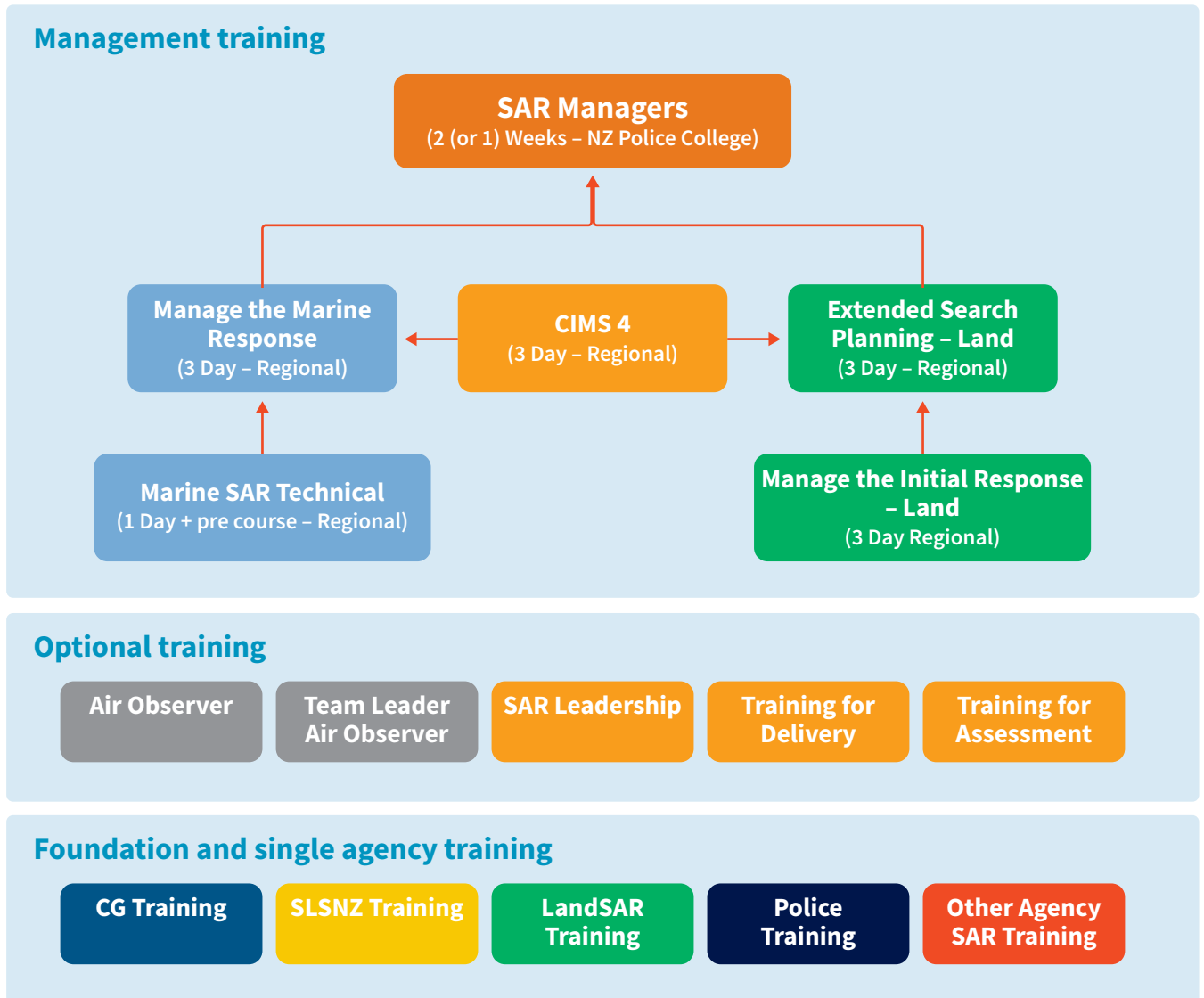
Multiagency SAR Training accessed by volunteers includes CIMS, Marine SAR Technical and Manage a Marine Response. A transition to the LMS, "etrainu", that SLS Australia uses, is underway.

5.5 NZSAR Secretariat managed training

The diagram below represents the training managed by NZSAR Secretariat for the SAR sector – **SAR Multi-agency Training** – and outlines the relationship between these courses and agency-specific training.

SAR Multi-agency Training ensures that there is consistency in how SAR is managed, promotes alignment, inter-agency networks and greater understanding of what and how each agency contributes.

SAR Multi-Agency Training



Foundation and single agency training is managed directly by the individual agencies (as outlined in section 5.4). The next tier of courses (Air Observer and others) are optional and accessed as required by individuals and are not requirements for the management courses. Training for Assessment and Training for Delivery help to establish quality training and assessment within agencies. SAR Leadership is offered to support leadership capability of Team Leaders.

The management courses, along with CIMS4, are linked in a training pathway that culminates with SAR Managers.

SAR operational capability within NZ is further supported by other SAR partner agencies, including rescue helicopters, DOC, NEMA, FENZ and NZDF. Training for these agencies is outside the scope of this Framework.

6. Delivery

Determination of training need is the responsibility of individual agencies. They identify the SAR training that will best meet their member's needs from multi-agency SAR training.

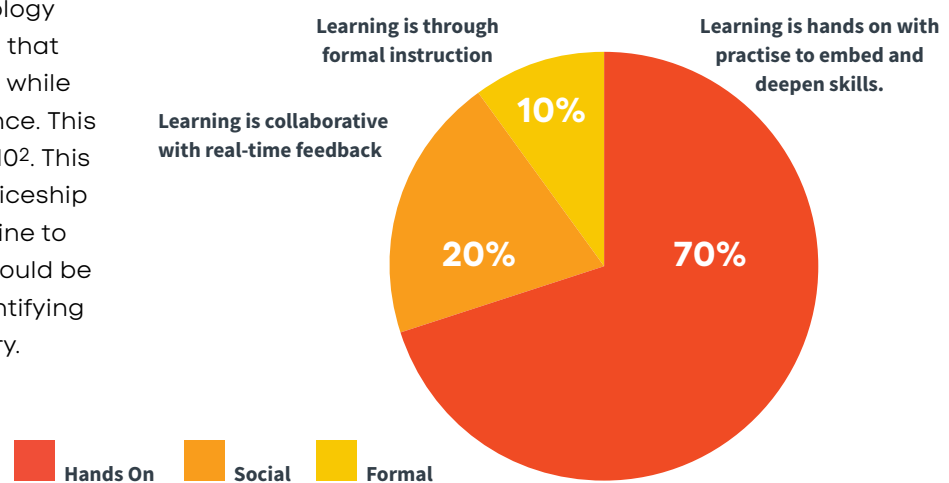
The provision and delivery of courses is managed to best address the demand for training. However, small numbers and /or widely dispersed demand, can limit the availability of courses.

All training is nationally consistent, as this helps support interoperability both within and between agencies.

The SAR Multi-Agency Training is the responsibility of NZSAR Secretariat, who owns and manages the training materials, and manages the providers who deliver the training on their behalf via both governance groups.

RCCNZ and Police access any of the training, including agency training, to ensure that their people understand the context in which they must operate.

Current learning methodology in adult learning suggests that most learning takes place while getting hands on experience. This approach is called 70-20-10². This model, akin to an apprenticeship model, is a general guideline to maximise learning and should be a consideration when identifying training needs and delivery.



6.1 Individual skills acquisition training

All agencies prefer to recruit personnel with some technical skill or experience. For some it is a requirement that personnel are certified e.g., radio operation. The competence and capability of SAR individuals is dependent on effective training and assessment. SAR training is largely decentralised and varies significantly³.

Refresher training for skills e.g., providing medical assistance, aircraft operation and operating vessels/ vehicles is common across all agencies and managed by them.

RCCNZ is the only agency who has full-time equivalent staff in search and rescue. They access training and have practise opportunities as part of their work.

Currently within the SAR context, individual skills acquisition occurs in the following ways:

- Attending formal training; instructor led or eLearning
- Participating in training events at their base or unit
- Participating in SAROPs
- Participating in SAREXs
- Participating in local collective exercising or scenarios
- Attending informational events such as conferences and agency specific events.

² Morgan McCall, Michael M. Lombardo and Robert A. Eichinger, Center of Creative Leadership

³ NZSAR Council risks, NZSAR Strategic Plan 2021-2024

6.2 Agency in-house specific training

Agencies are responsible for delivering skills specific training and assessment so that their people can contribute to SAR activity in their context, in a way that best suits their audience.

Generally, training and assessment is a blend of formal, “on the job” and informal learning in a group setting like a training night at a unit or base.

Agencies also manage and monitor the currency of people’s certifications to ensure they can operate. Examples include First Aid, safety drills, operator licences and physical assessments. These occur at agreed or mandated timeframes.

6.3 Collective training and exercising

Search and Rescue Exercises (SAREX) are an important inter-agency training activity and one of the most productive forms of experiential training. SAREXs enable SAR personnel to meet, plan, practise, review and evaluate in an environment where time and stress can be controlled.

Incident Management Exercises (IMT) are designed for incident management teams. These tabletop exercises are supported by several scenarios⁴ available for teams to use to practise. Currently, use of these exercises is not tracked or monitored.

Agencies conduct their own SAREXs or scenario-based exercises to keep skills current. This is a combination of ad hoc and formal activity and is treated as a skills development/ refresher exercise and not a formal assessment.

6.3.1 Purpose of SAREXs

To inform, train, assess, refresh, and test individuals, teams, and agencies. SAREXs may also be used to follow on from individual training, evaluate plans, validate operating procedures, and test equipment and to assess future training needs.

6.3.2 Objectives

To expose individuals, teams, and agencies to search and rescue operations, and working with other agencies.

Objectives⁵ within the exercise can include:

- Planning documents demonstrate preparedness
- SAR partners collaborate effectively
- The IMT effectively manages the exercise
- Information is effectively managed and communicated during the response
- Strengthen Iwi relationships
- Risks are identified, removed, minimised, or managed
- SAR operational personnel refresh and practise search and rescue skills

6.3.3 Delivery

NZ Police are expected to conduct a minimum of one marine SAREX and one land SAREX per Police District per year in accordance with Police Instructions. Annual NZSAR Council funding is available to Districts to support their SAREXs.

RCCNZ are expected to conduct a minimum of one SAREX (Aviation or Marine) with each neighbouring RCC yearly in accordance with Service Level Agreements and Memorandum of Understanding with each State. RCCNZ are expected to participate in integrated SAREX’s with NZ Police and other agencies on a regular basis.

⁴ <https://www.nzsar.govt.nz/training-resources/collective-training/imtex/>

⁵ SAREX Objectives – Item Bank

SAREXs are multi-agency exercises and the NZSAR Council requires the “NZSAR SAREX Guidelines”⁶ to be utilised for the analysis, design, execution and debrief of the exercises.

6.3.4 Evaluations

A SAREX is an important inter-agency training activity. Evaluation provides the sector with feedback for the Exercise Cycle. NZSAR maintains a list of trained Evaluators available for evaluation of NZSAR-supported District SAREXs⁷.

Evaluators provide quality feedback that will ultimately improve planning, organisation, tasking, and management of an actual event.

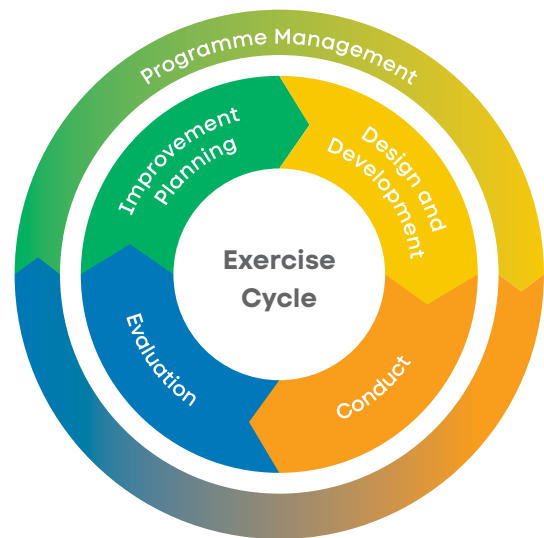
6.3.5 Reports

SAREX reports are based on a template and completed by the evaluators as part of the SAREX. This supports the exchange of ideas, scenarios, experience, and knowledge; and enables the collaborative development of SAREX planning, conduct and debriefing/evaluation for all.

SAREX pre-plans, plans, debriefs, evaluation reports and final reports have been placed on the NZSAR website for all to read and gain from the experiences of colleagues around the country.

Contents of a SAREX report can include:

- Exercise Summary
- Recommendations
- Introduction
- Background
- Exercise scenario
- Evaluation methodology
- Findings
- Conclusion



⁶ <https://nzsar.govt.nz/nzs-sar/nzs-sar-guidelines-overview/>

⁷ Reference NZSAR-Evaluators and SAREX Support

7. Revalidation

Revalidation in a SAR Context is refreshing/ renewing knowledge and skills so that they can be used in a search and rescue context. Revalidation, also known as recertification, may be based on formal or informal processes, or a combination of both.

For some agencies, revalidation for technical capability is required. Examples include Air Pilots licence, Skipper Certification, and vehicle licences. Whilst these are a requirement to operate at that level in a SAR context, they do not contribute to revalidation of SAR knowledge and skills needed.

There is evidence⁸ that suggests that people forget most of what they learn if they do not apply it. This indicates that Multiagency SAR Training efforts would be more effective with opportunities to apply knowledge and skills through practise after the training event.

Revalidation doesn't have to be at an individual level. Revalidations could occur for a team/crew or unit as not all individuals have to be fully trained to be able to contribute.

Any revalidation needs to recognise that not everyone in a team needs to be an expert. How they work together, and with others, is more critical to the success of the SAROP.

7.1 Risks

At the time this framework was developed, there is no common approach to revalidation. There is a risk that teams, units, and individuals are not practised and task ready, particularly if the task is not a common one.

Only a small number of volunteer's (5%) participate in the police coordinated SAREXs annually. More frequent, smaller scenario-based exercises could be a way to mitigate this risk. The type of scenario could be identified in each area quarterly, and agencies co-facilitate the activity. Scenarios that are priorities could be identified through lessons learnt, reporting, debriefs and lag indicators.

Ensuring that volunteers and other participants have a positive experience will be important, so that they are encouraged to continue using scenarios.

NEMA has developed a team assessment approach to revalidation, and this could be leveraged to design an approach that meets SAR needs.

⁸ Ebbinghaus's Forgetting Curve

8. Training governance

A strong training governance model should be aligned with strategy to provide long-term credibility to multi-agency SAR training. Governance would then take a strategic lens to decide what training focus would benefit and have priority within the sector.

Good governance practices are shaped by aligning stakeholder interests, while ensuring that training initiatives map back to, and are in support of goals.

Good governance in a training context would include:

- Capability needs of the sector at the forefront of wider strategy
- Establishing and prioritising training and planning processes for the sector as a whole
- Defining, adopting, and regularly reviewing Key Performance Indicators (KPIs)
- Establishment of one governance body for SAR training sector made up all stakeholders

As with quality systems, governance varies within agencies, with LandSAR Training and Coastguard Boating Education (CBE) having formal governance groups. Other agencies are looking to improve or enhance their current state.

Currently there are two governance groups for New Zealand Search and Rescue funded training. These are supported by the Programme Advisory Committees. The Multi-Agency PAC supports the Multi-Agency Governance Group. The Land SAR PAC is part of the PTE, Land SAR Training.

The make-up, roles and responsibilities of each group are outlined below.

8.1 SAR Training (Multi-Agency) Governance Group

The SAR Training Governance group⁹ manages and provides oversight to the SAR multi-agency training inter-organisation relationships and sets overall SAR Training goals and strategies, to contribute to the SAR Council goals, in particular “Capable SAR people”.

In keeping with the Governance Group’s high-level strategic function, its membership is composed of the Chief Executives or delegated senior executive of the following agencies:

- NZSAR Secretariat (Chair)
- Land Search and Rescue
- Coastguard New Zealand
- Surf Life Saving New Zealand
- New Zealand Police
- Rescue Coordination Centre New Zealand
- Amateur Radio Emergency Communications.
- Observers: National Emergency Management Agency (NEMA) and Tai Poutini Polytechnic

Objectives:

- To manage the relationship between the various parties who deliver and receive training funded by Tertiary Education Commission and to agree on any changes required to the delivery of training.
- To maintain the overall health and direction of the system. The Governance Group will receive and consider ‘summary level’ qualitative and quantitative information, via the PAC, about the delivery of standards-based training to the SAR sector. This will include reviewing the student and tutor satisfaction report, a year-to-date delivery report and course delivery summary.
- The management of performance issues and discussions.

⁹ SAR Training (Multi-Agency) Governance Group Terms of Reference November 2020

- Receive (from the Programme Advisory Committee) and consider business cases regarding new courses, modification to existing courses, or research & development proposals.
- Approve the SAR Training programme.
- Set priorities and approve collective prediction of training need as well as monitoring and approving the tutor pool for multi-agency SAR courses. This includes the final sign-off of the following years' 'training calendar', as developed by Programme Advisory Committee and recommended to Governance Group, for the whole SAR sector and associated parties. This should be completed by November annually.

8.2 Land SAR Governance Group

The LandSAR governance group¹⁰ has been established to manage, monitor, and provide oversight to SAR land skill acquisition training and set overall SAR Land Training goals and strategies.

Membership and composition:

In keeping with the Governance Group's high level strategic function, its membership is composed of the Chief Executives or delegated senior executive of the following agencies:

- NZSAR Secretariat (Chair or Point of Contact)
- New Zealand Police
- Rescue Coordination Centre New Zealand
- Observers:
 - LandSAR representative
 - Ministry of Civil Defence Emergency Management representative
- Representation from other agencies is at invitation.

Objectives:

- To approve, monitor the delivery of, and agree on any changes required for the delivery of NZSAR-funded (via the Tertiary Education Commission (TEC)), SAR land skill acquisition training by LandSAR.
- To maintain the overall health and direction of the system. The SAR Training (Land) Governance Group will receive and consider 'summary level' qualitative and quantitative information about the delivery of training to LandSAR members. This will include reviewing the student and tutor satisfaction report, a year-to-date delivery report and course delivery summary.
- Receive and consider business cases regarding new courses, modification to existing courses, or research & development proposals.
- Approve the annual SAR Land Training Programme
- Monitor and approve tutor pool
- Monitor course delivery against the approved programme
- Set priorities and approve collective prediction of training need as well as monitoring and approving the tutor pool. This includes the final sign-off of the following years' 'training calendar' for the SAR land sector. This should be completed by November annually.

¹⁰ SAR Training (Land) Governance Group Terms of Reference May 2019

8.3 The Multi-Agency Programme Advisory Committees (PAC)

The Multi-Agency Programme Advisory Committees (PAC) have been established to provide timely and accurate advice to the SAR Training (Multi-Agency) Governance Group and NZ SAR Council.

Membership

PAC membership will include search and rescue sector representation that will enable the Committee to best meet its objectives. Membership will include:

- NZSAR Secretariat representation
- Training Provide representation (currently Tai Poutini Polytechnic)
- Land Search and Rescue representation
- Coastguard New Zealand representation
- Surf Lifesaving representation
- New Zealand Police
- Rescue Coordination Centre New Zealand
- Amateur Radio Emergency Communications

Objectives

The committee will take into consideration cross-sector needs to:

- consider and recommend the annual SAR training (multi-agency) programme and its associated resourcing
- monitor the delivery and conduct of the SAR training (multi-agency) programme, including the annual moderation programme
- provide feedback on the programme delivery
- establish Technical Advisory Group(s) as required
- consider and make recommendations on the development or alteration of SAR Training (multi-agency) training material and/or courses
- provide advice to the Governance Group on ways to maximise the value of the SAR Training (multi-agency) contract funded from TEC.

9. Funding

The investment into multi-agency SAR training is significant and needs to deliver a return, in the form of capable SAR people. Learners (RCCNZ, Police and Volunteers) have diverse needs and backgrounds. The way they consume learning reflects this diversity.

Ideally funding would allow for investment into design, development and for there to be sufficient flexibility and agility to meet development and/or delivery needs should they change.

TEC funding provided for multi-agency SAR training has defined controls on how it is determined and used. This requires the training demand to be determined annually in advance, from which the course-specific funding levels are determined; final payments are then made based on the number of learners who attend the training event. These controls limit the flexibility required to better meet the training demands of the sector. All TEC funding is used by the two contracted training providers to deliver skills-acquisition training to SAR personnel.

Further NZSAR Council funds are used by the NZSAR Secretariat to further support training providers to deliver training, and into SAREXs, which enable practise opportunities. NZSAR also invests significantly to the design and development of content.

Agencies access funding to support their training through NZSAR, Lotteries Grants Board and fundraising activities. Two of the agencies also have PTE's, which also secure funding for courses offered. Both PTEs offer training to the public as well as to their volunteers. This is an additional revenue stream, which may be affected by the creation of the unified tertiary education provider, Te Pukenga (see risks, under future considerations).

10. Collaboration / Cooperation

10.1 Principles for collaboration

Collaboration can occur on many levels. It could be in the form of scenario exercising to promote inter-agency effectiveness, to the sharing of learning content. The following are principles that could promote and enhance collaboration between agencies to develop capable SAR people:

- Common content is shared. This would avoid duplication of effort and maximise resource utilisation.
- Capability gaps are identified, prioritised, and addressed as a sector issue, and then a collective approach taken to address them in a way that best meets agency needs.
- Localised SAR scenarios are promoted and encouraged, to aid better inter-agency collaboration and knowledge of local capabilities.

Currently collaboration is informal and adhoc, except for the coordinated SAREX activity and management of training programmes through PACs.

10.2 SAR Lessons implementation framework

Search and Rescue operations typically involve more than one operational agency in their response. Ongoing reflection of operational capability and performance supports achieving an aligned coherent and cohesive SAR sector. The ability to capture and share lessons is integral to supporting this outcome.

Sharing insights and lessons within and between organisations ensures everyone benefits from the knowledge gained. Sharing lessons can reduce risk, improve efficiency, and increase the effectiveness of processes and operations.

The outcomes of lessons learnt may result in changes to training and course materials.

10.3 START

START is a library of content that is accessible to all and provides a library of knowledge and experience for SAR people. It is operated under a Creative Commons Licence. Agencies can promote access by using the assets within their training programmes or by using them for training scenarios.

10.4 Agency LMS systems

The suite of Learning Management Systems in use across agencies is diverse and doesn't pose a risk. Each uses a system that best meets their operational needs. Commonality in terms of content development would be beneficial in promoting the sharing of resources.

11. Training audiences

The SAR sector training audiences are unique, as most people are volunteers and have careers and occupations outside of the sector. SAR qualifications may not be seen as a priority or relevant outside of SAR activity. Most of the qualifications gained are agency specific and are likely to be for technical skill.

The consumer of the training (e.g., volunteer, police) must be a consideration to how training is scheduled and delivered, so that access to training is at a time that optimises participant participation.

Transparency and equal access to learning for all agencies must also be a factor in learning delivery.

Pacific

The Pacific Search and Rescue (PACSAR) Steering Committee works to build SAR capability across the Pacific to save lives.

RCCNZ provides training support to this region as they are the point of contact and engagement for SAR events within the NZ SRR and may utilise SAR training as required.

Antarctica

RCCNZ provides training support to this region as they are the point of contact and engagement for SAR events within the NZ SRR. They may utilise SAR training as required.

12. Future considerations

12.1 Governance structure

Currently, there are two governance groups and two programme advisory committees whose focus are the training providers for SAR Multi-agency Training and the LandSAR training.

Ideally one governance group to provide oversight over the complete training offer would provide better linkage to the SAR strategy and to measure the effectiveness of SAR funded training.

The benefits of this could include the ability to:

- Maintain a strategic lens on SAR capability
- Objectively determine where to allocate training resources to create the most impact
- Maximising and measuring training effectiveness

The programme advisory committees could then focus on a quality and delivery approach that would benefit the sector.

Vendor management and the monitoring of KPIs should be a training operations activity.

Agencies would also benefit from a governance structure¹¹. This would assure the connection between strategy, people capability and training. Support could be provided to ensure this is in place.

12.2 Funding

Currently funding dictates what training can be delivered and to whom, and how it should be measured (attendance and completion). While this model may suit tertiary education environments, it doesn't facilitate measuring what impact and difference the training has on the sector.

Currently two agencies, Coastguard and LandSAR have PTES. CBE (Coastguard Boating Education) and LandSAR training attract funding directly through TEC to deliver courses to the public, including schools. The recent review of vocational education (ROVE) has seen the consolidation of polytechnics, and

¹¹ It is noted that LandSAR has a governance structure currently and that Coastguard has a PTE that offers limited training to volunteers.

industry training organisations into Te Pukenga, which is supporting by workforce development councils (WDCs) and centres of vocational excellence (CoVEs). How this impacts funding for PTE's has yet to be quantified and at the time of developing this framework, there is potential risk that there may be less funding available.

A more flexible, responsive funding model would benefit the sector (see recommendations), for the sector and the PTE's, so that investment and delivery costs are maximised.

13. Sustainability

Whilst the current training delivery model has rigour, structure and governance in place, there are access challenges for volunteers and agencies.

At the time this framework was developed multi-agency SAR training is being delivered in a very traditional manner and accessing the training has been difficult. Some of the challenges faced by trainees have been the frequency of courses, location, and course cancellations due to minimum numbers not being reached.

While the courses are content rich, adult learning principles suggest that if learning is problem centred, learners can work through what and how they can apply learning to their context - the bridge between concept and application. By breaking courses into small more achievable "bites" would mean that face to face sessions focus on practical application to embed learning.

95% of volunteers do not get to participate in SAREXs which are time consuming and challenging to coordinate. Potentially, a lot of people are out of practise for SAR operations. The creation of support materials to help people find practise opportunities after a training event could enable them to share what they learnt with others in their team, unit or crew and practise in their own environment, and help them apply what they learnt.

14. Bibliography

5.2 Responsibilities

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5.3 Quality of content

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6. Delivery

70/20/10 Model: Center for Creative Leadership: <https://www.ccl.org/articles/leading-effectively-articles/70-20-10-rule/>

7. Revalidation

Ebbinghaus Forgetting Curve: eLearning Industry: <https://elearningindustry.com/forgetting-curve-combat>