



NATIONAL SEARCH AND RESCUE COUNCIL

Forty-first meeting of the Australian National Search and Rescue Council

18-20 October 2017
Canberra



AFP
AUSTRALIAN FEDERAL POLICE

Executive summary

The 41st annual meeting of the National Search and Rescue Council (NATSAR) was held in Canberra, 18-20 October 2017, jointly hosted by the Australian Federal Police (AFP) and the Australian Defence Force (ADF). 28 representatives were in attendance from the ten Search and Rescue (SAR) Authorities that make up Australia's national SAR system, including the Australian Maritime Safety Authority (AMSA), the ADF and the eight State, Territory and Federal Police Services. Observers from the New Zealand SAR Council and the National Volunteer Marine SAR Committee also attended the meeting. Assistant Commissioner Frank Prendergast from the Australian Federal Police formally opened the annual meeting.

Each SAR Authority provided a review of SAR operations within their respective jurisdictions from the previous financial year, July 2016 – June 2017, reporting on notable SAR incidents, capabilities, training, SAR technologies, and future developments. These reports continue to provide the Council with an important opportunity to learn from shared experiences and identify common national SAR trends, which facilitate the continued development of consistent SAR operations and procedures across jurisdictions.

The meeting assessed the Council's performance against the Business Plan and prepared a summary of achievements in a *Performance Report* (Attachment 1), which highlighted the value of our collaborative approach and the professional contribution from all jurisdictions.

The Council hosted several guest speakers to present topics relevant to the Australian SAR system. These included presentations from the Bureau of Meteorology (BOM) and Council members on SAR technology including mapping applications, developments in mobile phone technology, aviation and visual technology.

There were three topics that the Council identified as being of particular importance for Search and Rescue (SAR) in Australia. The first topic is in regards a sound governance structure enabling the NATSAR Council to deliver its role. The key mechanism for this is the *Inter-Governmental Agreement on National Search and Rescue Response Arrangements* (IGA), which was revised during 2017. The Council also completed the revision of the National SAR Manual to integrate land search operations procedures, resulting in a more cohesive guidance. Both the IGA and Manual were subsequently published in February 2018.

The second topic related to the strategic importance of a national approach to SAR training, particularly how Australia intends to maintain consistently trained SAR professionals across jurisdictions enabling them to work together cohesively on a national basis. The third group of outcomes related to operationally focused Working Groups addressing key Council initiatives. A full *Statement of Meeting Outcomes* was circulated to Council members following the meeting and is presented in Attachment 2.

The 2017 Australian Search and Rescue Awards were presented at the annual dinner during the meeting program. For the first time the awards were divided into two categories, professional and non-professional. The awards were presented by AMSA CEO, Mick Kinley, with the non-professional award going to William (Wayne) Kelly who rescued 3 men from an upturned kayak in Port Phillip Bay. The professional category award went to the NSW Police Force, Marine Area Command for their courageous rescue of a couple from the 'VAL' yacht, located 210 NM offshore from Sydney. The Council was fortunate to host Matt Allen, President of Australian Sailing, as guest speaker for the Awards dinner.

Table of Contents

Executive summary.....	2
List of attendees	4
Formal opening.....	6
Session 1: Administration.....	6
Session 2: NATSAR Council Meeting Agenda	7
Session 3: SAR Operations	8
Session 4: National SAR System Arrangements.....	17
Session 5: National SAR Capability – SAR Technology.....	26
Session 6: National Safety Messaging.....	32
Session 7: Council Administration and Development.....	34
Session 8: Any other business.....	38
National Search and Rescue Award	40
Attachment 1 - List of key outcomes agreed at the 41st NATSAR Council Meeting	41



Attendees of the 2017 NATSAR annual meeting in Canberra, ACT.

List of attendees

Representatives of NATSAR Council Member Organisations

Attendee name	Position	Organisation
Toby Stone	NATSAR Council Chair General Manager, Response	AMSA
Alan Lloyd	Manager AMSA Response Centre	AMSA
Christine Macmillian	Manager Response Policy	AMSA
Mike Wytcherley	A/Manager AMSA Asset Capability	AMSA
Louise Proctor	NATSAR Council Secretariat	AMSA
Lou Fava	NATSAR Council Secretariat	AMSA
Lucena Deakin	NATSAR Council Secretariat	AMSA
Mark Hutchings	Superintendent	NSW Marine Area Command
Paul Farquharson	Sergeant	NSW Marine Area Command
Darren Wood	Inspector	NSW Marine Area Command
Michael Smith	Senior Sergeant	NSW Bomb Disposal Squad
Mark Arneil	Inspector	VIC Water Police
Greg Paul	Senior Sergeant	VIC Police
Alistair Nisbet	Senior Sergeant	VIC Police
David O'Donovan	Superintendent	SA Police
Phil Grear	Senior Sergeant	SA Police
Hege Burns	Superintendent	NT Police
Meacham King	Sergeant	NT Police
Brendon Zilko	Captain	Australian Defence Force
James Frost	Squadron Leader	Australian Defence Force
William Grierson	A/Inspector	TAS Police
Chris Williams	A/ Sergeant	TAS Police
Jim Whitehead	Senior Sergeant	QLD Water Police
Shane Sadler	Inspector	WA Police

Noel Minnock	Senior Sergeant	WA Police
Cathy Grassick	Superintendent	Australian Federal Police
Carmen Tootell	F/Constable	Australian Federal Police
David Bell	Sergeant	Australian Federal Police
Observers		
Carl van der Meulen	Secretariat	NZ SAR Council
Darryl Wright	Chair	National Volunteer Marine SAR Council
Presenter/Attendee	Position, Organisation	Presentation topic
Frank Prendergast	Assistant Commissioner, Australian Federal Police	Official Opening
Simon McDonald	Cobham	VIDAR search technology and Advanced mobile location
Neal Moodie	National Manager for Marine Weather Services, Bureau of Meteorology	Weather and SAR
Phillip Downes	Senior Constable, NSW Police	NSW police mapping program – POLSAR

Formal opening

Assistant Commissioner Frank Prendergast from the Australian Federal Police formally declared the 41st annual meeting of the National Search and Rescue (NATSAR) Council open.

The Assistant Commissioner expressed the AFP's pleasure in hosting the 2017 meeting. He also welcomed AMSA executives and all jurisdictional representatives present.

The Deputy Commissioner acknowledged the importance of the Australian SAR system and those that worked in it, including the volunteer organisations. Reference was made to the rapid advancements in technologies that are emerging in the SAR sphere and how it is changing the ability to find those in distress while also keeping the SAR professionals safe.

The Deputy Commissioner also reinforced the importance of the Council continuing to come together each year at the annual meeting to ensure we maintain an effective and efficient national SAR system.

Session 1: Administration

Name of Session

Welcome and Apologies

Objective

To confirm the administrative aspects of the Council meeting, including introductions and apologies and venue administration.

Discussion points and outcomes

The Chair of the National Search and Rescue Council, Toby Stone, welcomed everyone to the 41st NATSAR Council meeting. A record of attendees is available (page 4).

The Chair thanked the Australian Federal Police and the Australian Defence Force for hosting the annual meeting.

It was noted that, like previous years, there was an excellent level of representation from both marine and land SAR practitioners at both a strategic and operational level, which continues to facilitate the ongoing delivery of an efficient and effective SAR service to the wider Australian community.

New attendees, Acting Inspector William Grierson (replacing Lee Renshaw) and A/ Sergeant Chris Williams from Tasmania Police were welcomed; and Superintendent Hege Burns from NT police (replacing Dean Moloney). Superintendent John Todor from Victoria Police was unable to attend but Senior Sergeant Greg Paul joined as part of the Victoria Police delegation.

The Council recognised the departure of Senior Sergeant Stephen Cooke, AFP and Sergeant Michael Wear from WA Police. Both were long standing members on the Council and made a significant contribution to SAR in Australia over the years.

The Chair closed the first session.

Session 2: NATSAR Council Meeting Agenda

Name of sessions

Order of business and any other items

Announcement of National SAR Award winners

Working paper

WP 2.1 NATSAR Council Annual Meeting Agenda 2017

Objective

To confirm the agenda for this year's annual meeting and include any additional items proposed by Council members.

To announce the 2017 Australian SAR Award winners.

Discussion points and outcomes

The Chair gave a brief overview of the agenda, noting that it is again structured over three days as per previous years.

There were no additional items added to the agenda.

The winners of the Australian Search and Rescue Award 2017 were announced. This is the first year awards have been presented in two categories, recognising the differences between professional and non-professional members of the SAR community. The following winning nominations were announced:

- NON-PROFESSIONAL SAR AWARD
 - o William (Wayne) Kelly – Port Phillip Bay – for the rescue of 3 male kayakers in Port Phillip Bay.
- PROFESSIONAL SAR AWARD
 - o NSW Police Force, Marine Area Command – for the rescue of a foreign couple on board the vessel, 'VAL' 210NM off the coast of Sydney.
- COMMENDATION AWARD
 - o Craig Bowman, Garth Fitzgerald and Ben Harris (RAC Rescue) – for the rescue of injured fisherman 114 NM east of Esperance WA.

Actions

Nil

Session 3: SAR Operations

Name of session

SAR Activity Reports

National Volunteer Marine SAR Committee

AMSA SAR Operations

International SAR Operations and Liaison

Activity Summary: Annual Council Performance Report

Working paper(s)

WP 3.1.1 to WP 3.1.9	State SAR Activity Reports
WP 3.2	National Volunteer Marine SAR Committee Report
WP 3.3	AMSA SAR Operations Report
WP 3.3.1	AMSA's Operational Risk Framework
WP 3.5	Annual Council Performance Report

Objectives

For each SAR Authority and observer organisation to provide the NATSAR Council with a review of key highlights from the previous financial year July 2016 – June 2017, in order to share knowledge, recognise national SAR trends, identify where lessons learnt can be applied across jurisdictions, and note any issues that require further discussion.

To discuss the collection of statistical information to ensure it provides a comprehensive representation of SAR in Australia as well as being an efficient process for jurisdictions to extract and collate.

Discussion points

3.1 SAR Operations Reports

Each SAR Authority provided a brief summary of their respective SAR operations report. Full reports can be read for further information on the Members area of the NATSAR Council website (natsar.amsa.gov.au). Below is a summary of noteworthy topics or common trends that were identified across jurisdiction reports.

Trends	Comments	Applicable States
Causative factors	<p>No new causative factors were identified, however the factors below continue to impact SAR across all jurisdictions:</p> <ul style="list-style-type: none"> • Natural disasters (floods, fire, etc) • Dementia/mental health and other risk groups. Increase in despondency / suicide related incidents • Breakdown / Mechanical failure / Overdue vessels / Vessels in distress / Collisions and Lack of fuel/poorly maintained vessels • Increase in adventure based activities into the remote outdoors attributed partly to ready access to better technology(e.g. gps, smartphones) • Human factors - lack of preparedness and failure to properly study and understand weather patterns and tides including low level of knowledge in relation to navigation. • Alcohol and drugs • Failing to wear, or unsecured PFDs 	ALL
Enhancing operational SAR capability	<ul style="list-style-type: none"> • Procurement/commissioning of vessels and equipment including UAV's / RPA's • Unified command structures • Completion of VHF radio network • Staff movements in and out of SAR units continues to impact SAR capability • Commencement of fleet replacement (VIC) • Roster reform strategy which has resulted in improved capability and service delivery (VIC) • Integration into Emergency Management operating picture (EMCOP) (VIC) • Recidivism – highlighted and targeted. (VIC) • VHF via ROIP at two new installations - Dampier and Exmouth (WA) 	QLD NT TAS WA NSW
Safety Programs and Community Awareness	<ul style="list-style-type: none"> • A second season of Westpac Air Rescue participated in the Air Rescue TV program ("Think B4 you Trek" - joint venture between NSW Police Force and National Parks and Wildlife Services)) • NVMSARC granted observer status on the Australian and New Zealand Safe Boating Education Group (ANZSBEG) • Darwin Boat Show, Water Safety Week at 'Splashfest' (NT) • Law enforcement, lectures, presentation, Water police squad tours and info sessions, targeted media presentation and Melbourne boat show (VIC) • 'Surviving Outback Travel' survival kit and aide memoire provided to indigenous communities (WA) • "Snow Safe" Program (VIC Police) • Targeted media presentations for example: <ul style="list-style-type: none"> ○ Importance of PLB's in remote areas (AFP) 	ALL

	<ul style="list-style-type: none"> • Introduction of trial period of compulsory PFD's for rock fishermen in high risk areas (NSW) • Lecturers/presentations at industry groups, government bodies and volunteer organisations • Delivery of training to volunteers across multiple disciplines • Dementia/Alzheimer's SA Safe Return Program. • Safe-T-Cam – use of Safe-T-Cam to track missing persons who are in a vehicle • WA marine campaigns: <ul style="list-style-type: none"> - Nothing Is Faster Than Disaster – targeting the accessibility, and/or lack, of safety equipment. - 'Be Safe, Stay Safe' – targeting vessel maintenance and complacency issues for at risk vessel operators. - 'Sunny With A Chance Of Disaster' – Targeting ignorance of weather conditions. • NSW – 'Think before you trek' 	
Training	<ul style="list-style-type: none"> • NATSAR Police Managers course • Seafaring training in compliance with relevant state and national commercial legislative requirements (volunteers) • SAR specific training exercises at regional and State level in conjunction with State SAR Authorities (volunteers) • ADF conducted two Military Search and Rescue training courses resulting in 17 ADF SAR Mission Coordinators (SMCs) • AFP –members deployed to external territories (Norfolk, Christmas Island etc) have appropriate SAR training • Local training with Darwin port and SLSNT • Courses – Coxswain, Master V, MEDII, MED III, Swift water rescue, Advanced swift water, water police squad induction, Basic personal watercraft, advanced personal watercraft, Surf IRB, State SAR, Marine Response Team, First aid, survival at sea drills, bronze medallion, 4x4 off road (VIC marine) • Diving, climbing (VIC land) • Training, lectures and case studies to VMR, SLS, local police and state and local government (SA Marine) • Marine first responder training statewide 	ALL
Use of Social Media	<ul style="list-style-type: none"> • Facebook and/or Twitter to locate missing persons • SA note facebook is being used to find missing elderly persons • NSW work with other agencies to standardise messages and work together on common themes. 	ALL
Utilising technology for SAR	<ul style="list-style-type: none"> • Utilisation of mapping tools specific to SAR, eg SARMAP • Applications for example: <ul style="list-style-type: none"> ○ Log-on / log off applications – voyage plans / vessels can be monitored in real time • Increased use of Remotely Piloted Aircraft (RPA) and Unmanned Aerial Vehicles (UAVs) 	ALL

3.1.1 Reporting Statistics

Each jurisdiction again reported on a common set of criteria to further assist in developing a national picture of the Australian SAR system. The template for statistics collection had been refined following feedback provided at NATSAR 40. The Chair welcomed further input to the data collection noting changes could still be accommodated.

Many states advised that databases utilised for SAR statistics would be upgraded in the coming years resulting in the provision of better data.

WA noted the report provided extra context and information that facilitated forward planning around where to focus resources.

3.1.2 Number of SAR Incidents

In total, close to 21,000 incidents across Australia were recorded by AMSA, the State/Territory SAR Authorities and the National Volunteer Marine SAR Committee (NVMSARC). This includes incidents that involved both search and rescue operations (i.e. tasking of assets) and also those that required assistance (e.g. towing a vessel that had mechanical failure).

3.1.3 Causative Factors

1) Human error/behaviour continues to be a main factor in SAR incidents:

- With respect to Marine SAR incidents, VIC advised that 20% of offenders are recidivists. Repeat offenders are being targeted by vessel inspections and discussions around boating behaviour.
- NT reported individuals ignoring signage and other advice and crossing water known to be inhabited by crocodiles.
- TAS noted that many, often tourists, underestimate the conditions and are ill prepared for changing weather.

2) Increasing numbers of people venturing into the wilderness and out on the water:

- VIC reported that more people were wearing or taking a life jacket on the water but once in the water could not get back on the boat, could not raise an alert or had worn the life jacket incorrectly.
- VIC also reported that while marine incident numbers had decreased, paddle craft incidents were on the increase.

3) Mechanical

- All jurisdictions reported that mechanical failures continue to be a factor in causing SAR incidents. Safety messaging can play a part in targeting this issue.

4) Dementia patients / Alzheimer patients / Despondent

- Across all jurisdictions this continues to be an increasing factor in missing person SAR incidents.
- Some success was reported using social media to locate missing persons.
- AFP reported that missing persons having greater access to transport and being able to travel long distances over a short timeframe was an increasingly challenging factor in searching.

3.1.4 Further Trends

Other themes or common issues that became apparent as each jurisdiction presented SAR Operations Reports included:

- All jurisdictions acknowledged the important role of the volunteer units in SAR response.
- NT advised that land SAR incidents had decreased, perhaps due to improved mobile reception and subsequently better communication between individuals and also for responders once on scene.
- QLD, WA and SA reported SAR incidents involving trawlers, which AMSA is addressing more broadly through the regulation of Domestic Commercial Vessels in collaboration with the State/Territory Marine Safety agencies and Fisheries organisations.
- Staff resources
 - o All states reported challenges with staff movement/transfer and the subsequent impact on resourcing and retaining staff capability.
 - o Several states alluded to trained SAR staff being involved in incidents that are not traditionally SAR related e.g. evidence searches.
 - o In some cases, commercial companies were being employed to supplement the lack of available trained staff during SAR operations.
 - o AFP noted the increasing need to manage Post Traumatic Stress for staff that are involved with traumatic incidents.
- Capability
 - o Discussed the level of operational capability in terms of land/sea and air assets on a national basis and the collaborative arrangements that support the deployment of assets to support operations in other jurisdictions
- Training
 - o All jurisdictions reported on various 'cross-agency' training activities, and in some cases cross jurisdictions as well – all with good feedback.
 - o AFP participated in cross training with ACT Ambulance focusing on remote wilderness medical treatment.
 - o All jurisdictions reported the conduct of regular multi agency SAREXs and requested the involvement of AMSA where possible to ensure that the full context of the national SAR system and AMSA's role is understood.
 - o NT reported success on the association with the Sea Ranger Program, with an outlook for assistance to be provided to local police.
 - o NT also noted the usefulness of trackers in SAR situations, particularly in the event of a death where the tracker can provide additional information around the set of events leading to the death.
- Legislation/Coronial advice
 - o Most jurisdictions referred to outcomes from coronial and/or regular liaison with the Coroner's Office that may impact SAR operations. Any recommendations or adjustments that need to be made to the national SAR system will be managed through the Council, similar to the Land SAR Coordinating Working Group.

- NSW advised that since legislation was introduced to mandate the wearing of lifejackets for rock fishing, compliance rates have increased significantly.
- WA is anticipating a coronial recommendation for mandatory carriage of a PLB by prospectors in the field.
- Social Media
 - Social media continues to be a useful mechanism to convey safety messages to the general public and a resource to locate missing people.

3.2 National Volunteer Marine SAR Committee (NVMSARC)

Darryl Wright, Chair of the NVMSARC, gave an update from the volunteer SAR organisations from across Australia. Volunteer Marine Rescue (VMR) organisations in all jurisdictions continue to make a significant contribution towards community safety in the marine context, along with providing a substantial response capability to support SAR Authorities, particularly in regional and less populated areas where they are often the only water based capability.

Darryl noted that there are over 13,500 volunteers nationally, including in regional areas. While jurisdictional reports differ in the way statistics are reported from state to state, it was noted that VMRs responded to over 1,250 SAR incidents and attended to over 7,000 non-SAR taskings nationally. While many of the non-SAR jobs mainly relate to vessels with mechanical breakdown, many may have escalated to SAR operations had preventative actions not been taken in a timely manner.

The NVMSARC continues to focus on the implications of the Marine Safety (Domestic Commercial Vessel) National Law Act and work towards compliance by the cessation of 'grandfathering' provisions.

3.3 AMSA SAR Operations Report

AMSA staff Alan Lloyd and Mike Wytcherley presented the AMSA SAR Operations Report. Key points covered included:

- Challenger aircraft
 - All 3 Challenger based are now resourced
 - 85% availability – anticipated to increase with increasing crew numbers
 - Excellent capability with continuing software developments
 - Developments with VIDAR and night searching on land
 - Homing devices are providing better accuracy and direction finding capability
- Aviation capability
 - Noted changes to the tier structure in the multiusers list due to changes in regulations and restrictions.
- MEOSAR
 - Any 406 device will now work on this satellite system
 - Consistent time advantages over other systems have been demonstrated (as much as 3.5 hours in advance)
 - It is anticipated there will be a full satellite constellation in 2019, which is expected to further improve detection rate and location accuracy as the current system in place.

- AMSA's structural changes
 - o There have been changes in the divisional structure of AMSA to align with its core functions, consolidation of this will occur over the coming 12 months
 - o The delivery of the National System (for Domestic Commercial Vessels) will commence in July 2018.
- Training
 - o Air Search Observer training program
 - Police interested in undertaking these e-learning courses were encouraged to contact Mike Wytcherley for further information.
 - o Torres Strait Marine Safety Program (TSMSP)
 - 68% decrease in incidents since the program's inception
 - Benefits of the program include training, qualifications and dissemination of key safety messages
- Incidents
 - o Major incidents of interest were reported as well as the following observations:
 - Targeted campaign by AMSA to deal with dories and motherships in an effort to improve safety and prevent deaths at sea.
 - Cross agency SAR incidents between the states and AMSA continue to work smoothly.
- Land SAR incidents
 - o Following the implementation of the Land SAR Coordination Procedure in July 2015, the statistics indicate that jurisdictions are now coordinating 93% of land SAR incidents.
 - o The remaining 7% of incidents coordinated by AMSA were mostly due to factors such as remoteness or the incident being closed as a result of the intelligence gathering phase, which is as per the procedure.
 - o Al Lloyd noted that 93% of incidents required a response, which emphasises the need for the quickest possible response time to a life threatening situation.

Outcome: Agreed for AMSA to facilitate visits from AMSA Liaison Officers to jurisdictions to discuss safety aspects related to the national system (action).

Outcome: Noted the successful implementation of the Land SAR Coordination procedure with all SAR Authorities working in line with the procedure 98% of the time.

Outcome: Agreed for AMSA to amend the relevant JRCC instruction to reflect the correct Northern Territory point of contact to ensure SAR Mission Coordinator (SMC) involvement in land SAR incidents (action).

3.3.1 AMSA's Operational Risk Framework

Christine Macmillian presented WP 3.3.1 regarding AMSA's Operational Risk Framework, which is being developed to review and improve AMSA's management of operational risk arising from search and rescue (SAR) activities.

The project is in response to AMSA recognising the significant potential risk associated with the tasking of SAR resources by JRCC personnel. This risk primarily relates to duty of care obligations that may arise for AMSA and the JRCC personnel. AMSA's goal is to establish a robust governance framework that will provide, to an objective observer, evidence of a consistently applied and defensible decision making process that underpins tasking decisions.

Additionally the operational environment within which AMSA task SAR resources is rapidly evolving with the introduction of new regulatory reform programs and emerging technologies that directly impact search and rescue operations including:

- The current civil aviation regulatory reform program, primarily CASR Part 138 which will regulate all aerial work operations including SAR;
- Developments in technology that may be of benefit or have impacts on SAR such as Remotely Piloted Aircraft, Vessels;
- Changes in domestic legislation such as Work Health and Safety or Civil Liability that may have a direct impact on the duty of care that may be owed to those effected by a SAR operation or the level of individual liability that may flow to persons tasking SAR assets;
- Australia's current and ongoing obligations under Annex 12 of the Chicago Convention which are audited by ICAO; and
- Anticipated future audit obligations that may arise for the provision of the SAR service consistent with Australia's obligations under Safety of Life at Sea (SOLAS) convention and the International Convention on Maritime Search and Rescue.

The changes by Civil Aviation Safety Authority (CASA) to the regulation CASR Part 138, regarding general standards for aerial work operations for both rotorcraft and aeroplanes was highlighted as operationally important.

AMSA advised that the new regulation would improve the tasking of assets for the JRCC, providing more visibility about the operators' level of capability and other relevant factors that would assist risk-based decision making.

Jurisdictions discussed the potential impact on tasking assets, for example in the NT the Robinson 44 Helicopters are utilised for searches but would not be able to be tasked under the new regulation.

Outcome: Noted that the Civil Aviation Safety Authority (CASA) is making changes to the regulation CASR Part 138, regarding general standards for aerial work operations for both rotorcraft and aeroplanes and agreed the following actions:

- a. Agreed for the Secretariat to circulate information about CASR Part 138 to Council members (action);
- b. Agreed for AMSA to discuss the impact of CASR Part 138 with CASA on behalf of Council members, through normal agency-to-agency discussions (action); and
- c. Agreed to incorporate this issue into the letter of meeting outcomes to Police Commissioners (action).

Session 3.4 International SAR Operations and Liaison

Carl van der Meulen from the NZ SAR Council provided an update on SAR developments in NZ. Key points included:

- SAR donyx
 - o This IT project will standardise data collection and business intelligence. The project is currently in the procurement phase. It is anticipated that Land SAR volunteers will be able to log on to this system as well as SAR professionals. The system will also incorporate lost person behaviour information.
- Alzheimer's Research
 - o NZSAR will be producing a set of guidelines for searches involving missing persons with Alzheimer's, which is in response to a coroner's recommendation.
- Mass rescue operations (MRO)
 - o NZ is currently focussing on MRO policies, plans, resources, skills and equipment with the intention of reducing the risk and enhancing the ability to respond. They have a number of planned upcoming workshops and seminars related to this and welcomed Australian SAR participation.

Session 3.5 Activity Summary: Annual Council Performance Report

Louise Proctor presented the 2016-17 NATSAR Council performance report, advising that the report was a good mechanism to ensure that Council was meeting its strategic objectives as outlined in the Business Plan.

Members were invited to add activities to the report to further demonstrate the Council's achievements.

The report will be available on the NATSAR Council website and provided to Police Commissioners with the letter of outcomes, following the annual meeting.

Outcome: Reviewed the Council's achievements from the previous 12 months as documented in the NATSAR Council Performance Report, noting the significant number of activities delivered to progress the ongoing development of the Australian SAR system.

Session 4: National SAR System Arrangements

Name of session

IGA Status

NATSAR Manual Restructure

National SAR Training

Emerging Strategic Issues

Working paper(s)

WP 4.1 IGA 2017 Status

WP 4.2 NATSAR Manual Restructure

WP 4.3.1 National SAR Training

WP 4.3.2 National Police SAR Managers Course Report

WP 4.4.1a-c NZ SAR Mass Rescue Operations

WP 4.4.3 Medical Evacuations

Objectives

The objective for this session is to review and discuss the national SAR system arrangements that underpin the fundamental role and strategic position of the NATSAR Council; and which determine how the SAR Authorities work collaboratively to provide an effective SAR service for the Australian community.

Discussion points

Session 4.1 IGA Status

The IGA is the formal mechanism that provides the framework for search and rescue in Australia. This is a collaborative commitment between the 10 search and rescue authorities that comprise the National Search and Rescue Council (NATSAR Council). The IGA outlines the responsibility of each search and rescue authority and the requirement to be appropriately resourced to meet their respective obligations. The current IGA was signed in 2012.

As part of its general business the NATSAR Council agreed at the 2015 meeting to review the IGA to ensure it accurately reflects current national search and rescue arrangements. Minor amendments were proposed regarding the transfer of information between SAR Authorities for incidents occurring on land; and administrative changes to give greater clarity to the purpose and content of the document.

Council members consulted within their respective organisations during the review process. In 2016, all Police Commissioners endorsed the updated IGA and agreed for the Secretariat to obtain ministerial signature.

Outcome: Noted that the revised Inter-Governmental Agreement (IGA) 2017 was progressed to obtain Ministerial signature from the Commonwealth and each State/Territory, with three confirmed signatures from the Commonwealth, NSW and Tasmania. The IGA will be circulated and uploaded on the website once all signatures are received.

Session 4.2 NATSAR Manual Restructure

Council members were advised that the NATSAR Manual Working Group had completed the merger of the National SAR Manual and the Land Search Operations Manual into one document with two volumes.

The Council decided examine the scope for rationalising the two Manuals in 2015 in order to remove duplication and inconsistencies. The revised structure follows the format of the International Aviation and Maritime SAR (IAMSAR) Manual, with 2 volumes that separate guidance on 'SAR Administration' and 'SAR Operations' with separate appendices that are specific to Maritime/Aviation and Land. This ensures the Manual retains its usefulness for the different user groups. The consolidated manual also reduces workload in maintaining two separate manuals and ensures a consistent approach to the ongoing amendment process.

It was agreed for the Secretariat to prepare an email for Council members to notify key stakeholder groups of the intention to publish the new manual in February 2018, allowing enough time for stakeholders to update links and other respective references to the previous manuals.

Agreed for the Council members to provide any feedback prior to 22 December 2017.

It was suggested that in the future it would be useful for the manual to be available as an App.

It was advised that any proposed amendments to the new NATSAR Manual will go through the usual annual amendment cycle, which the Secretariat will collate and circulate to the Council at the next scheduled teleconference or Council meeting. These will then be incorporated into the next published edition in 2018.

The hard work and contribution of those who were involved in the review process was recognised, including Jim Whitehead, Lucena Deakin, Alistair Nisbet, Darren Wood.

Outcome: Noted the work of the NATSAR Manual Working Group in completing the merger of the National SAR Manual and the Land Search Operations Manual and agreed the following outcomes:

- Agreed to notify key stakeholder groups that the new manual will be published on 7 February 2018, allowing enough time for stakeholders to update links and other respective references to the previous manuals (action).
- Agreed for Council members to provide any further feedback on the format of the manual by 22 December 2017 to allow enough time for the Secretariat to incorporate changes ahead of the publishing date.

Session 4.3 National SAR Training

Three main topics were covered in this session.

1. Developments in National SAR Training Approach

Jamie Storrie, Manager Crisis Preparedness and Response, presented WP4.3.1 to discuss the proposed way forward for a national SAR training Framework.

For the last three years, the National SAR Council has discussed the strategic significance of the national approach to SAR training and how Australia intends to maintain consistent SAR capability across all jurisdictions.

The Council agreed that the strength of the national SAR system is underpinned by the National SAR Manager's Course which ensures a consistent approach to coordination of SAR response operations across Australia. The Council also noted the importance of the National training approach to the National SAR systems ability to function well at an operational level and to maintain a common language between SAR practitioners, facilitating the ability to work together cohesively on a national basis

It was agreed that the importance of Police having a nationally recognised SAR qualification, was particularly valuable during a Coronial inquest.

Peter Myers, Senior SAR Officer from the AMSA Response Centre, advised that he and another AMSA Search and Rescue Officer attended the National SAR Police Managers Course this year as students. It was agreed that the knowledge sharing between AMSA and the Police was invaluable and this should continue to be incorporated in the way forward for national SAR Training.

Christine discussed a proposed model (as shown in WP 4.3.1) for National SAR training in the future. The model includes 6 generic units of core competency for SAR practitioners from either AMSA, Police or ADF with specific modules then to be undertaken as they relate to the context of each SAR Authority, each resulting in a respective SAR qualification.

ADF advised that this model would be suitable as they are also currently looking at the delivery of SAR training, and the option to leverage a national course would provide much value.

Council members agreed to this proposed development framework with the aim of designing a comprehensive SAR curriculum based on the needs of the different stakeholders.

Jamie advised that a curriculum designer would be engaged to design an integrated curriculum with the view to leverage, where possible, work already completed (i.e. the National Police SAR Managers course). It was noted that AMSA will look to develop a graduated program including an Advanced Diploma combined with specialised courses for broader SAR stakeholders.

Outcome: Discussed the proposed way forward to develop a national SAR training Framework and agreed the following outcomes:

- Noted the importance of the National training approach to the National SAR System's ability to function well at an operational level and to maintain a common language between SAR practitioners to work together cohesively on a national basis;

- Agreed to the proposed development of a National SAR Training Framework with the aim of designing a comprehensive SAR curriculum based on the needs of the different stakeholders;
- Noted that AMSA will engage a curriculum designer to design an integrated curriculum, with the view to leverage, where possible work already completed (i.e. the National SAR Managers course);
- Noted AMSA's intent to develop a graduated program including an Advanced Diploma and specialised courses for broader SAR stakeholders;
- Agreed that in order to facilitate the completion of the National SAR Training Framework and to avoid interrupting the planning and preparation of the 2018 National Police SAR Managers Training Course, the course will be run in the same manner as this year under the Queensland RTO in Canberra, on behalf of the National SAR Council with administrative support from AMSA; and
- Noted that this arrangement is only suitable as a short to medium term option and the preferred arrangement is for AMSA RTO to resume responsibility for providing the national course.

2. National Police SAR Managers Course Report

The 2017 Course Director for the National Police SAR Managers Course (NATSARMC), Sergeant Meacham King presented the following key observations from the course:

- 21 students and 10 directing staff were in attendance – the largest course to date.
- Re-emphasised the value in having students with adequate SAR experience to be able to complete the course.
- Acknowledged support from AFP who provided classrooms and AMSA offering administrative support.
- Sasha Zigic, RPS APASA mapping expert provided training, support and guidance for SARMAP, the marine mapping program.
- AMSA presence on the course was valuable, recommended to have an AMSA instructor and student in 2018
- Noted the possibility of AFP being unavailable for 2018 and the need to secure an alternative venue.
- Student feedback forms were employed this year and have been sent out by the Course Director to relevant supervisors.
- Noted the potential loss of experience with several Directing Staff being replaced by new people in 2018, highlighting the need for some early continuity planning.

The Chair thanked Meacham King for his role as Course Director for the last 2 years and welcomed Senior Sergeant Jim Whitehead (QLD) as the incoming Course Director for 2018.

Outcome: Noted the National Police SAR Manager's Course Report, presented by the Course Director (Sergeant Meacham King, NT Police), and agreed to each of the recommendations in the actions list, including the following:

- A letter be sent early 2018 by the Chair of the NATSAR Council, to each state and Territory police commissioner requesting the release of directing staff and student nominations for the next NATSAR Managers Course;

- Agreed that the Queensland Registered Training Organisation (RTO) will run the 2018 National SAR Managers Training Course in Canberra on behalf of the National SAR Council with administrative support from AMSA; and that AMSA will cover the administration fee associated with assessing and issuing the Advanced Diploma (\$300 per student);
- Supported the intention to have a NZ instructor at next years' course on the provision that the course costs per student remain the same or similar to previous years;
- Agreed that Directing Staff will continue to schedule their arrival in to Canberra to allow attendance at the NATSAR Council annual Working Group meetings for SAR Technology and SARMAP;
- Agreed that a teleconference for Directing Staff is facilitated by the Course Director in February 2017 to discuss course curriculum, training issues and to provide an update on nominated tasks; and
- Noted the request for airfares to be booked 6-8 weeks prior to the course to minimise the cost per student.

Outcome: Noted that AFP are looking at suitable course venue options in consideration of possible competing requirements for the AFP venue.

3. Cross-jurisdiction training and development opportunities

The meeting discussed the value of cross jurisdictional training opportunities (e.g. diving, alpine operations, SAREXs) from both an economic perspective and for facilitating strong working relationships between SAR Authorities, which strengthens the whole SAR system. Members discussed various upcoming training opportunities and agreed to circulate invites through the Secretariat team.

NSW advised that they also enhance interoperability by having in place jurisdictional MOUs e.g. divers and other marine SAR resources are shared as necessary under a formal arrangement between NSW and QLD Police.

Outcome: Noted that the overarching cooperative arrangements agreed to by jurisdictions under the IGA supports initiatives such as cross-jurisdictional assistance for SAR operations; and agreed for the Secretariat to highlight this to Commissioners in the letter of meeting outcomes (action).

Outcome: It was agreed that AMSA highlight to the Commonwealth (through the Joint Agencies Maritime Advisory Group (JAMAG)) and to the States/Territories, the desire to look at shared resourcing opportunities for night winch operations (action).

Outcome: Noted AMSA's availability to attend State/Territory SAREX's when possible to enhance interoperability between SAR Authorities and other response organisations.

Outcome: NT Police advised it will provide a two week tracking course during June–August 2018, which is available for other jurisdictions to attend as required. The Secretariat will advise once the dates have been confirmed, likely in February 2018.

Session 4.4: Emerging Strategic Issues

1. Mass Rescue Operations (MRO)

Norwegian Star Case study

A joint presentation by VIC Police and AMSA regarding the Norwegian Star cruise ship incident in February 2017 highlighted key lessons about the need for early engagement between the commonwealth and the state authorities in the activation of a multi-agency response.

The Council noted that it worked well in this scenario, which was attributed to strong working relationships between key contacts. However, it was discussed that there needs to be some further work to document key contacts/positions and trigger points for when different organisations become involved.

Council members supported a workshop or table top exercise focussing on mass rescue operations, noting that AMSA was planning one for mid-2018. The Secretariat will keep Council members informed of progress and updates.

Outcome: Noted that some jurisdictions, including NSW, have already planned to conduct workshops related to 'mass rescue operations' during 2018 and noted the benefit in progressing joint planning opportunities between the Commonwealth and the States/Territories.

Outcome: Agreed for AMSA to update Council members on work associated with their intended mass rescue operations workshop and invite jurisdictional representatives to attend.

New Zealand MRO progress

Carl van der Meulen, Secretariat for the New Zealand SAR Council, presented WP 4.4.1 about New Zealand's preparedness for an MRO event.

Carl gave a summary of the *Rauora I and II* MRO exercise series, noting a key part to the preparation was to establish relationships in the SAR Emergency Management arena.

Key policy documentation was also provided for the Council's information and an open invitation was extended to all Council members to attend upcoming training exercises in New Zealand.

Outcome: Noted the work New Zealand SAR has progressed in MRO incident planning and exercising; and their invitation to attend upcoming exercises as desired.

2. Night Search Parameters

AMSA provided a verbal update detailing information about the incompatibility of some night vision devices (NVDs) and light-emitting diodes (LEDs), which had been discussed at the 2017 SAR Technology Working Group meeting.

The International Maritime Rescue Federation (IMRF) became aware of a problem concerning the use of LEDs in some safety and emergency equipment, in place of traditional incandescent bulbs. It was reported that, in some cases, LEDs in use in such equipment are at best only faintly visible to NVD systems. IMRF made a report to the International Civil Aviation

Organization (ICAO) and International Maritime Organization (IMO) Joint Working Group on the Harmonisation of SAR on this matter.

Users of night vision devices in the SAR community have noticed that certain LED lights are difficult to see when using NVD, although bright and clear to the naked eye. During an exercise and testing of new rescue equipment in Denmark, reported to the IMRF, it was found that a new type of 'electronic distress flare' was only faintly visible when NVD were used, especially at distances of more than 100 metres. However, according to the manufacturer, the electronic flare was: "a safe and long-lasting solution to visual signalling in an emergency, giving excellent visibility for SAR aircraft".

Crew using night vision equipment primarily 'see' in the near-infrared spectrum. Most visible light is blocked by the equipment to prevent cockpit and other nearby lighting saturating the imaging system. Unlike traditional bulbs, LEDs have a narrow band of emission and do not emit infrared energy. Although they are clearly visible to the naked eye, they can 'disappear' in night vision equipment.

The blocking filters in current night vision equipment have the unintended effect of making some LED lights invisible or only faintly visible, especially at distance. Most NVDs approved for civil aviation are only sensitive to energy ranging from 665 to about 930 nm.

The problem has been addressed by some manufacturers, with 'NVD-friendly' technology included in some LED lighting. One safety light manufacturer, for example, has solved the issue by introducing an 850 nm infrared 'peak intensity', which renders the LEDs visible to night vision systems.

It was confirmed that the new Challenger aircraft can fly at low altitude at night and is fitted with a high definition camera at the front and NVD compatible lights.

Jurisdictions agreed to provide parameters presently used for search assets if available and that further discussions around night search parameters would be discussed at the next SAR Technology Working Group in 2018.

Outcome: Noted the information paper regarding incompatibility of some LED lights and night vision goggles (NVG) and AMSA will provide a further update if available at the first teleconference in 2018 (action).

Outcome: Noted AMSA's work to enhance Australia's Night Search Planning and Techniques through practical benchmarking of electronic sensors, including night vision devices. This will encompass work by AMSA and Cobham to develop night search capability guidance parameters to support Australia's National SAR System. Jurisdictions agreed to provide parameters presently used for search assets if available (action).

3. Medical evacuations

AMSA presented WP4.4.3 to provide an update on issues related to medical evacuations.

Australia, by being party to International Conventions related to search and rescue, has accepted the obligation to provide aeronautical and maritime SAR coordination services within its search and rescue region.

In line with this, the International Maritime Organization (IMO) in 2000, noted that the definition of 'SAR services' includes provision of medical advice, initial medical assistance or medical evacuation. Consistent with this, both the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR) and Australia's NATSAR manual define a 'Search and rescue service' to include medical evacuation.

In 2016, Australia reviewed its interpretation of our obligations in regard to medical evacuations for SAR and confirmed that the obligation remained for Australia's SAR service to provide emergency assistance, including medical assistance and/or evacuation, to persons in distress at sea.

For several years in Australia there have been complexities identified in the response to Medevacs. There are many elements to this but mostly the complexities manifest when the SAR system, either on the Commonwealth or State/Territory level, and the State/Territory medical retrieval services are not necessarily aligned on issues related to medical evacuations.

At the 40th NATSAR Council meeting in 2016 a working group was agreed to be established to discuss the topic in order to provide clearer guidance to SAR jurisdictions on the matter. This working group was put on hold pending the review of Australia's interpretation on the obligation under SAR for medical evacuations which has now been reaffirmed.

The current NATSAR manual does not make reference to MEDEVAC procedures and this was recognised as an organisational risk. Further it was agreed that the procedure needs to be understood in each state and referred to in the NATSAR manual accordingly.

In further reviewing the NATSAR manual content it is considered that it may be necessary to add and or amend the document to provide better clarity on Medevacs and appropriately refer to the link to State/Territory health and medical retrieval arrangements as appropriate.

Additionally, although the working group will be able to discuss consistent national SAR issues relevant to Medevacs, other issues are specific to each State/ Territory and can only be effectively managed within each respective jurisdiction as required.

Outcome: It was agreed to establish a Working Group with representatives from WA, QLD and VIC Police and other jurisdictions as required to develop an appropriate reference in the National SAR Manual (and any other relevant documentation) about state/territory medical evacuation arrangements. This will include clarity of the Commonwealth and State roles (action).

4. Counter Terrorism/Security and the National SAR Arrangements

The meeting discussed the inter-relationship of the national SAR arrangements with Policing and other Defence procedures/protocols for SAR incidents that have a possible security aspect. Council members noted that this was also a topic of discussion at a recent national counter terrorism workshop.

Members discussed the role of the different SAR Authorities in this instance and whether the procedures in the NATSAR Manual for requesting assistance of Defence assets are applicable in this context. Members were reminded that a general awareness of security is required when in a coordinating role.

Outcome: Agreed for the Secretariat to identify references in the National SAR Manual related to SAR incidents involving security / law enforcement aspects (action).

Outcome: Agreed for ADF to review the *Defence Assistance to the Civil Community* (DACC) form, which is used by other jurisdictions that require ADF assistance during a SAR response operation, to determine whether it also applies for incidents involving a security aspect (action).

5. Succession planning

Council members repeatedly raised the issue of retaining trained SAR staff due to reasons of natural attrition and staff rotation/transfer, which is common practice within the Police. The impact on resourcing is significant and given the specialised nature of SAR, it is difficult to replace people with extensive experience.

NSW reported that succession planning has become a core focus as part of their strategic planning to ensure they maintain adequate levels of staff capability on an ongoing basis.

Suggestions were made from jurisdictions of some ways to ameliorate this, including:

- Continued support and attendance of students and Directing Staff at the National SAR Manager's Course.
- Staff secondments to other organisations to broaden skill levels and cross pollination, e.g. sending someone to the JRCC or other State SAR Authorities for a period of time.
- Increasing the number of observers at NATSAR Council and other meetings to broaden the level of understanding of the national SAR arrangements
- Early notification to the NATSAR Council Secretariat team about new Council delegates to facilitate an adequate briefing and introduction meeting.

Outcome: Noted the potential risk of losing trained SAR professionals through natural attrition and agreed for the Council to emphasise to Commissioners the importance of effective succession planning to maintain experience levels across jurisdictions (action).

Outcome: Noted the invitation from NSW Police to share their recent work in succession planning of SAR experts to other jurisdictions.

Session 5: National SAR Capability – SAR Technology

Name of session

SAR Technology Working Group Report

Search Technology

Mobile Phone Technology

Distress Alerting Technology

Weather Technology

Integrated Operations Technology

Remotely Piloted Aircraft Systems

Other Technology Presentations

Working paper(s)

WP 5.1 SAR Technology Working Group

WP 5.2.1 Lost Person Behaviour

WP 5.2.2 Dead Person Behaviour

WP 5.5 Weather and Search and Rescue

WP 5.6 Integrated Operations Technology

WP 5.7 Remotely Piloted Aircraft Systems

Objectives

The objective for this session is to discuss and review different initiatives (national and or jurisdiction specific) to enhance national SAR capability from a SAR technology perspective; and share insights / lessons learnt that might be relevant for other jurisdictions.

Discussion points

Session 5.1 SAR Technology Working Group Report

Paper 5.1 was presented, giving a history of the SAR Technology Working Group and the outcomes from the most recent Working Group meeting in August 2017.

The Working Group was established in response to the growth of emerging technology that is impacting SAR in Australia, from both a practitioner perspective and also for people requiring a response from SAR services. The Working Group is also important for the Council to achieve its strategic objective about keeping abreast of SAR Technology.

The purpose of the Working Group is to 'identify and review new technology that has implications for SAR and recommend further discussion of those technologies deemed to be useful or relevant at a national level to the NATSAR Council'.

Over 50 technologies were either noted or discussed at the Working Group, and these were taken to the 2017 Police National SAR Managers Course (NATSARMC) for further review and subsequent discussion at NATSAR 41.

Outcome: Noted the second convening of the SAR Technology Working Group, August 2017, involving the Directing Staff of the National Police SAR Manager's Course and agreed to the continuation of the working group in 2018.

Outcome: Noted the Working Group's progress in capturing and evaluating current and new technologies to determine possible national benefits with all presentations at the annual meeting resulting from the Working Group's findings.

Session 5.2 Search Technology

1. POLSAR

Senior Constable Phillip Downes from NSW Police gave a presentation on POLSAR - a NSW Police Mapping program utilised for land SAR operations. The program was also presented at the SAR Technology Working Group and members requested that it be presented to the Council at NATSAR 41 to consider for national application.

Outcome: Agreed for jurisdictions to consider the application of POLSAR, or products that provide similar functionality, to enhance land search capability as required; and to further discuss at the first teleconference in 2018.

2. AVENZA

F/Constable Carmen Tootell from the AFP in conjunction with Emergency Services Agency (ESA) Mapping presented a case study of a search for a missing female using AVENZA technology.

Outcome: Noted the presentation on Avenza Maps in relation to 'dynamic search mapping' and agreed for jurisdictions to consider its use by their respective teams as a standalone technology, or in conjunction with POLSAR.

3. Fleetsu

Senior Sergeant Alistair Nisbet from Victoria Police presented on the application of Fleetsu for tracking assets, noting the annual cost of around \$30km, depending on usage.

Outcome: Agreed for jurisdictions to consider the application of Fleetsu, noting the benefits of this technology as presented by Victoria Police;

4. Lost person behaviour

Senior Sergeant Jim Whitehead presented WP 5.2.1 advising that the Lost Person Behaviour (LPB) database was progressing well with over 250 entries for the last financial year. Jim encouraged members to continue to add to the database.

As part of the continual improvements to the National SAR Manual two further categories of Lost Person Behaviour have been added to the database:

- 1) Prospectors
- 2) ADD, ADHD, Aspergers and Autism.

Up until recently there has not been sufficient data to make any meaningful statistical analysis on the characteristics, tendencies or distances travelled by persons in these two categories. In the instance of prospectors this was also due to a relatively high percentage that were never found, making it difficult to determine what they did prior to perishing.

ADD, ADHD, Asperger's and Autism have been grouped together, and although the underlying medical issues are different their behaviour have a lot of similarities.

Outcome: Noted the ongoing development of the Lost Person Behaviour database with over 250 entries in the last financial year; and the continual refinement of guidance in the NATSAR Manual from Senior Sergeant Jim Whitehead based on experience in this field.

5. Unlocated Victims of Violent Crime

Senior Sergeant Jim Whitehead presented WP 5.2.2. titled 'Exploring the location of undiscovered victims of violent crime'. Similar to the LPB database, members were encouraged to provide data for input into this database noting that to date just 3 jurisdictions had responded.

While not technically SAR (not searching for a person in distress), evidentiary searches are becoming more common as the expectation from both the Courts/Coronial systems and investigation teams is that field evidence is located in a systematically and sound manner.

Due to the skill sets of land search coordinators they are increasingly being requested to coordinate the search for evidence discarded by offenders.

It was a natural progression from evidence to undiscovered victims of violent crime. Research undertaken to date has revealed that this project is a world first. The use of victims to profile offenders has been in use for over two decades with some success.

The use of offenders to identify victim locations has never been done on a national basis. Three small studies were conducted in the early 2000's in Finland, Germany and Canada/USA using sexual serial murders.

Serial murders are a very small subset of killers in Australia, with only 32 recorded since 1862, hence the use of all homicide incidents between 2004 and 2016.

Inquiries with both Scotland Yard in the UK and the FBI at Quantico, USA, has confirmed the uniqueness of this project. Both have also indicated an interest in the research methodology and any subsequent findings.

To date five requests have been made for advice. As a result, four deceased persons have been located using the data.

As part of this project a study was undertaken of the current land search methods as contained within the National Land Search Operations Manual. The findings indicated that almost all coordinators of land SAR incidents (87%) used the strategies and methods contained in the

manual. Of these there was a 97% success rate in locating the person. For those coordinators who stated they did not use the manual the overall success rate was significantly lower in locating the person alive (79%).

In a manner similar to LPB this database does not indicate exactly where to look, but provides distances from the homicide scene, disposal patterns, transport methods and concealable methods. From this, search areas can be deduced based on terrain, access, time available and physical ability of the offender.

Success has a flow on effect for the SAR system, provides good publicity, enhances the SAR system, increases community confidence, provides a small measure of closure for the family and friends of the deceased and increases the chances of a successful prosecution.

Outcome: Agreed for correspondence to Commissioners would seek support to provide data for the research on 'Unlocated Victims of Violent Crimes', noting that requests for advice from this research has already resulted in the location of four victims of historic crimes.

Session 5.3 Mobile Phone Technology

Simon McDonald from Cobham gave a presentation that discussed the capabilities of the Challenger jets, particularly focussing on electronic tools for search and mobile phone locating technology.

NSW Police presented on mobile phone locating technology, providing a demonstration of the Marine Rescue NSW mobile application, which is being considered for implementation in WA.

Council members noted that the number mobile apps with SAR functions, particularly distress alerting and location/position finding functions, are continuing to grow. The Secretariat and members are often asked to endorse various apps. However, noting the inability of government agencies to endorse commercial entities, it was agreed that the Council would instead endorse a list of functions that a SAR app should include.

Outcome: Agreed for the Secretariat, NSW Police, Marine Rescue NSW and the NVMSARC to liaise about how to progress the use of the Marine Rescue Application in other jurisdictions;

Outcome: Noted the identification of SAR related mobile apps currently on the market and the initial list of recommended functions for SAR apps; and agreed for the Secretariat to distribute this list for members' consideration with the intention to finalise and publish on the NATSAR Council website as a benchmark / minimum recommended standard for developers of future apps.

Session 5.4 Distress Alerting Technology

John Ophel from AMSA presented on recent developments associated with distress alerting technology including:

- a. Technology emerging from COSPAS SARSAT
- b. MEOSAR update
- c. Vehicle Distress Alerting Technology

Outcome: Noted the increased usage of PLBs in a range of scenarios that are not necessarily SAR related, and agreed to analyse incident statistics that are not related to a real distress to determine requirements for possible further action.

Outcome: Noted discussions and correspondence between AMSA, Cospas-Sarsat, the Australian Communications and Media Authority (ACMA) and National Emergency Communications Working Group (NECWG) regarding proposed 'vehicle crash alerting' technology for introduction into Australia; and agreed for AMSA to maintain a watching brief and update the Council accordingly.

Session 5.5 Weather Technology

Neal Moodie from Bureau of Meteorology provided an update on weather related aspects to SAR, particular focussing on marine weather services for boaters and safety education including:

- a. **Hazardous surf warning product for NSW and QLD** - available through the BOM app and also the marine radio
- b. **BOM's Marine Weather Knowledge Centre** - provides a one-stop shop for information about marine weather hazards, how to utilise marine services and reference education material.
- c. **MarineLite** – BOM has developed a "MarineLite" webpage for Australia's marine forecasts and warnings to avoid the high cost of satellite downloads if this information is obtained online.
- d. **HF radio – updated software to remove truncation of broadcasts** - Kordia installed a software update on the HF radio service to remove the fixed broadcast time for warnings (Oct 17). This allows warnings to wait until the forecast broadcast has completed, stopping the forecast being truncated. This change will ensure mariners have access to relevant forecast information for situational awareness.

Neal then presented on new tools supporting search and rescue including warning maps and a new hazardous wind onset map. Neal also talked about the continued work to integrate weather data into SARMAP for effective drift modelling.

The SARMAP Working Group has now moved out of the development phase and into a maintenance phase. The most recent meeting held on 8 August 2017 focused on updates to the mapping program and ways to keep abreast of training and new amendments. The last 3 years of the WG has delivered around 15 developments to the system. These are now all complete.

The Council acknowledged the contribution of Sasha Zigic from RPS APASA in assisting the Working Group to form a national approach to the ongoing development and application of SARMAP.

Session 5.6 Integrated Operations Technology

AMSA presented WP 5.6 to provide information related to the operational benefits in the use of CAD Electronic Messaging System (ICEMS) standard messaging between AMSA and State and Territory SAR authorities. Also to seek Council members' endorsement for AMSA to proceed in the development and use of ICEMS as the preferred method for SAR coordination information communications between authorities, where available.

Outcome: Agreed for AMSA to progress the development of a protocol to assist the flow of information between AMSA and the Police using the Inter-CAD Electronic Messaging System (ICEMS). This will occur through the National Emergency Communications Working Group (NECWG) with NSW Police agreeing to be the partner agency for testing.

Session 5.7 Remotely Piloted Aircraft Systems (RPAS)

AMSA presented WP 5.7 to provide an update on the continuing actions being undertaken by AMSA in regards Remotely Piloted Aircraft Systems (RPAS).

RPAS have characteristics, such as extended endurance and the lack of on-board crew, that make them ideal platforms to take on many tasks including those considered higher risk, such as searching in remote or inhospitable environments.

It is expected that RPAS will play an important role in how AMSA performs its functions in the future. AMSA's SAR and pollution response functions provide for circumstances where the use of RPAS is anticipated could deliver many safety and economic advantages. While AMSA acknowledges the potential benefits of this emerging technology, with this RPAS technology comes significant challenges for the safe integration of these aircraft into airspace that is shared with traditional piloted aircraft.

The environment that AMSA performs its functions, particularly SAR and pollution response, similar to other jurisdictions is high pressure and time critical, with aircraft operations that are at altitudes that are often below maximum 'standard RPAS operating conditions' altitude and where most 'near misses' with RPAS have occurred. The safety of response personnel and those persons that are being responded to is paramount. The safe coordination of aviation assets, including RPAS that are being used in an incident is critical to that safety. Awareness of other aircraft including any transient RPAS by both the aviation assets deployed in the incident and coordination authorities is also essential.

As part of AMSA's continually reviewing its operational risk governance framework, AMSA is an active member of CASA's Unmanned Aircraft Standards sub-committee (UASSC). The UASSC is responsible for considering specific UAS (or RPAS) regulatory issues and proposals. The UASSC provides the forum in which UAS industry members can provide their comments and recommendations to CASA on specific technical issues and proposals for the development of regulations, standards and associated advisory material.

AMSA will continue to be active in appropriate forums to ensure the regulatory frame work that governs RPAS is, where possible, consistent with the existing regulatory environment of manned aircraft operations and provides or supports safety outcomes that are 'not less safe than manned operations'.

Outcome: Agreed that AMSA will continue its representation on the National CASA Working Group for Unmanned Aerial Vehicles (UAV) and provide considerations on behalf of the Council as required.

Session 6: National Safety Messaging

Name of session

Land SAR Stakeholder Engagement

Collective approach to messaging for the maritime and aviation community

Collaboration with Australia and New Zealand Safe Boating Education Group (ANZSBEG)

Working paper(s)

WP 6.1 National Messaging for Land SAR Stakeholders

Objectives

To discuss engagement approach with these two national forums and discuss options for engagement with land stakeholders.

Discussion points

6.1 Land SAR Stakeholder Engagement

During the 40th NATSAR Council annual meeting, AMSA discussed their engagement approach with national SAR stakeholder forums (Australian and NZ Safe Boating Education Group and the Australian SAR Consultative Forum). AMSA has historically focussed its engagement on marine stakeholders and produces a set of SAR incident statistics to support this. These statistics are normally shared with maritime safety agencies and as requested to Police jurisdictions on an ad hoc basis.

AMSA agreed to provide jurisdictions with similar statistics for land SAR incidents, particularly relating to beacons, to assist Police engagement with land stakeholders.

The Secretariat proposes to provide the Council with the below information package to share with their respective communication teams as required and to inform safety engagement campaigns within the land SAR community.

- a) **Statistics map** – The map will include a state by state breakdown of both beacon registration statistics and search and rescue incident statistics.
- b) **Trend Graphs** – Trend graphs demonstrate SAR incident and beacon activity over an extended period of time. They can also be used as an indicator of the impact of ongoing education campaigns SAR incidents as it relates to beacon statistics.
- c) **Plot Graph** - To identify high incident areas in each state across a range of land based activities (4WD, bushwalking, etc). This may assist in identifying areas of concentrated activity and inform more geo-targeted education campaigning.
- d) **Information Report** – To highlight trends, issues, updates etc. that AMSA has identified and would be relevant to states/territories.

The Secretariat will prepare the information pack annually, reporting on the financial year. This will be sent via the NATSAR distribution email list and will also be made available on the NATSAR Council member's area. Members can also nominate another point of contact in Police media (or equivalent) to ensure the information is incorporated into broader Police education messaging. The nominated point of contact will be included on the email distribution list to receive the information package.

The Secretariat will seek feedback and/or comments to adjust the information where possible, to ensure it remains contemporary and useful.

Outcome: Agreed for the Secretariat to provide jurisdictions with land SAR incident analysis information to assist in developing effective land SAR response plans; and to support engagement and safety messaging with land based stakeholders (action).

Outcome: Discussed the possibility of inviting a representative from a land based SAR response group, similar to the National Volunteer Marine SAR Committee (NVMSARC), to be an observer on the Council; and agreed for jurisdictions to conduct additional research and consider this for further discussion at the next teleconference in 2017 (action).

6.2 Collective approach to messaging for the maritime and aviation community

6.3 Collaboration with Australia and New Zealand Safe Boating Education Group (ANZSBEG)

The Secretariat advised that AMSA are represented on the Australian and New Zealand Safe Boating Education Group (ANZSBEG), along with the marine safety agencies of each jurisdictions and other organisations responsible for marine safety.

This group is very proactive in sharing information and collaborating to promote consistent messaging and safety campaigns across Australia. AMSA has increased its engagement with the aviation industry to ensure similar targeted messaging at recreational aviators.

The meeting discussed correct beacon disposal as an important message to the community, as tasking assets to non-distress situations is very costly and also diverts assets away from potentially life threatening distress alerts.

The Secretariat agreed to the following outcomes in regards to beacon disposal.

Outcome: Discussed the increasing trend of beacon activations resulting from incorrect disposal, noting the significant cost to the Australian SAR system and the diversion of search assets away from possible real emergencies.

Outcome: Agreed for the Secretariat to send jurisdictions the current advice for beacon disposal from AMSA's website, noting that each State and Territory has different local arrangements in place (action).

Outcome: Agreed for AMSA to further explore national disposal opportunities, similar to the previous arrangement with Battery World, which ceased in 2014 (action).

Outcome: Agreed for AMSA to discuss with the Australia and New Zealand Safe Boating Education Group (ANZSBEG) the possibility of a national campaign for correct beacon disposal ahead of the Christmas summer period (action).

Session 7: Council Administration and Development

Name of session

NATSAR Council Business Plan and Risk Register

Charter

Australian SAR Award

Proposed amendments to NATSAR Manual

NATSAR Council action table

Format of the Council meeting

Next Annual NATSAR Council meeting

Working paper(s)

WP 7.2 NATASR Council Charter (draft)

WP 7.3 National SAR Awards Sponsorship Briefing

WP 7.4 NATSAR Manual Amendment Schedule

Objectives

To address any administration matters to facilitate the efficient ongoing operation of Council and to determine the next meeting arrangements.

Discussion points

7.1 NATSAR Council Business Plan and Risk Register

The Secretariat presented an updated Business Plan for 2017-19, including all of the initiatives agreed to during the last three day meeting. Members reviewed the document in line with agreed outcomes and provided in principle agreement. The Business Plan will be circulated and finalised at the first teleconference following the meeting.

Outcome: Confirmed the Business Plan objectives and goals as the ongoing strategic framework for the NATSAR Council with one change - the removal of priority 3.4, noting that it reflects an outcome of the other three priorities under Strategic Objective 3.

Outcome: Noted that the Secretariat will update the Business Plan to reflect initiatives that the Council agreed to deliver in the 2017-2019 period and endorse the Business Plan at the teleconference in December 2017, in conjunction with the final statement of meeting outcomes.

7.2 Charter

As agreed at the 2016 annual meeting, the Secretariat has documented the Council's operation in a Charter, describing roles and responsibilities and other key processes for the NATSAR Manual, the IGA, the Australian SAR Award and others.

Outcome: Agreed for Council members to review the final draft of the Charter and provide feedback to the Secretariat by 30 November 2017. The intention is to finalise the Charter at the December 2017 teleconference and upload it in the members' area of the NATSAR Council website.

7.3 Australian SAR Award

The Secretariat presented WP 7.3 to provide information and obtain Council members' endorsement to formally seek sponsorship for the Australian National SAR Award event from suitable commercial organisations for FY 18-19, in line with all Council members' related policies.

AMSA, in its role as Secretariat, is currently responsible for costs related to and the planning and coordination of the National SAR Award event. The event is traditionally held on the second night of National SAR Council meeting and follows on from a formal Award nomination, voting and selection process.

AMSA has been approached by commercial organisations involved in SAR regarding sponsoring the Australian Search and Rescue Award event. This was previously raised during the 40th NATSAR Council meeting where it was agreed that the Secretariat would investigate possible sponsorship and/or grant opportunities available to the Council, noting that jurisdictions' may have their own policy and procedures around corporate sponsorship that need to be considered.

In line with AMSA's policy, sponsorship of the SAR Award event and Award itself is authorised. In consideration of other jurisdiction's related policies, the Secretariat will develop a Sponsorship process for consideration by Council members in consultation with their organisations. It is intended the sponsorship opportunity will be made available to all interested parties which are deemed suitable through an open tender process. They will then be placed on a suitable panel to be considered for future Award event sponsorship on a rotating basis, most likely on a 2 year interval.

Interested Council members will be invited to be on the selection panel for the sponsorship. Additionally, every two years ahead of the annual meeting the Council will discuss and decide on an appropriate sponsor for the following two year event cycle.

It is considered that the following benefits will be realised by the Council as part of this process:

- Broadening the profile of the national award amongst industry
- Broadening the profile of search and rescue
- Financial support
- Broadened promotion opportunities
- Industry networking

The sponsoring organisation will gain the following benefits from their involvement in the National SAR Award event:

- Corporate social responsibility recognition
- Media promotion associated with the Award
- Logo inclusion on Award related campaign material
- Brand awareness
- Industry networking

Outcome: Noted AMSA's paper (WP 7.3) in regards to obtaining external sponsorship for the Australian SAR Award event and:

- a. Agreed for jurisdictions to obtain endorsement from their respective organisations for sponsorship in line with their respective policies; and
- b. Agreed for the Secretariat to develop the proposal to seek sponsorship and circulate it to Council members for approval prior to releasing it externally.

7.4 Proposed amendments to NATSAR Manual

The Secretariat presented WP 7.4, outlining proposed amendments to the NATSAR Manual since the last meeting. Some amendments were approved and it was agreed others needed further review and consideration. The Secretariat will incorporate approved amendments into the next published edition in 2018. Others will be progressed and submitted to the first teleconference of 2018.

Outcome: Agreed to some of the proposed NATSAR Manual amendments through the annual amendment cycle, which the Secretariat will incorporate into the next published edition on 7 February 2018. The amendments requiring further work will be progressed by the nominated SAR Authority and submitted for approval at the first teleconference in 2018.

7.5 NATSAR Council action table

The Secretariat advised that all of the actions in the table had been addressed throughout the course of the meeting and will be updated in the master copy of the action plan that is kept in the member's area of the website.

7.6 Format of the Council meeting

The meeting discussed whether the existing format of the three day meeting was still suitable, noting that the meeting time was initially aimed at reducing travel costs by allowing travel on the morning of the first day and afternoon of the last day. However, most members have to travel on the day before anyway due to flight schedules, so it was agreed to trial a 2 day meeting structure in 2018 with the formal dinner remaining on the second night and return travel on the third day.

Members also agreed that with the increased focus on SAR Technology, there would be value in having separate strategic and operational sessions for half a day to maximise the attendance of both senior level delegates and SAR Coordinator / operational members.

Outcome: Agreed to trial a new meeting format across 2 full days, including a split session for strategy and technology on Day 2 in order to maximise the value obtained from both senior and operational representatives in attendance.

7.7 Next Annual NATSAR Council meeting

The NATSAR Council Chair, Toby Stone concluded the meeting by recognising the collaborative nature of the Council and its importance in progressing search and rescue issues and initiatives, which continues to facilitate consistency and interoperability between all jurisdictions of the Australian SAR system.

The 42nd NATSAR Council annual meeting will be held in the Darwin in September 2018, hosted by the Northern Territory Police.

Outcome: Agreed the Secretariat will formally write to the Northern Territory Police regarding their hosting role for the 42nd NATSAR Council annual meeting in 2018, noting the proposed change of timing to late September / early October.

Outcome: Agreed for the Secretariat to schedule a teleconference end November / beginning of December to review the outcomes and instigate progress on agreed actions, in order to maintain momentum before 2018.

Session 8: Any other business

Working paper

WP 8.1 Volunteer Search Dog Capability

Objective

To address any other business tabled for review and discussion by the NATSAR Council.

Discussion points and outcomes

8.1 Volunteer Dog Capability

Jim Whitehead presented paper 8.1 on behalf of Sue Pritchard regarding the use of search dogs in SAR.

Internationally, volunteer search dog capabilities are an integral part of search response. In Australia, these capabilities are evolving and gaining recognition as a valuable resource to support search teams.

With increasing numbers of searches involving individuals with dementia, autism, or who are despondent (and where passive or active evasion of search teams is a feature), volunteer search dogs are proving to be key factor in successful search outcomes.

In 2014, the Attorney General's Department (AGD), through Emergency Management Australia, recognised the growing development of volunteer search dog capabilities for area (missing persons) search and urban search and rescue (USAR) in Australia. With the collaborative efforts of volunteer search dog organisations and jurisdictional emergency service organisations, a framework was developed to progress future national development. The framework was presented in the report:

A Strategic Framework for Volunteer Search Dogs in Australia - A guide for future action. <https://www.ag.gov.au/EmergencyManagement/Emergency-management-capability/Documents/Strategic-Framework-Search-Dogs.pdf>

Building on the AGD report, a Churchill Fellowship was awarded to research to inform capability development based on international best practice. The Churchill Fellowship report: "To better integrate volunteer canine search capabilities with emergency services for search response" incorporated research undertaken in 2016 with emergency services personnel and volunteer search dog groups in the United Kingdom, Ireland, Switzerland, New Zealand and the United States.

<https://www.churchilltrust.com.au/fellows/detail/4065/Susan+Pritchard>

One of the gaps identified in the Churchill Fellowship research was the lack of reference to volunteer search dog capabilities in the current content of the Australian Land Search Operations Manual. The current version identifies the value of utilising search dogs in a range of search scenarios, however is limited to describing the benefits and constraints of Police search dogs.

The updated content is intended to broaden the description of search dog resources to introduce a range of search dog capabilities that currently exist or are under development in Australia, in both emergency service and private organisations. The content briefly outlines how the various search dog capabilities can be effectively utilised in search operations, including Air Scenting Area Search, Ground Disturbance Tracking, Scent Specific Tracking, Avalanche, Water Search, Cadaver/Human Remains Detection and Urban Search and Rescue.

Outcome: Noted that Senior Sergeant Jim Whitehead (QLD Police) will propose content for the NATSAR Manual regarding search dog capability, as per the paper presented on behalf of Sue Pritchard (WP 8.1).

8.2 Dementia related marine SAR incidents

Victoria Police Marine Investigation Unit enquired whether other jurisdictions are seeing a trend in dementia, or other related factors, in marine SAR incidents as well as land SAR.

The enquiry comes from the perspective that police are (a) the State level co-ordinating agency for marine SAR and (b) in this role the water police units are the main interface between the public and the regulators concerning marine safety in general, so are therefore best placed to address it as required.

The Secretariat agreed to distribute the full enquiry from Victoria Police to Council members so they could consider the request for information and provide directly to the nominated point of contact.

Outcome: Agreed for jurisdictions to provide any relevant information regarding a possible trend of dementia related incidents in the marine environment (raised by VIC Police).

National Search and Rescue Award

As an important component of the annual meeting, the NATSAR Council hosted the 2017 Australian Search and Rescue Awards event at the National Portrait Gallery. To recognise the importance of both professionals and non-professionals and the role they play in the search and rescue system, the award was separated to recognise contributions from both categories. Presented by AMSA CEO, Mick Kinley, the 2017 Australian Search and Rescue Award was presented to the following recipients:

Professional Search and Rescue Award – New South Wales Police Force Marine Area Command Nemesis crew, who came to the rescue of two sailors whose yacht capsized off Sydney in one of the most publicised rescues of the year;

Non-professional Search and Rescue Award – Port Phillip Bay fisherman Wayne Kelly, who saved the lives of three kayakers upturned in the bay with no lifejackets;

Commendation Award – Western Australia Department of Fire and Emergency Service RAC Rescue helicopter 651 crew, who battled 90 km/hour winds and fading light to winch an injured cray fisherman in Israelite Bay to safety.



Attachment 1 - List of key outcomes agreed at the 41st NATSAR Council Meeting

A summary of the agreed key outcomes from the 41st NATSAR Council annual meeting are outlined below. Subsequently, a formal letter outlining the most significant outcomes will be sent to Commissioners of each SAR Authority by 22 December 2017 and a full meeting report will be provided by 31 January 2018 for review and feedback.

NATSAR Council Strategic Development and Governance

2. Reviewed the Council's achievements from the previous 12 months as documented in the NATSAR Council Performance Report, noting the significant number of activities delivered to progress the ongoing development of the Australian SAR system.
3. Noted that the revised Inter-Governmental Agreement (IGA) 2017 was progressed to obtain Ministerial signature from the Commonwealth and each State/Territory, with three confirmed signatures from the Commonwealth, NSW and Tasmania. The IGA will be circulated and uploaded on the website once all signatures are received.
4. Noted the potential risk of losing trained SAR professionals through natural attrition and agreed for the Council to emphasise to Commissioners the importance of effective succession planning to maintain experience levels across jurisdictions.
5. Noted the invitation from NSW Police to share their recent work in succession planning of SAR experts to other jurisdictions.
6. Confirmed the Business Plan objectives and goals as the ongoing strategic framework for the NATSAR Council with one change - the removal of priority 3.4, noting that it reflects an outcome of the other three priorities under Strategic Objective 3.
7. Noted that the Secretariat will update the Business Plan to reflect initiatives that the Council agreed to deliver in the 2017-2019 period and endorse the Business Plan at the teleconference in December 2017, in conjunction with the final statement of meeting outcomes.
8. Agreed for Council members to review the final draft of the Charter and provide feedback to the Secretariat by 30 November 2017. The intention is to finalise the Charter at the December 2017 teleconference and upload it in the members' area of the NATSAR Council website.
9. Noted AMSA's paper (WP 7.3) in regards to obtaining external sponsorship for the Australian SAR Award event and:
 - a. Agreed for jurisdictions to obtain endorsement from their respective organisations for sponsorship in line with their respective policies; and
 - b. Agreed for the Secretariat to develop the proposal to seek sponsorship and circulate it to Council members for approval prior to releasing it externally.

National SAR Training

10. Discussed the proposed way forward to develop a national SAR training Framework and agreed the following outcomes:
 - a. Noted the importance of the National training approach to the National SAR System's ability to function well at an operational level and to maintain a common language between SAR practitioners to work together cohesively on a national basis;
 - b. Agreed to the proposed development of a National SAR Training Framework with the aim of designing a comprehensive SAR curriculum based on the needs of the different stakeholders;
 - c. Noted that AMSA will engage a curriculum designer to design an integrated curriculum, with the view to leverage, where possible work already completed (i.e. the National SAR Managers course);
 - d. Noted AMSA's intent to develop a graduated program including an Advanced Diploma and specialised courses for broader SAR stakeholders;
 - e. Agreed that in order to facilitate the completion of the National SAR Training Framework and to avoid interrupting the planning and preparation of the 2018 National Police SAR Managers Training Course, the course will be run in the same manner as this year under the Queensland RTO in Canberra, on behalf of the National SAR Council with administrative support from AMSA; and
 - f. Noted that this arrangement is only suitable as a short to medium term option and the preferred arrangement is for AMSA RTO to resume responsibility for providing the national course.
11. Noted the National Police SAR Manager's Course Report, presented by the Course Director (Sergeant Meacham King, NT Police), and agreed to each of the recommendations in the actions list, including the following:
 - a. A letter be sent early 2018 by the Chair of the NATSAR Council, to each state and Territory police commissioner requesting the release of directing staff and student nominations for the next NATSAR Managers Course;
 - b. Agreed that the Queensland Registered Training Organisation (RTO) will run the 2018 National SAR Managers Training Course in Canberra on behalf of the National SAR Council with administrative support from AMSA; and that AMSA will cover the administration fee associated with assessing and issuing the Advanced Diploma (\$300 per student);
 - c. Supported the intention to have a NZ instructor at next years' course on the provision that the course costs per student remain the same or similar to previous years;

- d. Agreed that Directing Staff will continue to schedule their arrival in to Canberra to allow attendance at the NATSAR Council annual Working Group meetings for SAR Technology and SARMAP;
 - e. Agreed that a teleconference for Directing Staff is facilitated by the Course Director in February 2017 to discuss course curriculum, training issues and to provide an update on nominated tasks; and
 - f. Noted the request for airfares to be booked 6-8 weeks prior to the course to minimise the cost per student.
12. Noted that AFP are looking at suitable course venue options in consideration of possible competing requirements for the AFP venue.

Cross Jurisdiction Resourcing and Training Opportunities

13. Agreed for AMSA to highlight to the Commonwealth (through the Joint Agencies Maritime Advisory Group (JAMAG)) and to the States/Territories, the desire to look at shared resourcing opportunities for night winch operations.
14. Noted that Northern Territory Police will provide a two week tracking course during June–August 2018, which is available for other jurisdictions to attend as required. The Secretariat will advise once the dates have been confirmed, likely in February 2018.
15. Noted AMSA's availability to attend State/Territory SAREX's when possible to enhance interoperability between SAR Authorities and other response organisations.
16. Noted that the overarching cooperative arrangements agreed to by jurisdictions under the IGA supports initiatives such as cross-jurisdictional assistance for SAR operations; and agreed for the Secretariat to highlight this to Commissioners in the letter of meeting outcomes.

National SAR Manual

17. Noted the work of the NATSAR Manual Working Group in completing the merger of the National SAR Manual and the Land Search Operations Manual and agreed the following outcomes:
- a. Agreed to notify key stakeholder groups that the new manual will be published on 7 February 2018, allowing enough time for stakeholders to update links and other respective references to the previous manuals.
 - b. Agreed for Council members to provide any further feedback on the format of the manual by 22 December 2017 to allow enough time for the Secretariat to incorporate changes ahead of the publishing date.
18. Agreed to some of the proposed NATSAR Manual amendments through the annual amendment cycle, which the Secretariat will incorporate into the next published edition on 7 February 2018. The amendments requiring further work will be progressed by the nominated SAR Authority and submitted for approval at the first teleconference in 2018.

Regulatory Implications

19. Agreed for AMSA to facilitate visits from AMSA Liaison Officers to jurisdictions to discuss safety aspects related to the national system.
20. Noted that the Civil Aviation Safety Authority (CASA) is making changes to the regulation CASR Part 138, regarding general standards for aerial work operations for both rotorcraft and aeroplanes and agreed the following outcomes:
 - a. Agreed for the Secretariat to circulate information about CASR Part 138 to Council members;
 - b. Agreed for AMSA to discuss the impact of CASR Part 138 with CASA on behalf of Council members, through normal agency to agency discussions; and
 - c. Agreed to incorporate this issue into the letter of meeting outcomes to Police Commissioners.

Mass Rescue Operations

21. Noted that some jurisdictions, including NSW, have already planned to conduct workshops related to 'mass rescue operations' during 2018 and noted the benefit in progressing joint planning opportunities between the Commonwealth and the States/Territories.
22. Agreed for AMSA to update Council members on work associated with their intended mass rescue operations workshop and invite jurisdictional representatives to attend.
23. Noted the work New Zealand SAR has progressed in MRO incident planning and exercising; and their invitation to attend upcoming exercises as desired.

Land SAR Coordination Working Group

24. Noted the successful implementation of the Land SAR Coordination procedure with all SAR Authorities working in line with the procedure 98% of the time.
25. Agreed for the Secretariat to provide jurisdictions with land SAR incident analysis information to assist in developing effective land SAR response plans; and to support engagement and safety messaging with land based stakeholders.
26. Agreed for AMSA to amend the relevant JRCC instruction to reflect the correct Northern Territory point of contact to ensure SAR Mission Coordinator (SMC) involvement in land SAR incidents.
27. Discussed the possibility of inviting a representative from a land based SAR response group, similar to the National Volunteer Marine SAR Committee (NVMSARC), to be an observer on the Council; and agreed for jurisdictions to conduct additional research and consider this for further discussion at the next teleconference in 2017.

SAR Technology

28. Noted the second convening of the SAR Technology Working Group, August 2017, involving the Directing Staff of the National Police SAR Manager's Course and agreed to the continuation of the working group in 2018.
29. Noted the Working Group's progress in capturing and evaluating current and new technologies to determine possible national benefits, with the following outcomes arising from associated presentations during NATSAR 41:
 - a. Agreed for jurisdictions to consider the application of Fleetsu, noting the benefits of this technology as presented by Victoria Police;
 - b. Agreed for jurisdictions to consider the application of POLSAR, or products that provide similar functionality, to enhance land search capability as required; and to further discuss at the first teleconference in 2018;
 - c. Noted the presentation on Avenza Maps in relation to 'dynamic search mapping' and agreed for jurisdictions to consider its use by their respective teams as a standalone technology, or in conjunction with POLSAR;
 - d. Agreed for the Secretariat, NSW Police, Marine Rescue NSW and the NVMSARC to liaise about how to progress the use of the Marine Rescue Application in other jurisdictions;
 - e. Agreed for AMSA to progress the development of a protocol to assist the flow of information between AMSA and the Police using the Inter-CAD Electronic Messaging System (ICEMS). This will occur through the National Emergency Communications Working Group (NECWG) with NSW Police agreeing to be the partner agency for testing; and
 - f. Noted the identification of SAR related mobile apps currently on the market and the initial list of recommended functions for SAR apps; and agreed for the Secretariat to distribute this list for members' consideration with the intention to finalise and publish on the NATSAR Council website as a benchmark / minimum recommended standard for developers of future apps.
30. Noted the information paper regarding incompatibility of some LED lights and night vision goggles (NVG) and AMSA will provide a further update if available at the first teleconference in 2018.
31. Noted AMSA's work to enhance Australia's Night Search Planning and Techniques through practical benchmarking of electronic sensors, including night vision devices. This will encompass work by AMSA and Cobham to develop night search capability guidance parameters to support Australia's National SAR System. Jurisdictions agreed to provide parameters presently used for search assets if available.
32. Noted the increased usage of PLBs in a range of scenarios that are not necessarily SAR related, and agreed to analyse incident statistics that are not related to a real distress to determine requirements for possible further action.

33. Noted discussions and correspondence between AMSA, Cospas-Sarsat, the Australian Communications and Media Authority (ACMA) and National Emergency Communications Working Group (NECWG) regarding proposed 'vehicle crash alerting' technology for introduction into Australia; and agreed for AMSA to maintain a watching brief and update the Council accordingly.
34. Agreed that AMSA will continue its representation on the National CASA Working Group for Unmanned Aerial Vehicles (UAV) and provide considerations on behalf of the Council as required.

Beacon Disposal

35. Discussed the increasing trend of beacon activations resulting from incorrect disposal, noting the significant cost to the Australian SAR system and the diversion of search assets away from possible real emergencies.
36. Agreed for the Secretariat to send jurisdictions the current advice for beacon disposal from AMSA's website, noting that each State and Territory has different local arrangements in place.
37. Agreed for AMSA to further explore national disposal opportunities, similar to the previous arrangement with Battery World, which ceased in 2014.
38. Agreed for AMSA to discuss with the Australia and New Zealand Safe Boating Education Group (ANZSBEG) the possibility of a national campaign for correct beacon disposal ahead of the Christmas summer period.

Medevac Evacuations

39. Agreed to establish a Working Group with representatives from WA, QLD and VIC Police and other jurisdictions as required to develop an appropriate reference in the National SAR Manual (and any other relevant documentation) about state/territory medical evacuation arrangements. This will include clarity of the Commonwealth and State roles.

National SAR Arrangements and Security Incidents

40. Agreed for the Secretariat to identify references in the National SAR Manual related to SAR incidents involving security / law enforcement aspects.
41. Agreed for ADF to review the *Defence Assistance to the Civil Community* (DACC) form, which is used by other jurisdictions that require ADF assistance during a SAR response operation, to determine whether it also applies for incidents involving a security aspect.

National SAR Research and Analysis

42. Agreed for correspondence to Commissioners seeking support to provide data for the research on 'Unlocated Victims of Violent Crimes', noting that requests for advice from this research has already resulted in the location of four victims of historic.

43. Noted the ongoing development of the Lost Person Behaviour database with over 250 entries in the last financial year; and the continual refinement of guidance in the NATSAR Manual from Senior Sergeant Jim Whitehead based on experience in this field.
44. Agreed for jurisdictions to provide any relevant information regarding a possible trend of dementia related incidents in the marine environment (raised by VIC Police).

Search Dog Capability

45. Noted that Senior Sergeant Jim Whitehead (QLD Police) will propose content for the NATSAR Manual regarding search dog capability, as per the paper presented on behalf of Sue Pritchard (WP 8.1).

Next NATSAR Council Annual Meeting

46. Agreed the Secretariat will formally write to the Northern Territory Police regarding their hosting role for the 42nd NATSAR Council annual meeting in 2018, noting the proposed change of timing to late September / early October.
47. Agreed to trial a new meeting format across 2 full days, including a split session for strategy and technology on Day 2 in order to maximise the value obtained from both senior and operational representatives in attendance.
48. Agreed for the Secretariat to schedule a teleconference end November / beginning of December to review the outcomes and instigate progress on agreed actions, in order to maintain momentum before 2018.