Australian Government

THAI CAVE RESCUE SYMPOSIUM 2018

Symposium Report

EXECUTIVE SUMMARY

On Saturday 23 June 2018, 12 boys and a coach from the Wild Boars Thai soccer team entered the Tham Luang Nang Non cave in Chiang Rai Province, Thailand and were not seen for nine days. An international rescue operation led by the Royal Thai Army found the group on 2 July, 4.7km inside the complex cave system. Up to 1000 personnel from the Royal Thai Army's special operations unit, Navy Seals, Thai government rescue organisations and international responders, including Australia, assisted in the rescue effort. In total approximately 10,000 people were involved in the rescue effort.

On Friday 12 October 2018, The Department of Home Affairs through Emergency Management Australia (EMA) hosted the Thai Cave Symposium (the Symposium). The Symposium brought together representatives from the Australian Government agencies directly involved in Australia's planning and response to the Tham Luang Nang Non Cave Rescue.

Following the recount of experiences and observations from the rescue, an Australian based scenario involving experts from both state and federal agencies and departments was examined, specifically discussing how Australia would respond, should a similar situation occur domestically. This report outlines observations and insights identified from the Symposium under the following key focus areas:

- Leadership, Command, Control and Coordination
- Operations
- Capability and Indemnity
- Culture and Relationships
- Communication and Media

The Australian response was initially composed of a multi-agency team that formed part of the international effort to search and locate the boys. Once the boys were located Dr Richard Harris, an internationally recognised cave diver and anaesthetist was personally requested to support the rescue operation. Dr Harris was accompanied by his long term dive partner Dr Craig Challen. Their role was instrumental in the success of the rescue. This incident highlighted that disaster response is increasingly complex, characterised by new challenges, new actors and a requirement to adapt.

As discussed at the Symposium, special-purpose arrangements can be a creative and a powerful way of responding to specific incidents or circumstances, and should be encouraged in future complex responses. At the same time, special-purpose and temporary arrangements should not replace established procedures for responding to more predictable events such as natural disasters or consular emergencies.

The Australian response to the Tham Luang Nang Non cave rescue was intrinsic in the successful outcome, showcasing international cooperation and collaboration to successfully rescue all members of the Wild Boar soccer team and their coach. The response highlighted a number of considerations that may inform how Australia manages future incidents, both internationally and domestically. The complexity of this event, along with the risk across the strategic, operational and tactical elements of the mission demonstrated a multi-agency response that required cooperation between and from senior decision-making personnel within government right down to the tactical personnel operating on the ground.

CONTENTS

BACKGROUND

In June and July 2018, a widely publicised cave rescue successfully extracted members of the Wild Boars soccer team trapped in Tham Luang Nang Non cave in Chiang Rai Province, Thailand. The team entered the cave on 23 June after soccer practice. Shortly afterwards, heavy rains partially flooded the cave, trapping the group inside.

Efforts to locate the group were hampered by rising water levels and strong currents, and the group was not seen for nine days. A search and rescue operation, led by the Royal Thai Army, with the support of two British civilian cave divers, located the boys and their coach alive on an elevated clay platform about 2.5 kilometres from the mouth of the cave. Rescue organisers discussed various options for extracting the group, including whether to teach them basic diving skills to enable their rescue, wait until a new entrance was found or drilled, or wait for floodwaters to subside at the end of the monsoon season months later. After days of pumping water from the cave system and respite from rain, the rescue teams agreed that there was a small window to attempt the extraction before the monsoon season commenced. This would require the team to dive through the cave system. The group had no prior diving experience, complicating what would already be a difficult operation.

On 29 June 2018, the Government of Thailand accepted Australia's offer of assistance. The Australian Government's support to the response was initially to advise local authorities and evolved to help support the extraction. Australia's support included the Australian Federal Police (AFP) Specialist Response Group (SRG), Australian Defence Force (ADF) personnel alongside Department of Foreign Affairs and Trade (DFAT) Crisis Response Team (CRT). Dr Richard Harris, a member of the Australian Medical Assistance Team (AUSMAT) with extensive cave diving experience and an anaesthetist was personally requested to the support the response. His long standing dive partner Dr Craig Challen was also requested to assist. The Thai authorities agreed that the only option to rescue the team was to sedate them, fit them with dive equipment and have experienced divers swim them through the flooded cave system.

Overall, up to 20 Australian personnel assisted at the cave site with many more supporting these Australians behind the scenes. In total an estimated 10,000 personnel were involved in the rescue. Between 8 and 10 July, the group was successfully rescued by an international team of expert divers, with Dr Richard Harris playing a critical role in the success of the rescue.

Emergency Management Australia (EMA) held a Symposium to provide a forum to discuss and identify whole-of-government observations and insights. This report presents the findings. A list of presenters and panel members can be found at **Attachment A**.

EMERGENCY MANAGEMENT AUSTRALIA SYMPOSIUM

PURPOSE

The Symposium bought together over 100 representatives from all levels of government, along with emergency management and technical diving experts. A list of participating agencies can be found at Attachment B. The Symposium enabled those involved to discuss and reflect on the complexity of the response, including the strategic, operational and tactical components of the operation.

AIM

The aim of the symposium was to share experiences from those directly involved, to capture their observations and identify insights for further analysis.

SCOPE

The report will cover the observations and insights only and does not attempt to make recommendations for remedial action by agencies involved in the response.

METHODOLOGY

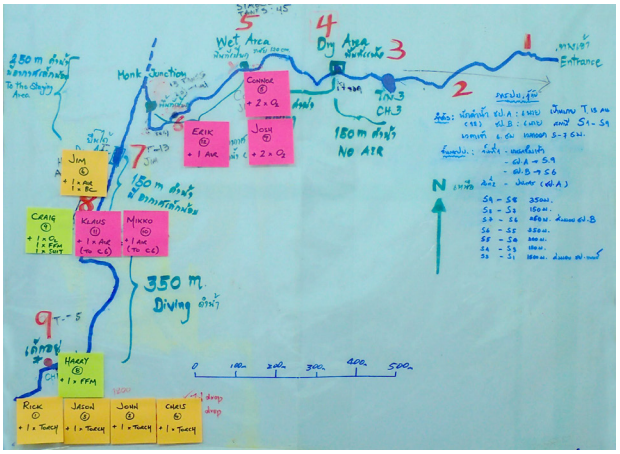
The methodology used for this report draws on the OILL (Observations-Insights-Lessons Identified-Lessons Learned) Model as documented in the Australian Emergency Management Handbook – Lessons Management. Observations were captured by a panel of representatives Emergency Management Australia supported by the Australian Civil Military Centre.

The Symposium provided presentations from key agencies involved in the response. Speakers participated in a facilitated question and answer panel discussion, which provided an opportunity for agencies to share their experiences. The second half of the Symposium utilised a scenario to explore how Australia would respond, should a similar incident occur domestically. The scenario discussion was led by a panel of disaster and emergency response experts and considered how relevant observations and insights from the Thai response might apply in the Australian context.

LEADERSHIP, COMMAND CONTROL AND COORDINATION

GOVERNMENT OF THAILAND

The Thai-led response involved a huge coordination effort to manage the number of personnel involved in the rescue, including international responders and a large-scale media presence. Command, Control and Coordination of the mission was divided into four sections; Internal cave operations, external site coordination, regional operations and national coordination. The leadership from the Thai authorities was highly visible and was exceptional considering the complexity and global interest for this operation.



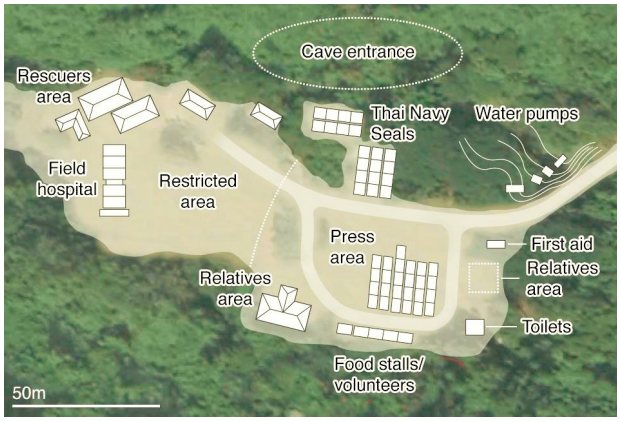
AUSTRALIAN GOVERNMENT

Consistent with the Australian Government Crisis Management Framework (AGCMF), the Department of Foreign Affairs and Trade (DFAT) is the lead agency for international crisis and leads any whole-of-government response overseas. This is coordinated through the Head of Mission in country. In this instance, DFAT were supported by a number of key Australian Government agencies including the Australian Defence Force (ADF), the Australian Federal Police (AFP), The Department of Health, EMA, National Critical Care and Trauma Response Centre and jurisdictional capability, notably Australian Medical Assistance Teams (AUSMAT). DFAT officials at the Australian Embassy in Thailand were the conduit between DFAT Canberra and the Thai Government in coordinating requests for Australian government assistance. AUSASSISTPLAN provided the authority for the provision of emergency Australian Government organised physical assistance to Thailand. Considering the risks involved with Australia's contribution to the rescue, the demonstrated leadership in Thailand and in Australia was commendable.

RESPONSE SITE

The operational response site was based at the cave entrance. It was divided into two parts: a restricted area for responders and the field hospital and a non-restricted area for relatives, first aid, food stalls, volunteers, toilets, water pumps and media. The community had also rallied to support the rescue, by providing catering and prayer vigils.

The Australian Embassy in Bangkok, the DFAT CRT, AFP, ADF, Dr Harris and Dr Challen formed 'Team Australia' in country. Team Australia collaborated closely with other international responders under the lead of the Government of Thailand. On site DFAT CRT undertook key leadership engagement with Thai officials, managed the Team Australia work area, reported through Post to whole-of-government, and supported Dr Harris and Dr Challen. The ADF played an intrinsic role in coordinating Australia's response effort through the deployment of an officer into the Thai Command post who advised on (in Thai) Team Australia's capability, role and function. AFP played critical role in tactical dive planning and the high ranking representation and engagement from senior officers in country.



OBSERVATIONS

- Approximately 10,000 people played a direct or indirect role in the rescue effort. This comprised 13 countries and included 100 specialist divers, 900 police officers, 2000 soldiers and thousands of volunteers. This challenged Thai officials and also Australian personnel working within a command structure that evolved as the crisis continued.
- The scale of the growing response also presented challenges. This was particularly evident at the area of operation where the incident command and coordination areas were situated. The site itself had limited reception and coordination protocols creating challenges across the staging of equipment and the integration of personnel in and around the site. Area management improved as the response progressed.
- The dynamic nature of the response and subsequent evolution of the site exposed those involved in the tactical response to local and international media. The level of interest placed pressure on those involved who had to physically walk past the media to use sanitation and mess facilities.
- Little consideration was given to the physical and mental strain of the response, specifically for the divers. There was no dedicated area for the divers to re-charge and rest in between briefings, practice techniques or test concept drills. Ad-hoc areas were utilised but were compromised by the volume of personnel moving in and around the site. Thai authorities recognised this and put strategies in place to relocate and manage the media for the extraction operation.
- Australian personnel faced challenges understanding and navigating the Thai Command structure, which was observed to be complex, particularly identifying the lines for decision-making processes from a multi-national perspective. The United States Military established a secondary command post to link into the Royal Representative Thai Command Post but no dedicated Multi-National Force headquarters was established.
- Little distinction between planning and operational lines of command, control and coordination, with responders playing a significant role, as subject matter experts, in the detailed planning of the response.
- There was no single appointed Dive Commander with tactical command to oversee dive processes, procedures or monitor diver health and wellbeing. This contributed to the physical and mental fatigue for divers operating in a high-risk environment.

INSIGHT

Several issues across command control and coordination were observed across the strategic, operational and tactical elements of the response and were amplified through the rapid increase of personnel and equipment arriving in support. This produced challenges for international responders who had to rapidly integrate into foreign command structures that were not easily accessible or understood. The absence of an appointed and communicated dive commander increased the risk for dive specialists in terms of their safety, health and wellbeing. A lack of suitable staging, reception or respite facilities contributed to greater physical and mental fatigue for Australian teams. This was exacerbated by the large media contingent that personnel were frequently exposed to. It was recognised that as the incident unfolded the command, control and coordination arrangements evolved and adapted.

OPERATIONS

GOVERNMENT OF THAILAND

An outpouring of international offers of assistance and a lack of local experienced subject matter experts presented challenges for both Thai authorities and international responders. The complexity of this operation required the Thai authorities to be innovative and open minded. It was evident that they were exploring all options to rescue the team.

AUSTRALIAN GOVERNMENT

The Australian Government sourced and provided logistic, planning and specialist support to the operation as well as air assets to transport teams and equipment into Chiang Rai. The ADF's ability to redeploy assets for the mission rapidly enabled a quick and timely response following the acceptance of Australia's offer of assistance from the Government of Thailand.

RESPONSE SITE

The Tham Luang Nang Non cave is a complex karstic cave system beneath Doi Nang Non, a mountain range on the border between Thailand and Myanmar. The system is 10 kilometres long and has many deep recesses, narrow passages and tunnels winding under limestone strata. The start of the monsoon season presented further challenges with widespread rainfall hampering response efforts.

OBSERVATIONS

- Several factors led to the need for a plan that had to evolve rapidly, with limited rehearsal time, including:
  - weather conditions and water levels
  - the physical and mental health of the group and the risk of that deteriorating
  - complexity of the group's location
  - the limited number of experienced cave divers with the skills to perform a complex rescue.
- The consistency of diving standards, equipment capability and levels of risk differ between countries. For example, the dive gear the Australian divers brought with them was different to other countries.
- Diving compressor quality control in Thailand was not monitored to the same standard that the Australian and UK divers operate. This meant that the air quality while filling the air tanks was at risk of deteriorating. If the operation went any longer, the deteriorating air quality may not have been realised, putting the divers at risk.
- The Australian team worked together to mitigate risks within their control but they had little control over the international management of dive operations and had to work within a multi-national, Thai led operations structure.
- Through established relationships within the international cave diving community, Dr Harris and Dr Challen were identified early as experienced cave divers with appropriate skills and qualifications. The Australian Government through DFAT were able to quickly deploy them to the site of operations.

- Quick engagement of local experts who knew the terrain of the cave system provided time critical, relevant and practical advice to inform the response operation.
- In consultation with local and international authorities Dr Harris worked through a plan to sedate the boys, fit them with pressurised face masks, secure them and establish checkpoints to monitor the boys condition at regular intervals throughout each extraction attempt.
- Consideration was given to the sedation plan and tolerance levels for failure were established and communicated by Dr Harris prior to the first rescue attempt.
- The children and coach didn't have sufficient supplies with them and were running out of food. A local guide and cave diver who knew the area assisted Thai officials in mapping the cave system.

INSIGHT

The complexity of the cave system, deteriorating weather conditions and the large-scale international response presented both challenges and opportunities across the operation. Local knowledge was utilised effectively to understand the complexities of the cave system. The value of established relationships, familiarity, trust and respect amongst the dive community led to the early recognition of additional specialist skillsets to support the operation. Whist there were vast differences in training standards , knowledge, skills and equipment, teams worked closely to ensure that the right expertise were involved to rehearse possible extraction methods and complete the high risk rescue extraction.

CAPABILITY AND INDEMNITY

GOVERNMENT OF THAILAND

The Royal Thai Navy has an established capability of divers but the requirements for the search and extraction needed additional technical expertise specific to cave diving, which could not be sourced locally. The Thai Government accepted multiple offers of assistance with a particular focus on obtaining dive specialists. This included utilising and accepting civilian cave divers that volunteered their expertise.

AUSTRALIAN GOVERNMENT

The Australian Government is well practiced at deploying capability in support of crisis both domestically and overseas. Australia's response to the rescue effort was efficient evidenced by the rapid deployment of the initial Australian dive contingent. Through AUSASSISTPLAN the Australian Government deployed two specialists (Dr Richard Harris and Dr Craig Challen) to play a critical role in the rescue effort following the location of the team.

RESPONSE SITE AND OTHER KEY SPECIALISTS

The British cave divers who discovered the boys alive were civilian cave divers that had volunteered their expertise, one had previously dived and surveyed the cave system. This provided extensive local knowledge of the site. They realised that additional assistance would be required from specialist cave diving experts if there was any chance of a successful rescue. This included knowledge, skills and experience in anaesthesiology for sedation purposes, which was a crucial element of the extraction plan.

OBSERVATIONS

- Informal mechanisms to identify those with the requisite knowledge, skills and experience to assist in the rescue were valuable in determining Dr Harris' suitability for the operation.
- Dr Harris was on the AUSMAT capability register so the process to contact and mobilise him was made easier and highlighted the benefits of an up to date AUSMAT data-base. Due to the technical complexity of the response, Dr Harris stipulated his dive partner accompany him. Dr Challen, was not on the AUSMAT data-base but the flexibility of AUSASSITPLAN enabled him to deploy with Dr Harris. They were in transit to Thailand within four hours.
- The processes and timeframes for obtaining authorisations and indemnities to practice in Thailand were unclear and provided a challenge for Australian Government officials in Canberra and Thailand.
- Australian Government officials worked to ensure that the specialists had immunity based for their medical interactions. The decision to sedate the children and their coach as part of the response plan was authorised by Thai authorities.
- Dr Harris and Dr Challen were aware that DFAT were working to obtain relevant clearances and indemnities, so they trusted in that process and proceeded with working on risk mitigation strategies and detailed response planning for the extraction.
- A number of options were explored to provide the appropriate indemnities for Dr Harris and Dr Challen to undertake their medical interventions for the rescue. The final option was to make both Dr Harris and Dr Challan diplomats. This was finalised as they moved into the cave system for the first extraction attempt.
- Whilst authorisations for AFP to assist in the dive operations were granted, the indemnities did not apply to the AFP divers and no arrangements were in place for them regarding legal status and protections.

INSIGHT

The flexibility, understanding and application of Australian Government policy including AUSASSISTPLAN ensured that the technical capability deployed had the requisite knowledge, skills and experience to support the Government of Thailand. The importance of listening to and accepting civilian specialist advice was also identified – in this case it was the cave diving community that provided the expertise. Given the complexity of the extraction operation additional legal protections and indemnities were sought to ensure that the specialists involved in the sedation of the team had the full support of both governments.

CULTURE AND RELATIONSHIPS

GOVERNMENT OF THAILAND

As the response to the event grew in complexity, the command structure evolved. The cultural integration and management of the response under the Government of Thailand differed from the model that the Australian responders were used to operating under, however they adapted to these arrangements as the operation evolved.

AUSTRALIAN GOVERNMENT

Australian emergency management and police agencies operate under common incident management structures. This shared understanding enables the transfer of personnel and resources across jurisdictions into similar operational environments creating a culture whereby roles and responsibilities are clearly recognised and defined.

An ADF officer was embedded into the Thai command and control system. This officer had a previous relationship with the Thai authorities and spoke fluent Thai assisting bridge any cultural or relationship considerations. This was reported to be a critical function to assist the Australian team to integrate and operate effectively within the Thai structure. Representatives from AFP and DFAT all provided vital linguistic and cultural interpretation throughout all stages of the response.

RESPONSE SITE

The response included personnel from 13 different countries, many of whom could not speak English or Thai. With the number of response personnel onsite increasing to over 1000 , there were limited interpreters available to enable effective communication.
This impacted on the operation at times and started to cause some frustration for key players.

OBSERVATIONS

- The ADF sent a planning officer and interpreter who spoke fluent Thai, and through his established relationships with the Thai Military, he was invited into the Thai Command Post.
- Language barriers and cultural differences at the site presented difficulties. Local staff from AFP and DFAT played an important role in providing interpretation and cultural context.
- Personnel were provided with substantial briefings when deployed to the response site that were often lengthy and had to be translated into other languages.
- The information flow at a strategic level did not filter down to the tactical crews in a timely or efficient manner. This meant that the plan changed frequently and had the potential to create ambiguity.
- Local knowledge was critical in assisting rescue personnel develop options and tactical extraction plans. As part of the offshore deployment process under AUSASSISTPLAN, deployed personnel are given a cultural brief by DFAT officers to better understand the working environment.
- Staff from the Australian Embassy in Thailand who liaised with the Government of Thailand were the conduit in providing information between Canberra officials and Australian response personnel.
- High levels of water was pumped out of the cave system and lots of rubbish was present. It was acknowledged that this could have had longer term implications for local communities.
- The cultural differences between international responders and Thailand challenged the viable options for extraction. The ethical dilemma over response options (wait it out or directly intervene) created challenges across several elements off the operation, particularly the ability to get indemnity for the specialists once that option was authorised.

INSIGHT

Cultural perceptions, differences and expectations have the ability to significantly influence a domestic operation where there is a large international presence. Where pre-existing relationships existed, there was increased trust and respect which enabled greater integration and more effective communication between stakeholders. There are however potential risks and vulnerabilities when relationships are based on individuals. The use of local knowledge proved helpful at times, however challenges around interpretation and translation resulted in some uncertainty. This was exacerbated by the time-critical nature of the operation whereby plans and options were evolving frequently. Greater cultural considerations during the response phase were acknowledged as an area for improvement particularly around community recovery, clean-up and the team's ongoing welfare.

COMMUNICATION AND MEDIA MANAGEMENT

GOVERNMENT OF THAILAND

The media interest in the fate of the group was insatiable. Thai authorities were overwhelmed at the sheer scale of the media response as journalists and media teams from around the world arrived in Thailand.

AUSTRALIAN GOVERNMENT

Consistent with the Australian Government crisis arrangements, DFAT led and coordinated the Australian Government media response. The Foreign Minister was the spokesperson and liaison to the Australian press and gave updates on Australian's assistance to the Thai led operation. A joint media release was issued by the Minister for Foreign Affairs, the Minister for Defence and the Minister for Home Affairs following the successful extraction of the group.

RESPONSE SITE

The media area was adjacent to the food stalls and amenities and operated 24/7 to meet the demands of the global interest. Prior to the extraction commencing, media personnel were moved to another site, 800m away from the cave entrance. This was to ensure privacy around the extraction and allow medical teams and officials to respond without the added pressure of media scrutiny.

OBSERVATIONS

- Social media enables immediate access to news and information from individuals and governments around the world.
- The international attention on the Thai cave rescue demonstrated how media coverage increases empathy.
- There were a number of issues with the media embedded close to the response site. Information about the operation was leaked and misinformation was widespread. The media guidance from authorities was reactive and the contingent was moved for the extraction operation.
- Operational information leaks across social media were widespread due to the proximity of the media at the response site and the different media protocols between agencies and countries.
- Public affairs guidance to multi-national support teams was also reactive and lacked consistency. As the crisis became 'the biggest news story in the world', media protocols and guidance within Australian departments and news agencies varied, and whole of government media response arrangements evolved. For example, in the initial stages of the response, AFP, ADF and DFAT (CRT and Post) all spoke to the local media. As the incident continued, media protocols changed and DFAT took the lead as the sole agency speaking directly to media.
- Australian Government agencies are well practiced in managing their own media according to established protocols. Individual agencies were able to utilise their own internal media protocols to meet reporting requirements and inform senior-level decision makers as part of the response. For the latter half of the response, AFP had a dedicated Public Affairs Officer to support the Australian contingent and assist to facilitate media conferences.

INSIGHT

The level of sustained media interest in a crisis should not be underestimated, nor should the value of the press in being able to induce public compassion. The visual nature of a disaster event creates particular challenges for managing media at the scene. Ineffective media management during and at the scene of a crisis can compromise operations and creates the potential for leaks. There is value in dispatching a media liaison officer to the scene to coordinate media activity, limit interference and control the amplification and distortion of information. There is also value in ensuring Australian responders on the ground are aware of media protocols, including around speaking to the media and where media should direct their enquiries.

THE AUSTRALIAN CONTEXT

A discussion scenario encouraged participants to reflect on how Australia would respond to a similar event. Themes of coordination, leadership and decision-making processes were considered, as well as whether Australia had specialists in country or would be willing to request or accept offers of international assistance.

THE SCENARIO - COCKLEBIDDY CAVE (WESTERN AUSTRALIA)

Cocklebiddy is a remote community in the Eucla district of Western Australia, approximately 1156km (12 hours) from Perth and 1537km (16 hours) from Adelaide. The Cocklebiddy Roadhouse is 22km from the cave and has basic supplies and a dirt strip runway. The closest police station is approximately 270km away. Due to its technical complexity and remote location diving in Cocklebiddy Cave is high-risk.

Cocklebiddy Cave is one of many hundreds of caves that dot the Nullarbor 'karst', the largest arid area of limestone in the world. The entrance to Cocklebiddy Cave is an example of a collapsed 'doline' - a sinkhole created when the cave roof collapsed to reveal a system of massive underground caverns and more than 6km of underwater passages, with 90% only accessible by underwater cave diving. The entrance chamber is over 300m long and leads to a 180m long lake. The cave then consists of a single, straight tunnel more than 6km long. Dive gear must be transported over the Rockfall Chamber to the second sump, which is 2.5km in length. The second sump leads to another chamber named Toad Hall. Dive gear must be carried across Toad Hall to reach the third and final sump, which is 1.8km in length.

How would Australian emergency services respond if there was an incident involving an injured or missing person/s in Cocklebiddy Cave?

OBSERVATIONS

- It could potentially take 3.5 days (108 hours) to attempt to evacuate personnel from the cave due to the remoteness of the location, the limited communications and the time for emergency responders to mobilise, deploy and respond.
- The number of people who have the requisite experience, knowledge and skills to be able to dive far into cave systems of this complexity is approximately 40 (Australia) and it would take time to contact and seek their assistance. However perhaps another 100-200 cave divers within Australia would be qualified to assist in the first section of the cave.
- The use of accredited training is a key component for developing capability across organisations. The alignment of training standards and risk tolerance levels needs to be considered.
- The current arrangements for interstate assistance are well practiced between jurisdictions, enabling the quick movement of specialists and emergency personnel. However, assistance may be required from individuals who don't belong to or align to formal emergency management organisations. Within Australia, domestic expertise would run out quickly, particularly for a protracted and sustained response.

- Working, training and exercising with civilian cave diving specialists in Australia is critical to successful preparedness for this type of rescue.
- In the Thailand cave rescue, the two Australian civilian cave diving specialists with medical training were both granted indemnities to practice medicine on the boys and their coach. The Department of Health noted that if international assistance was required similar challenges around authority to practice and indemnity would occur.
- Australia has emergency management procedures and protocols that enable response to an emergency. The state or territory in which the incident occurs, in this case Western Australia, would have primacy in the management of the response.
- Australian jurisdictions have processes in place to request assistance and could make requests through the Department of Home Affairs (EMA) if they are unable to manage the incident within existing resources. This is facilitated through the Australian Government Disaster Response Plan (COMDISPLAN).
- Australia would utilise existing in-country resources to respond to such an incident and would only request for international assistance if no options were available within Australia's existing capabilities. DFAT would then be engaged to manage the requests for assistance' through DFAT posts and manage any incoming offers of assistance. It was acknowledged that the timeliness of any offers or requests could pose a challenge to the response.
- The management of the media would be a consideration. The jurisdiction with primacy for the management of the response would lead media engagement. The Department of Home Affairs Crisis Communications team would provide support to the lead jurisdiction managing the response.
- Due to the remote location of Cocklebiddy cave, the international media would take some time in getting to the location, which would allow time for lead emergency responders to think of strategies and methods to put in place to ensure that the media is managed appropriately.
- The Department of Home Affairs would work closely across the Australian Government and the affected jurisdiction to ensure that all media had access to appropriate translators, sources and subject matter experts.

INSIGHT

There are opportunities to strengthen Australia's technical and specialist dive capability. There is currently a gap in this capability across Australia and the region more broadly. The use of accredited training and standards was suggested as an area to explore to increase expertise, foster relationships and enhance overall capacity. The location of the Cocklebiddy Cave presents a number of challenges for authorities to manage. While Australian and jurisdictional agencies have practiced emergency management arrangements and supporting media measures, non-traditional crisis present challenges around the timelines and integration of specialist capability into formalised emergency management structures and are complicated further should international resources be required.

CONCLUSION

Few experiences bring the display of strong leadership, strategic coordination and innovation as the Thai cave rescue. The rescue is a model of remarkable regional and international cooperation and whilst there will always be elements of unpredictability and risk, the operation provides key takeaways to support and optimise Australia's emergency plan and response efforts.

The observations and insights drawn from this report should be shared across agencies. Continued investment in maintaining and strengthening cross-agency capabilities will further strengthen Australia's response capacity.

Australian agencies have considerable ability in multi-agency cooperation to respond professionally, flexibly, creatively and rapidly to overseas crises. Our ability to learn from this experience and apply that in an Australian context is critical if we are to enhance our overall capability.

Australia was proud to support the government and people of Thailand in this extraordinary rescue mission.

ATTACHMENT A

ACKNOWLEDGEMENT OF PRESENTERS AND PANEL MEMBERS

Facilitator

- Mr Joe Buffone PSM , Assistant Secretary, Emergency Management Australia, Department of Home Affairs

Presenters

- Mr Robert Cameron OAM, Director-General Emergency Management Australia, Department of Home Affairs
- Dr Richard Harris, SC, OAM Head of Unit, Retrieval Coordination South Australia Ambulance Service (MedSTAR)
- Dr Craig Challen, SC OAM
- Mr Mark Tattersall, Assistant Secretary, Department of Foreign Affairs and Trade
- Sergeant Mark Usback, Specialist Response Group Tactical Response, Support Capability, Australian Federal Police
- Major Alex Rubin, Staff Officer, Headquarters Forces Command, Australian Defence Force

Panel Members

- Dr Richard Harris, SC, OAM Head of Unit, Retrieval Coordination South Australia Ambulance Service (MedSTAR)
- Senior Sergeant Bec Caskey APM, Monitoring Assessment Centre, State Emergencies and Support Command, Victoria Police
- Sergeant David Bacchus, Water Operations Unit, South Australia Police
- Ms. Bronte Martin, Nursing Director, Trauma and Response Centre, National Critical Care and Trauma Response Centre
- Ms. Tracy Heffernan, Director National Security and Crisis Media, Department of Home Affairs

Acknowledgement to those Department of Home Affairs (Emergency Management Australia) officers who supported the event coordination for the Thai Cave Symposium and assisted in the development of this report.

ATTACHMENT B

LIST OF PARTICIPATING AGENCIES

- ACT Ambulance Service
- ACT Emergency Services Agency
- ACT Fire and Rescue
- ACT Health
- ACT Security and Emergency Management
- Airservices Australia
- Australian Catholic University
- Australasian Fire and Emergency Service Authorities Council
- Australian Civil-Military Centre
- Australian Federal Police
- Australian Maritime Safety Authority
- Australian Speleological Federation
- Country Fire Authority – Vic
- Department of Agriculture and Water Resources
- Department of Defence
- Department of Fire and Emergency Services – WA
- Department of Foreign Affairs and Trade
- Department of Health
- Department of Health and Human Services – Vic
- Department of Health – WA
- Department of Home Affairs
- Department of Justice and Regulation – Vic
- Department of Prime Minister and Cabinet
- Emergency Management Victoria
- Emergency Services Agency – ACT
- Fire and Rescue – NSW
- Geoscience Australia
- JFD Australia
- MedSTAR, SA Ambulance
- Metropolitan Fire Brigade
- National Critical Care and Trauma Response Centre
- NSW Cave Rescue
- NSW Cave Rescue Squad
- NSW Police
- NSW Rural Fire Service
- NSW State Emergency Service
- Queensland Fire and Emergency Services
- Country Fire Service – SA
- SA Health
- SA Police
- South Australian State Emergency Service
- University of Tasmania
- Victoria Police
- WA Health

ATTACHMENT C

CHRONOLOGY OF EVENTS

23 June	• Wild Boars Soccer team (12 boys aged between 11–16 and coach) enter Tham Luang Nang Non cave in Chang Rai Province, Thailand. • Reported missing that night when they fail to return home. • Local officials find bicycles locked to fence and shoes/football boots close to cave entrance.
24 June	• Park officials and police find handprints and footprints believed to belong to boys.
25 June	• Royal Thai Navy SEALS enter cave in search of the boys. • Heavy rains experienced. Water pumps brought into location to start attempting to pump water out of the cave.
26 June	• Divers forced out of cave by rushing floodwaters, after a failed attempt to reach an area known as 'Pattaya Beach", where boys may have retreated to.
27 June	• A team of 42 American military personnel from US Indo Pacific Command (INDOPACOM) and Special Operations Command Pacific (SOCPAC) arrive, joined by 3 British diving experts who start to probe the cave.
28 June	• Heavy rains create fast-moving floods inside the cave and force a suspension in the search and rescue. • Water pumps start draining rising, murky floodwaters. • Military and local volunteers begin searching for alternate entries into the cave system and consider drilling down into the cave.
29 June	• Thai Government accepts Australia's offer of assistance. • Thailand's junta leader Prayut Chan-O-Cha visits the site and urges relatives not to give up hope.
30 June	• AFP Special Response Group Divers and one DFAT Crisis Response Team (CRT) officer arrive in Thailand at 1940 on RAAF C-17. • A break in the rain allows for divers to resume search attempt and they reach further inside the cave, but still a long distance from where boys may be if they are still alive.
1 July	• Divers reach 'chamber 3' and hundreds of air tanks and other supplies are pulled in.
2 July	• Two British cave divers discover the boys and their coach alive and relatively well, about 400m beyond Pattaya Beach.
3 July	• Food and medical supplies, including high calorie gels and paracetamol reach the boys and their coach
4 July	• Boys and Coach are being taught how to use diving masks and breathing apparatuses, as planning teams start working on possible rescue solutions, which may involve boys/coach remaining inside cave until after the wet season (approx. a 3-month period)
5 July	• Rain continues and the option of a complex rescue hastens, as flood waters rise within the cave system. • Thai authorities, on advice from British Divers, request Dr Richard Harris.
6 July	• AUSMAT team of Dr Harris and Dr Challen arrive in Thailand, via RAAF C-17. • Former Thai Navy SEAL (volunteer) dies whilst helping establish an airline to the chamber. It is reported that he ran out of air. This tragedy highlights the complexity and risk in attempting a rescue. • DFAT start process for requesting indemnity/protections for those involved in cave rescue.
7 July	• Harris and Challen dive the cave and reach the boys/coach. They assess each child and the coach to see if they are fit for an evacuation attempt. • Plan goes ahead to dive the boys and their coach out. Rehearsal of Concept drills being conducted at operations site and in nearby pool with children of similar size/weight to work out the logistics involved in the rescue.
8 July	• Media teams relocated to another site, 800m away from the entrance of the cave. • Military divers stationed at chamber 3. Cave Dive Rescue Team (2 Australian, 6 British, 4 Eurodivers, 1 Canadian = 13 cave divers and 5 elite Thai Navy SEAL divers) are stationed throughout chambers 9, 8, 6 and 5 to physically dive/carry pull 4 boys throughout the narrow cave system, 2 divers per child. • Four boys are safely brought out of cave by Thai Navy SEALS and taken directly to hospital. • Rescue mission on hold for approximately 10 hours while oxygen and other supplies replenished.
9 July	• Second evacuation occurs – 4 more boys safely rescued out of the cave and taken to hospital
10 July	• Third/Final evacuation – remaining 4 boys and their coach are successfully rescued from cave. • Evacuation of approximately 145 rescuers within the cave also occurs, just as pumps fail and water levels rapidly rise flooding the cave. • Third DFAT CRT officer arrives in Thailand.
11 July	• Australian team speaks with then PM Turnbull via Skype. • Dr Harris and Dr Challen meet the children at Chiang Rai Hospital
13 July	• Australian team meets members of Royal Household in official ceremony of appreciation. • Team departs Thailand on RAAF C-17, arrives in Adelaide.