To investigate emergency service volunteers and community engagement to build community resilience

A report for the Winston Churchill Memorial Trust of Australia

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2015 Churchill Fellow
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Agreement

The Winston Churchill Memorial Trust of Australia

Report by: Mr Andrew B. Warton
2015 Churchill Fellow

To investigate emergency service volunteers and community engagement to build community resilience

I understand that the Churchill Trust may publish this Report, either in hard copy or on the internet or both, and consent to such publication.

I indemnify the Churchill Trust against any loss, costs or damages it may suffer arising out of any claim or proceedings made against the Trust in respect or arising out of the publication of any Report submitted to the Trust which the Trust places on a website for access over the internet.

I also warrant that my Final Report is original and does not infringe the copyright of any person, or contain anything which is, or the incorporation of which into the Final Report is, actionable for defamation, a breach of any privacy law or obligation, breach of confidence, contempt of court, passing-off or contravention of any other private right or of any law.

Signed: Andrew B. Warton Dated: 30 April 2016

Contact Details

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         Parap NT 0804

Occupation: Director Northern Territory State Emergency Service (SES)

Project Description: A project to investigate the use of emergency service volunteers and community engagement to build community resilience in the context of natural disasters.
Acknowledgements

I take this opportunity to thank and acknowledge The Winston Churchill Memorial Trust of Australia (the Trust) for awarding me one of 5 fellowships for 2015 in the Northern Territory. It is particularly meaningful that this is the 50th year anniversary of the Trust, and the 40th year anniversary of the organisation I represented during the assignment, the Northern Territory Emergency Service (NTES).

This opportunity provided me with an invaluable opportunity for professional and personal growth by travelling and working with emergency service personnel in the USA, Japan and New Zealand. All three countries rely heavily on volunteers to assist in the response to and recovery from natural and other disasters. Likewise, all three countries are exposed to a variety of natural hazards ranging from typhoons and flood, through to bushfires, severe storms and earthquakes.

This learning opportunity was made possible through the Trust and could not have materialised without the support of a range of international agencies and individuals. I would like to thank personnel from the Tokyo Metropolitan Government, the Australian Embassy in Tokyo and the Asian Disaster Reduction Centre (ADRC) in Japan.

I would like to thank the Federal Emergency Management Agency (FEMA) in the USA, the Fairfax County Fire and Rescue Department, the Arlington County Fire Department, the Arlington Community Emergency Response Team, the Fairfax Community Emergency Response Team, the District of Columbia Homeland Security and Emergency Management Agency (HSEMA), the Arlington Office of Emergency Management (OEM), the American Red Cross, the FEMA Emergency Management Institute (EMI) and the US Department of Homeland Security.

I would also like to specifically thank the New Zealand Ministry of Civil Defence and Emergency Management, the New Zealand Fire Service, St John Ambulance New Zealand, Wellington Free Ambulance, the Rescue Coordination Centre (RCC) and Maritime New Zealand and the New Zealand Department of Prime Minister and Cabinet.

Thank you to all the individuals from the various organizations for your time, genuine interest in sharing professional information and hospitality. This experience further proves that the emergency management profession is a well-connected worldwide professional network with a shared common purpose.

I would like to thank the Churchill Trust Board for hearing my submission and trusting me to represent the Trust and Australia through this opportunity, and the Northern Territory Commissioner of Police and CEO Emergency Services for granting me the time and support to undertake this project. Special thank also go to the Australian Institute of Management (AIM) for their generous sponsorship of this award.

Finally I would like to acknowledge my wife Lyndall and young daughter Abbey for their tolerance and hard work during my absence overseas, and my parents and parents-in-law for providing support to my family during the absence. The families of emergency service personnel play a critical support role both within and outside times of emergency.

I am grateful to every individual and organisation encountered during this experience and note that any successes born from this experience will be shared successes.
Executive summary

"If our hopes of building a better and safer world are to become more than wishful thinking, we will need the engagement of volunteers more than ever."¹

I departed Australia as the head of a State Emergency Service (SES) knowing the social and economic value SES and other volunteers around Australia deliver on a 24/7 basis to the Australian public. In the back of my mind was one of the Northern Territory State Emergency Service’s (NT SES) legislated responsibilities, namely to deliver public education to residents of the Northern Territory.²

Acknowledging the nominal resources allocated to this part of the NTES mission, and a historically basic method of imparting public education, this overseas opportunity provided a unique window into the delivery of public education and emergency response services to communities in Japan, the USA and New Zealand.

My fellowship confirmed the international nature of the emergency management profession, and highlighted some of the hazards faced by countries outside Australia, particularly natural hazards including earthquake, flood, storm, cyclone, bushfires and tsunami. My fellowship also confirmed, particularly when assessing overseas resources available to manage emergency situations that the Northern Territory performs extremely well with limited resources across a broad area of operation when it comes to emergency management and emergency response and recovery operations. Counterparts in all three countries were consistently surprised and impressed by the vast nature and geographic location of the Northern Territory in Australia’s center and north, and the challenges this presents to emergency management professionals.

Perhaps the most poignant takeaway from this privileged experience is the realisation that the countries I visited also place a real reliance on volunteers as a valued resource in this field. The insight into different approaches to volunteer recruitment, training and management were invaluable. Key to this fellowship is a series of lessons learned from the utilization of volunteers and other professionals to deliver emergency-related public education in order to build resilient communities.

My fellowship experience allowed integration with some of the world’s leading emergency management and response agencies. It facilitated informative and real conversations with international emergency management professionals from the highest levels in Government to the frontline emergency service workers and personnel in countries facing a diverse range of natural and man-made hazards.

Aside from the development of strong professional associations and relationships, this experience provided exposure to a range of public disaster education methods and ideas not yet experienced in Australia. The combination of experiences has resulted in a number of key recommendations contained within this report. I am privileged as the Director of the NT SES and a member of the NT Police, Fire and Emergency Services Executive Board, to be in a position to champion the change identified in this report.

Establishment of a dedicated volunteer team within the NT SES with a clear mandate to provide additional public education in the disaster resilience space will result in direct community benefit over time. Continuing to recognise and value the important contribution emergency service volunteers make to resilient communities, as is the case in all three countries visited, will remain critical to ensuring that this initiative succeeds.

Now more than ever, emergency services in Australia require the support of volunteers to educate communities, and encourage disaster preparation and prevention well before the event occurs. It is hoped that this report goes some way to strengthening this capability.

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¹ Kofi Atta Annan is a Ghanaian diplomat who served as the seventh Secretary-General of the United Nations from January 1997 to December 2006. He is a recipient of the Nobel Peace Prize.
² Section 46(b) of the Emergency Management Act 2013, Northern Territory
Key Recommendations

The key recommendations resulting from my Fellowship are:

1. To establish a separate volunteer capability within the NT SES specifically aimed at the delivery of public education for emergency prevention and preparation.

2. To develop an in-school disaster resilience program similar to the NZ and USA experience and applicable to the Northern Territory operating environment.

3. To establish an ongoing partnership and volunteer exchange program between the Northern Territory Fire and Rescue Service (NTFRS), NT SES and the Federal Emergency Management Agency (FEMA) Emergency Management Institute (EMI) in the USA.

Implementation of recommendations

Implementation of the key recommendation (to establish a separate volunteer capability within the NT SES specifically aimed at the delivery of public education for emergency prevention and preparation) will commence on finalisation and submission of this report.

To ensure its success, separate quarantined funding has been obtained by way of a 6-month Government grant to employ a Project Officer attached to the Northern Territory Emergency Service. Under the direction of the author, this Project Officer will be responsible for translating the lessons learned from this Churchill fellowship into real and tangible results for the community of the Northern Territory.

Dissemination of report

I intend to disseminate my report with the NT Police, Fire and Emergency Services (PFES) through a presentation and paper to the PFES Executive Board and to members of the Department of Chief Minister Security and Emergency Response Team (SERT). Dissemination will also take place through my professional associations with the following organisations:

- Australian Council of State Emergency Services (ACSES)
- Australasian Fire & Emergency Service Authorities Council (AFAC)
- Australia New Zealand Emergency Management Committee (ANZEMC)
- Australian Institute of Emergency Services (AIES)
- Selected media organisations timed in concert with launch of the key recommendation
- Presentation of report, recommendations and implementation at forums and conferences
- Publication of report on the Churchill fellowship webpage

A detailed set of recommendations is included in Part 5 of this report and in addition to the key recommendations addresses consideration to the use of volunteer translators and interpreters during emergencies, the use of iPad-based technology to create emergency simulations as educational tools, an emphasis on ‘taking action’ during preparation exercises, the increased use of amateur radio operators in emergencies, adjunct volunteer training instructors, the volunteer management spectrum, disaster resilience programs for primary school children, and ‘force multiplier’ targeted public education.
1 Program

8-13 October 2015

Japan

• Tokyo
• Kobe

Australian High Commission, Japan

• Ms Naomi Eade, Second Secretary and Consul
• Ms Claire McComish, Counsellor/Contingency Coordinator
• Mr Craig Cracker, Senior Consular Officer

Tokyo Metropolitan Government

• Mr Yusuke Sasaki and colleagues

Hanjo Bosaikan Life Learning Center, Tokyo Fire Department

• Personal tour of disaster reduction and community education facility including participating in earthquake, fire and hurricane simulations.

Tokyo Rinkai Disaster Prevention Facility

• Personal tour of facility including participation in community education exercise through a staged earthquake event.

Asian Disaster reduction Centre (ADRC), Hyogo Prefecture

• Ms Kyoko Kondo, Executive Director, Asian Disaster Reduction Centre
• Mr Vigen Harutyunyan, Ministry of Emergency Situations of the Republic of Armenia
• Mr Elyor Fozilov, Republic of Uzbekistan
• Ms Yumi Shiomi, Asian Disaster Reduction Centre
• Mr Tahir Mehmood, Visiting Researcher, Government of Pakistan

Disaster Management Organisation and Museum

• Personal tour of facility

15-27 October 2015

United States of America

• Washington DC
• Fairfax County
• Emmitsburg
• Gaithersburg
• Arlington


• Mr Timothy W. Manning, Deputy Administrator for Protection and National Preparedness
• Ms Wendy Riley, Special Assistant to the Deputy Administrator Protection and National Preparedness
• Ms Charlotte Porter, Director Office of the National Advisory Council Office of the Administrator
• Mr Dante Randazzo, Program Specialist Individual & Community Preparedness, National Preparedness Directorate
• Mr Jeffrey F. Katz, Volunteer Liaison, Fairfax County Fire and Rescue Department
• Ms Cynthia L. Kellams, Coordinator Arlington County CERT
• Mr Stewart Mones, Disaster Assistance Directorate
• Jaymes Hall, International Affairs Division, Office of Policy and Program Analysis
United States of America


- Mr Stewart Mones, Training Manager, Public Assistance Division, Disaster Assistance Directorate
- Mr Christopher Smith, Division Director, Individual Assistance
- Mr Phil Shaw, Voluntary Agency Liaison

Fairfax County Fire and Rescue Academy

- Personal tour of 911 Call Centre and Emergency Operations Centre, 4600 West Ox Rd, Fairfax

Federal Emergency Management Agency (FEMA) Emergency Management Institute (EMI)

- Mr Paul Benyeda, Training Specialist, Preparedness Branch

Arlington County Fire Department

- Mr Joeseph M. Reshetar, Assistant Fire Chief
- Mr Nick J. Salameh, Training Academy Program Manager

Homeland Security and Emergency Management Agency (HSEMA), District of Columbia

- Mr Chris T. Geldart, Director
- Mr Brian C. Baker, Chief of Staff

American Red Cross

- Mr Greg Tune, Lead Program Manager
- Ms Amy Mintz, Senior Director, Emergency Management Coordination Unit

Arlington County Office of Emergency Management

- Jeffrey A. Horwitz, ECC Deputy Administrator
- Lt. Robert (Bob) Medairos, Deputy Coordinator
- Ms Debbie Powers, Deputy Coordinator
Auckland
• Mr Keith Evans, Regional Coordinator Central
• Mr Shane Bayley, Manager Development
• Mr David Coetzee, Manager Capability and Operations
• Ms Tess Williamson, Emergency Management Advisor

Wellington
• Mr Duncan Ferner NZSAR Secretariat Manager

Porirua
• Ms Bridget Cheesman, Public Education Advisor

Avalon

Ministry of Civil Defence and Emergency Management (MCDEM)

NZ Search and Rescue Secretariat

Public Education Initiative - What’s the Plan Stan

St John Ambulance Service

New Zealand Red Cross

Wellington Regional Emergency Management Office (WREMO)

New Zealand Fire Service (NZFS)

NZ Rural Fire Authority (NZRFA)

Wellington Free Ambulance (WFA)

NZ Rescue Coordination Centre (RCC)

NZ Ministry of Health

Mr Charles Blanch, Director Emergency Management
2 Summary of Visits

A comprehensive approach to emergency management is adopted across all Australian jurisdictions. The foundation of this approach is often referred to as PPRR, or activities undertaken by Government and other agencies to prevent, prepare for, respond to and recover from emergencies. By way of further context, all of these activities are approached from an all hazards and integrated approach. For instance, the PPRR activities and associated plans and activations are applicable to a range of emergencies often experienced in the Northern Territory.\(^3\) Examples include cyclones, floods, major storms and bushfires.

While emergency service volunteers play a role at all stages of the PPRR model, the particular focus of this report is to investigate overseas approaches in the prevention and preparedness stages of the model. Increasing the resilience of communities can greatly mitigate the impact of emergencies and ensuring prepared communities empowers them to make a positive contribution to the response and recovery stages. Investment in prevention and preparedness does pay dividends when it comes to response and recovery from emergencies.

2.1 Tokyo, Japan

This section of the visit commenced with a series of meetings at the Australian High Commission in Tokyo and a general discussion with respect to Australian expatriate citizens and the role of the mission during natural disasters. Noting the range of natural disasters impacting Japan, the most notable are earthquakes; the mission places a high level of emphasis on disaster preparation for Australian expatriate citizens. Expatriate citizens are all encouraged to register their details on the DFAT website and regular information nights are held in partnership with the Tokyo Metropolitan Government with respect to preparation and planning.

The visit with Australian High Commission diplomats to the Tokyo Metropolitan Government was undertaken to meet the key individuals and teams responsible for emergency management across the 23 wards in Tokyo. This function sits under the Disaster Prevention Division within the Bureau of General Affairs. The meeting was conducted with reliance on an interpreter and provided an excellent opportunity to exchange information on emergency management. It was clear from the outset that the concept of bousai, the Japanese meaning of disaster preparedness is very much a priority for the Government. I was taken through the emergency management framework and a manual produced for the Japanese public called the Tokyo Bousai. The manual is distributed to all citizens within the 23 wards or municipalities that make up the broad population of Tokyo. The manual predominantly focuses on the earthquake hazard and addresses preparation, survival tips and general earthquake facts and information.

It was clear from the outset that the Japanese authorities place a high degree of importance on ensuring that their citizens receive ongoing public education with respect to disaster preparation. Of interest is the use of trained interpreter and translator volunteers provided by the Tokyo Metropolitan Government to provide assistance to foreign citizens during natural disasters and emergencies. This initiative commenced in 1996 and in 2015 had a total of 836 volunteers registered.

During the response to an event these language volunteers attend the evacuation centers and assist in collating and providing information directly to foreign citizens via social media. They also assist at local hospitals. Volunteers undergo regular training days and as part of the communal society are willing and motivated to provide their time.

Visiting Tokyo I attended the Tokyo Rinkai Disaster Prevention Facility and the Hanjo Bosaikan Life Learning Centre that was located at the Tokyo Fire Department. At the former facility I was provided with an iPad and shown into an elevator that represented the start of an earthquake simulation. The elevator ascended and all lights extinguished as a simulated earthquake commenced.

The exercise moved into a series of hallways dimly lit by exit signs. After navigating the hallways the area opened up into a large scale simulated earthquake scene including shops on simulated fire, damaged vehicles, severe structural damage and mass casualties.

At each station the iPad would prompt a short quiz seeking answers to preparedness and action based questions. The exercise finished in a large display area simulating an evacuation center and providing examples of emergency response equipment and individual emergency kits.

I had never experienced disaster preparation education to this degree or on this scale. This was an amazing experience from which a number of key learnings can be harnessed. Of particular note is that the facility is free to the public and clearly encourages the public to become actively involved in their own safety and preparation.

The Hanjo Bosaikan Life Learning Centre was housed in a multi-level building adjoining the Tokyo Fire Department and again contained an extraordinary amount of public information relating to disaster preparedness.

One entire floor of the facility was dedicated to a children’s learning area and the volume of information available was highly impressive. During this visit I took part in two simulations, both realistic and both educational.
The first involved a Category 3 Hurricane simulation and involved getting dressed in waterproof attire and gumboots before moving into the simulator.

Inside the simulator was a series of large screen televisions and as the hurricane gained strength, the television screens showed footage of equivalent rain and wind and the impact on the community.

As the hurricane grew in strength the physical wind and rain inside the simulator increased to a point where the only position was to look down and hold onto the rail to maintain balance. This was a visceral and realistic experience.

The second simulator was an earthquake simulator, this one different from the first as it represented a small room with padded furniture. After being shown into the open room (which was situated on a movable base), the guide dialed up a Magnitude 7 earthquake.

As the earthquake gained strength the drop, cover and hold-on response was immediately invoked until the earthquake ended. Interestingly, at the conclusion of the simulation the guide asked me how long I thought the earthquake had lasted for. Whist the answer was only 30 seconds; my concept of time was much exaggerated due to the event. This experience is state of the art in disaster relevant public education and further exemplifies the high level of innovation and importance placed on such education in Japan. The facility was staffed by volunteers.

2.2 Hyogo Prefecture, Japan

On 17 January 1995 the worst earthquake to strike Japan since 1923 impacted Kobe in Japan’s Hyogo Prefecture. It measured 6.8 on the moment magnitude scale and resulted in more than 6,000 deaths and more than 30,000 injuries. In the same Prefecture, the Asian Disaster Reduction Centre (ADRC) was established in 1998 as a cooperative research center to build disaster resilience of the 30 member countries. Australia and New Zealand retain observer status at the ADRC and this visit provided the opportunity to exchange information with emergency management professionals from a range of countries including Pakistan, Uzbekistan, Armenia and Japan.
Discussion during this meeting revolved around the use of volunteer emergency service workers during floods and fires, and the use of volunteer registration centers at the local level during earthquake responses. It was clear from these discussions that Japan is experiencing an increase in volunteering relevant to disaster response and that most of the structures and systems used to recruit, train and maintain volunteers exist at the local level. It was also interesting to discuss in detail the evolving strengthening of working relationships between the various emergency management agencies and local authorities on the ground.

At a member country policy level the ADRC is extremely active in addressing a range of global disaster related issues and works closely with several key United Nations organisations to achieve that goal. Those present at this meeting were extremely interested in my explanation of the Northern Territory’s emergency management arrangements and the tyranny of distance associated with emergency response and recovery operations. A significant amount of literature and information was provided to me by the ADRC and an invite extended to attend future conferences.

2.3 Washington DC, United States of America

The US Department of Homeland Security has a core mission of securing the nation from a range of threats including the spectrum of natural and other disasters. Within the Department sits the Federal Emergency Management Agency (FEMA) whose mission is to “Support our citizens and first responders to ensure that as a nation we work together to build, sustain and improve our capability to prepare for, protect against, respond to, recover from and mitigate all hazards.”

I was privileged during this segment of the fellowship to be introduced to personnel at the highest levels of FEMA. Coupled with accommodation directly next door to FEMA’s national headquarters, this made for excellent access to a range of stakeholders and community groups.

The visit commenced at FEMA’s Individual Community Preparedness Division, the main forum from which FEMA communicates with individuals and organisations with respect to disaster preparedness in the USA.

I was also introduced to America’s PreparAthon, a FEMA campaign designed to increase community resilience and preparedness.

A key component of this ongoing campaign is to provide preparedness information and at the same time, encourage citizens to take the necessary action required to prepare for a range of hazards. I was advised that US citizens had registered 23 million actions from April to September 2015 with two national days of action occurring every year.

This program has a key focus on muscle memory. A prime example of this literally occurred during my meeting with FEMA officials as the annual Great Shake Out event took place across the USA.

4 https://www.fema.gov/about-agency
5 https://community.fema.gov
6 http://www.shakeout.org
This initiative represents an annual opportunity for people across the USA to practice what they would do during an earthquake. The drop, cover and hold-on drill literally saw me under a boardroom table with senior FEMA officials and immediately highlighted that public education is taken seriously in the USA emergency management profession. The exercise took place at the same time right across the country.

In meeting with the Individual Community Preparedness Division it was clear that the aim is to provide communities and agencies with the overarching tools they require to build resilience but not over-run local efforts to do the same. The force multiplier effect of youth with respect to disaster preparedness was also discussed noting that disaster preparation education is now common across many USA schools. The role of the Community Emergency Response Teams (CERT) in public education, particularly in relation to youth, was flagged as an area for further investigation during the fellowship.

A core focus of this fellowship is the CERT program, which is administered and supported by FEMA. In essence, CERTs exist across the USA with the aim of providing individual disaster preparedness education to US citizens and training them in basic disaster response. In an Australian context, the CERTs are the closest match to the Australian State Emergency Services (SES) with both models being largely reliant on emergency service volunteers.

During one meeting with FEMA's Individual Community Preparedness Division, I was privileged to have a range of CERT team leaders present from a variety of active CERTs. The concept of the CERT commenced in Los Angeles in 1985 when a group of officials visited Japan to study earthquake preparedness. The team discovered Japan’s high level of community level preparedness achieved through training large number of locals in a range of basic emergency response capabilities. Later that year the Mexico City earthquake resulted in the death of over more than 10,000 people and the emergence of spontaneous volunteers prompted the Los Angeles Fire Department to trial volunteer response teams similar to those informal teams born out of the Mexico earthquake.

In 1987 the Whittier Narrows earthquake prompted the creation of a Disaster Preparedness Division within the Los Angeles Fire Department, this division mandating the creation, training and maintenance of CERTs within Los Angeles.

Six years later, in 1993, the CERT program gained full support from FEMA and was instigated across the USA based on a whole communities concept of emergency management and adopting an all-hazards approach.

At the date of my meeting with FEMA there were 2,600 CERT programs across the US with more than 600,000 people having been trained in the program.

From my discussions with the various CERT representatives it was clear that the CERTs perform a broad range of functions across the USA. Recent examples provided included traffic management and first-aid support to a large Oktoberfest event, response to significant snowstorm events and rapid impact assessment. It was interesting to note that CERT members formed part of the first response to the events of September 2011 during the Pentagon phase of the event. The introduction of counter-terrorism awareness and CERT participation in large-scale active shooter exercises was also extremely interesting to learn. Keeping volunteers engaged with constant pre-planned exercises was identified as a key strategy to aid volunteer retention.
As is the case with Australian SES organisations, the key to maintaining the CERTs is centered on attracting, training and retaining volunteers. One identified difference was the lower cost of providing basic CERT training to volunteers who, on completion, receive a CERT backpack containing some basic rescue, first-aid and disaster preparedness material and a basic level of Personal Protective Equipment (PPE). The cost of providing basic training to a CERT volunteer appears significantly less than the Australian SES equivalent, and volunteers who undergo the basic training and decide not to remain with CERT are colloquially referred to by CERT administrators as "catch and release".

The prevailing view is that a CERT member who undertakes the basic training and elects not to continue still returns to his or her community with a heightened awareness of disaster preparation and prevention, and a basic ability to positively impact family and community during an emergency event.

2.4 Fairfax County, United States of America

The Fairfax Country CERT has a paid program manager who was very generous with his time during this fellowship engaging in meetings at FEMA and coordinating a visit to the CERT in Fairfax County.

Since 2003 this CERT has trained in excess of 2,300 volunteers with classes run by volunteer instructors. A key theme identified during this visit is the willingness of the CERT to take training and resilience building education to the people. In one example provided, the CERT volunteer instructors attended a church and delivered material to an audience of 25 people.

Another interesting observation when visiting this CERT was the current and historical use of Ham Radio Operators as CERT volunteers. These operators often have access to reserve (and sometimes primary) forms of radio communications during emergency events and are routinely deployed to the local Emergency Operations Centre (EOC) during response and recovery operations. During this visit it was also made clear that CERT volunteers are not first responders per se, rather they are community members who have a level of training and disaster response related education over and above the average citizen. The focus therefore is on being self-deployable and saving yourself, your family and your neighbors.

This CERT is sponsored by and attached to the local Fire and Rescue Department and it was pleasing to note that the CERT has gained a high level of acceptance amongst career firefighters in past years.

This relationship is strengthened by the fact that 25% of this CERT’s work involves disaster prevention related public education, or community outreach as described by the CERT.

The subject matter of this public education often includes fire prevention and preparedness messaging which presents obvious benefit to both the Fire Department and the community.

Those CERT volunteers engaged in community outreach are provided with specialised training and all the necessary tools required to deliver a professional and relevant package to the public. The skills taught include delivering one consistent message, public speaking to large groups of people, event action plans and after event debriefs.

An opportunity to attend a CERT training session and emergency exercise also provided excellent insight into the program and quality time spent with a large group of CERT volunteers.
Places of worship have proven particularly receptive audiences for community outreach and this particular CERT has visited 10 places of worship over the past 3 years reaching large numbers of people. Again, the concept of “we bring the class to you” has proven particularly effective for volunteers building resilient communities through public education.

2.5 Emmitsburg, Maryland District, United States of America

I was fortunate enough to be hosted during a visit to the US Department of Homeland Security's Emergency Management Institute (EMI) located in the historically significant town of Emmitsburg. This institution is the nation’s premier training facility, leads the way in emergency management training and directly supports the nation’s National Incident Management System (NIMS). It is located on the same grounds as the National Emergency Training Center (NETC).

This visit was highly relevant to the training of CERTs across the USA with the Train-the-Trainer and Program Manager Courses standing out as flagship courses for CERT members. The former is a 2-day course and the latter a 3-day course covering all aspects of recruiting, raising, training and sustaining volunteers. The use of CERT volunteers as paid adjunct trainers is an interesting concept and may be relevant to examine in the Australian context.

Considerable discussion also occurred around the Teen CERT concept of targeting youth for disaster resilience training and opportunities. The EMI indicated that there is a high level of interest in Teen CERT from schools across the nation.

An additional benefit to both organisations arising from this visit was initial discussion with respect to establishing an ongoing exchange program between the EMI and the NT SES. A separate project will be established with a view to sending NT SES volunteer representatives to the EMI in order to undertake the Train-the-Trainer and the Program Manager Course.

2.6 Gaithersburg, Maryland District, United States of America

It was observed during the visit that each CERT maintains its membership and qualifications to a set standard. However each CERT also had its own unique features and skills emphasis. I spent a Saturday morning with the Montgomery CERT in Gaithersburg. This is an extremely active CERT and part of their contribution to community involves delivering free CPR training to members of the public several times each year.
This CERT is also responsible for developing a public education program called Storm Camp, which involves a half-day educational event aimed at both adults and children. Adults are taught how to construct a Disaster Kit, operate fire extinguishers, undertake basic first aid and prepare for a range of emergencies. For the 4-10 year target group the program also includes Ready Pirates, disaster preparedness education also designed by this CERT.

This CERT also sits under the local Fire and Rescue Department in terms of support and sponsorship. The degree of community interaction and contribution offered by all CERTs is to be highly commended.

2.7 Arlington, Virginia, United States of America

The Arlington County CERT covers a total area of 26 square miles, which includes the Pentagon and surrounding grounds. The events of September 2011 remain deeply personal for the members of the Arlington County CERT. Indeed this CERT was created on the 1-year anniversary of the September 2011 event and is managed completely by volunteers. The County has a population of 216,000 and 1 in every 300 are CERT trained. This CERT sits under the local Office of Emergency Management (OEM). Again, it was established that this CERT has an active Ham Radio Operator volunteer base of 41 members.

The Arlington County CERT is involved in partnering with police and other agencies to undertake active shooter modules and exercises. This occurs on the concept that trained CERT members may already be on the scene of an active shooter situation and are best placed to administer first-aid and other immediate action. A particular skill of this local CERT is their moulage capability used to assist first responders in creating realistic exercises. This interaction has built increased trust between the CERT volunteers and first responders.

As with other CERTs, the Arlington County CERT provides volunteers to assist in EOCs when they are stood up under the overarching incident management system known as National Incident Management System (NIMS). It was also interesting to learn that this local CERT trained volunteers in the use of WebEOC, the same incident management system and software utilized by Police, Fire and Emergency Services in the Northern Territory.

This CERT is very much established to enhance whole of community ability to cope with major disasters. Unlike our Australian SES organisations this particular CERT is not routinely deployed in a first response capacity.

Whilst in Arlington I also spent time with the Arlington Police Department including time with a local police detective who was one of the Incident Controllers during the September 2011 attack on the Pentagon. Again the emphasis was on the creation of the CERT and the permanent secondment of a police officer to the OEM being initiated in the aftermath of the attack on the Pentagon. The use of Ham Radio Operators during the September 2011 response was also highlighted as a major benefit, particularly in light of power and other communication failures. Arlington County is extremely proactive when it comes to public education and during my visit a door-to-door campaign called Arlington Prepares was underway.

During the time spent with police I was also shown through a series of current active shooter presentations and drills being run by police seconded to the OEM. Particularly alarming were the statistics on previous school-based active shooter attacks and the starkly accepted reality that this training was essential knowing that more attacks were inevitable.
2.8 Auckland, New Zealand

The Auckland visit commenced with a range of meetings and tours around the St John Ambulance Service, an emergency response agency with an unequivocal reliance on volunteers. St John Ambulance Service provides ambulance response services to 96% of New Zealand. Of immediate interest was the concept of volunteer teams created with the specific purpose of deploying and setting up a range of field medical facilities. This is a work in progress and it has been deemed that volunteers attached to these teams are not permitted to make themselves available for any other St John volunteering duties.

The teams are largely metropolitan based and their key focus is on public education in peacetime and major events during disaster and emergency responses. As ambulance crews are a mix of paid staff and volunteers, the same standards apply to both. This was a particularly useful discussion and several research and other documents were provided to inform the creation of the NT SES public education volunteer base. Of particular interest was the use to which these volunteers are put during times of emergency, considerations necessary in the Northern Territory’s case.

In meeting with the St John Ambulance Service Volunteer Project Administrator the essential nature of volunteers across the board in New Zealand was apparent. St John is currently working to a 5-year volunteer sustainability strategy that commenced on 1 July 2014. Each year has an individual objective attached to it and Year 1 is the examination of recruitment and induction processes.

Volunteer reward and recognition will also form a part of the strategy noting the current system involving 3, 6 and 9-year lapel pins, a 10-year service medal and medal clasps for each additional 5-years’ service.

Other volunteer rewards include volunteer points for the receipt of pre-loaded Visa cards, a National Volunteer of the Week program run by Volunteering NZ and shift allowances for volunteers by way of meal and transport allowances.

The concept of reviewing and enhancing each stage of the volunteer management spectrum over a long-range project is an excellent one and could translate directly to those arrangements under which the NT SES and Northern Territory Fire and Rescue Service (NTFRS) volunteers operate.

St John Ambulance Service is extremely proactive in the disaster preparedness education space and regularly delivers disaster preparedness modules to schools. The reach of this initiative (which forms the basis of a Government contract) is 480,000 students over 5 years. Another key area of community engagement is indigenous engagement at the Chief level. Specific St John Ambulance Service points of contact were also provided for other programs involving volunteers in New Zealand’s indigenous communities.

2.9 Thames, New Zealand

To contrast the visit to St John Ambulance Service National Headquarters, the next part of this tour involved a visit to the town of Thames located at the southwest end of the Coromandel Peninsula on New Zealand’s North Island. This provided an excellent opportunity to see the reliance on St John Ambulance Service volunteers in practical application. This St John Ambulance Service operation has a unique partnership with a New Zealand’s Auckland University of Technology (AUT) whereby 50 students continually rotate through volunteer service with St John.
Community engagement appeared particularly strong between the St John officers and the public in Thames, and this according to the local station Chief is indicative of the town’s strong community and family based culture. From talking to those at the station, it appears that the average volunteer journey is about 3.5 years and that the pathways through St John for volunteers are extremely strong. There is little doubt that without St John Ambulance Service Volunteers in this community, the local ambulance service would not exist.

2.10 Wellington, New Zealand

New Zealand’s Ministry for Civil Defence and Emergency Management (MCDEM) sits under the Department of Prime Minister and Cabinet and fulfills the critical function of driving policy, ensuring coordination at all levels and managing resources from a central point for large scale emergencies where resource requirements stem beyond the local jurisdictions.

As a slight variation to the PPRR approach adopted in Australia, New Zealand adopts the RRRR approach; Reduction, Readiness, Response and Recovery. Identifying, understanding and managing all hazards is a key tenant of the Civil Defence and Emergency Management Act 2002. The groups are structured as follows:

This fellowship attachment to the MCDEM provided an in depth tour and overview of the National Crisis Management Centre (NCMC) which is located in a secure bunker within New Zealand’s Parliamentary building also known as The Beehive. This attachment provided a solid schedule of meetings and visits with personnel from a range of emergency service functional groups and organisations including:

- New Zealand Search and Rescue (including NZSAR Secretariat)
- Red Cross New Zealand
- Wellington Region Emergency Management Office (WREMO)
- New Zealand Fire Service (NZFS)
- New Zealand Rural Fire Authority (NZRFA)
- Wellington Free Ambulance (WFA)
- Rescue Coordination Centre (RCC)
- New Zealand Ministry of Health
New Zealand experiences up to 14,000 earthquakes a year with an average of up to 6 causing damage. Notwithstanding this key hazard, the all hazards approach is adopted by MCDEM and all emergency management agencies. There are 16 regional councils and in terms of incident control, these local authorities manage the actual events. The role of the central Government through MCDEM is to provide a support role, except where a State of Emergency exists. The Ministry provides 10 Regional Emergency Management Advisor’s (REMA). These advisors are seconded to various local emergency management agencies and provide a single source of contact back to MCDEM.

Emergency management professionals at MCDEM pointed to two recent emergencies in the context of lessons learned in the volunteer space. First, the Christchurch earthquake in 2011 occurred on the 22nd of February 2011 at 12:51pm and resulted in the death of 185 people. Secondly, agencies responded to a major oil spill declared as New Zealand’s worst maritime environmental disaster when the MV Rena was grounded on Astrolabe Reef. Both these events saw the turnout of large numbers of spontaneous volunteers with no connection to the main structures. In the case of the MV Rena oil spill, the spontaneous volunteers did not begin to emerge until Day 5 of the event.

The presence of such a large body of resources was further analysed in a post-operational review undertaken by the Ministry. This report is not for publication but was kindly offered to the author in order to extract detailed lessons learned.

A key meeting at the Ministry revolved around New Zealand’s disaster related public education program for youth called *What’s the Plan Stan*? This is a world-class public education program directly aimed at building resilience through targeting youth across a range of hazards including earthquake, tsunami, flood, volcano, storm and non-natural disasters.

Public education in New Zealand with respect to disaster resilience takes a high policy priority and fits squarely within the Disaster Resilient Australia New Zealand School education network (DRANZSEN) priorities. The underlying principle focuses on building resilience by ensuring that everyone understands their role in disaster resilience education.

In meeting with those responsible for designing and implementing *What’s the Plan Stan* a similar theme to the FEMA meetings became apparent, namely, an acknowledgment of awareness but a strong need to convert awareness into action. The tacit goal for disaster resilience messaging and education in New Zealand is to “make it a discussion at the weekend barbeque” and in doing so to benchmark all programs to current research.

The *What’s the Plan Stan* program is aimed at those aged 7-12 and their teachers. Its initial funding of $2M was granted following severe floods in 2004 when the *Get Ready, Get Through* campaign was developed. Of side interest, this campaign and slogan is still utilised by the NT SES. Each region has its own Public Education Officer and through this network, the *What’s the Plan Stan* program is delivered, monitored and evaluated.

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http://www.whatstheplanstan.govt.nz
Examining the program in detail the content is straightforward, factual and hazard specific. Each hazard is explained in plain English then actions to take before, during and after an event are described in direct and concise language. Lesson plans, stories relating to each hazard and a CD ROM are provided to teachers enabling delivery. I am grateful to have been provided with the full set of What’s the Plan Stan materials and key contacts in order to further explore such a program’s applicability to the Northern Territory.

Perhaps the key takeaway from an examination of What’s the Plan Stan is the fact that it is designed for leaders to re-teach, not as a presentation for emergency managers. This theme was expanded on at the next set of meetings.

**Wellington Region Emergency Management Office (WREMO)**

During the visit to Wellington which was generously coordinated by MCDEM, I spent time at the WREMO whose role it is to co-ordinate Civil Defence and Emergency Management services on behalf of all local Councils in the Wellington region. In talking to staff at WREMO the reliance on emergency service volunteers was immediately apparent with one volunteer manager stating, “If people want to give us their energy, it is our job to channel that energy”. The focus with respect to recruiting and maintaining volunteers was very much focused on delivering plain English and relevant training modules, and developing what was very cleverly termed the “non-Rambo type of volunteer”.

Of great relevance to this fellowship was a growing body of thought within WREMO relevant to building community resilience through emergency service volunteers. The first point discussed was the fact that traditional emergency service volunteers are not always trained in the art of community engagement with the traditional focus being on technical skills-based training and development. The second point of discussion revolved around the hierarchy of community engagement stakeholders in an emergency service volunteer context. The discussion centered on a simple hierarchy as follows:
It was noted that traditional community engagement targets the neighbors and households & businesses levels. This was certainly the case in the USA where the majority of effort is directed at these levels. In the Northern Territory this is also the case in regards to disaster preparation type public education where the prime target is micro communities, households and businesses. The new focus for WREMO targets engagement at the community level, and within this, are those community leaders who offer the ability to leverage engagement and in turn educate their own communities.

This concept is directly translatable to the Northern Territory environment. Targeting disaster prevention and preparation public education at indigenous community leaders, school principals, church leaders and other community leaders (as opposed to just the masses of students and households) will realize a greater return on investment.

The WREMO model sees emergency service volunteers and others steering away from educating the masses directly, and towards educating the community leaders to achieve the same result, or in their terms “putting all energy into the leader who can influence the change”.

This is the true essence of a force multiplier and will directly translate to the Northern Territory environment. This also represents a shift in thinking from a sector founded on the principles of command and control, to a collaborative and partnership based approach in the public education space. As it was described to me in this series of meetings, “the pyramid has been inverted”. As a closing note, it was interesting to learn that Wellington has been officially deemed of the 100 most resilient cities in the world.

**New Zealand Fire Service**

The New Zealand Fire Service rely heavily on volunteers with 250 volunteers in the Wellington district, 8,500 urban firefighter volunteers and about 3,000 rural firefighter volunteers. Unlike Australia, in the absence of a federation a national fire service exists. Local community fire stations were described to me as ‘the local hub’ with a strong sense of community engagement and connection. Our discussions canvassed a range of universally identified challenges associated with managing, retaining and valuing volunteers in the emergency response environment. This was also described to me as having the ability to “manage the enthusiasm” and it was well agreed by all in these meetings that emergency service volunteers provide an absolutely invaluable service to their communities.

Firefighter volunteers in New Zealand have their own volunteer union (the UFBA) providing a national voice for volunteers. This organisation has been in existence for over 100 years and one current project includes an examination of volunteer sustainability. Within the New Zealand Fire Service exists a series of specific paid positions (Volunteer Support Officers) with a mandate to support sustainability of the volunteer brigades. Their responsibilities include the scheduling of training programs, the undertaking of volunteer administration and ensuring that the brigades remain independent. Over recent years the service has recognised a change in the typical profile of volunteers to include those with specific administration and other skills of benefit to the service.

One very successful program offered by the New Zealand Fire Service in the emergency management space is the Youth in Emergency Service (YES) program. This is a hands on emergency services initiative for youth aged 15-18 years and involves direct participation in a series of disaster-related scenarios. It aims to introduce young people to the emergency management sector and encourages them to consider volunteering. A school’s rescue competition also operates with similar objectives. It was clear from my visit that the New Zealand Fire Service takes public education seriously and is extremely innovative in the approach to new initiatives.
2.11 Porirua, New Zealand

A visit to New Zealand’s Volunteer Coast Guard confirmed again that New Zealand is a nation extremely reliant on volunteers to provide a range of emergency service and response capabilities, perhaps even more so than Australia. This unit of the Coast Guard operates with 40 volunteers, 2 vessels and a membership of 850. The model is a national one comprising North, West, Central and Southern regions. This allows for a national training syllabus and a degree of standardization across all Coast Guard units.

It was clear from this visit that attracting and maintaining appropriate levels of volunteer staff is key to maintaining the service. The organization also relies heavily on fundraising requiring in the vicinity of $15 million per annum nationally to maintain the service. Less than 10% of the organisation’s funding is provided by Government.

2.12 Avalon, New Zealand

The New Zealand Rescue Coordination Centre (RCC) provides a 24/7 service covering some 30 million square kilometers of region. The agency coordinates Search and Rescue (SAR) services for all aviation and off-shore incidents and land-based SAR operations involving the activation of distress beacons. When viewed on a map, the area of operation is extremely vast.

During this visit I undertook a tour of the operations center and discussed organizational structure, funding and strategy. Of note was the strong emphasis on ensuring community preparedness by way of pre-trip planning, possession of current and operational communications equipment and maintaining a forward understanding and appreciation of weather conditions.

Of interest, part-way through this tour a distress beacon was activated by a yacht off New Zealand’s coastline. This provided a live opportunity for the RCC staff to explain their procedures using a real-time example.
3 Discussion

3.1 Broad Themes

What was clearly apparent from this fellowship experience was a broad recognition by all jurisdictions visited that the frequency, nature and intensity of natural disasters experienced in recent times is unequivocally changing. With this comes an implicit need for emergency services in both the response and recovery spaces to keep pace. Part of keeping pace now involves an increased focus on ensuring that individuals, communities and agencies are prepared for a range of potential emergencies.

It was also evident that the jurisdictions visited place a high emphasis, both philosophically and in terms of funding, on the requirement for and value of widespread public education with a view to building individual and community resilience. The public education facilities in Japan were particularly striking and relevant. The strong reliance on volunteers in New Zealand and the national resilience campaigns in the USA were also broad standout themes.

Finally, it was evident that the discipline of emergency management is evolving across all jurisdictions and exists within the context of a world-wide profession based on fundamentally similar principles. These principles are motivated towards one clear outcome, namely, the delivery of public safety in an ever evolving environment. The maintenance of public safety remains a clear imperative of all Governments and the sharing of information and experiences is widely acknowledged as beneficial.

This final observation is evidenced by the unreserved cooperation and hospitality experienced during this fellowship. In all jurisdictions visited there was a consistent thirst for the exchange of information and experience, particularly in relation to the cyclone/typhoon and storm/flood hazards. A broad theme fed back from interlocutors during this visit was an admiration for the way in which emergency service agencies in the Northern Territory prepare for and respond to emergencies with the added obstacle of remoteness.

3.2 Specific Outcomes

The purpose of this Churchill Fellowship was to investigate ways in which emergency service volunteers could be utilized to build community resilience with direct application to the Northern Territory. A secondary objective of this Churchill Fellowship is to take these learnings and apply them directly to the creation of a new capability within the NT SES. A strong theme in the context of this fellowship, and Churchill himself is legacy. By incorporating these learnings into the creation of a new organisational component, it is hoped that the legacy will positively impact the Northern Territory community over time.

The concept of volunteer interpreters and translators discussed with the Tokyo Metropolitan Government could well be applied to remote indigenous communities and other cultural groups within the Northern Territory’s urban context. Audio and video preparation and emergency information could be communicated in remote locations via television screens in prominent community locations, or via the use of volunteer translators and interpreters.8

The earthquake simulation exercise undertaken in Japan using the interactive iPad platform was extremely engaging and openly accessible to the public. This concept could well be adapted, even in a classroom setting, to the Northern Territory context. Darwin’s museum currently houses an audio and visual Cyclone Tracy display. Based on the Japanese experience it may be feasible to design and implement a similar iPad based experience taking participants through the preparation, response and recovery stages of a simulated cyclone. This concept would be equally applicable to the storm, flood and fire hazards experienced across the Northern Territory.9

8 Referred to in Section 2.1
9 Referred to in Section 2.1
A key takeaway, and one directly applicable to the way in which the NT SES approaches public education is the theme experienced in the USA, Japan and New Zealand with respect to ‘taking action’. Perhaps the best example was the Great Shakeout in the USA where the community was encouraged to detail their actions taken in response to the simulated events. This experience prompted some reflection on the NT SES’s approach to cyclone preparation where members of the public are encouraged to prepare their household emergency plans and cyclones kits. The experiences I was exposed to in the overseas jurisdictions appeared to take this form of public education to the next level by strongly advocating, and in some examples mandating additional and real action by the public. A Northern Territory hour of action could well be implemented based on some of the experiences encountered during this fellowship.10

The necessity to keep volunteers engaged through regular planned exercises is not a new concept, however this need was highlighted and re-iterated during this fellowship. The USA CERT’s were particularly advanced in this field and many lessons learned can be applied directly to the Northern Territory operating environment, not just for SES volunteers but for emergency service volunteers more broadly.11

Perhaps one of the more interesting observations during this fellowship related to the use and importance of HAM radio, or amateur radio operators as volunteers attached to emergency service organizations. As a qualified Australian amateur radio operator I had not completely considered the value this fraternity can add during emergency situations. The USA experience was particularly striking and numerous examples of communications failures supplemented or replaced by the HAM radio operators and spectrums were fascinating and practical.12

From my time with all of the CERT’s in the USA it was evident that the standard of training endorsed by FEMA and provided to all CERT members greatly enhanced the ability of volunteers to engage in community outreach. The development of professional training packages for delivery to volunteers entrusted with delivery public education to their community is essential and this will form a key part in the development of the Northern Territory model.13

The use of adjunct trainers by way of volunteers paid to perform ad-hoc training roles was an extremely interesting model as evidenced during the visit to FEMA’s Emergency Management Institute. This is a concept for definite consideration in the Northern Territory, particularly in the context of whole-of-government emergency management training. The experience, qualifications and ability of emergency service volunteers can never be underestimated, and to utilize volunteers through ad-hoc or routine casual or part-time training tasks would provide numerous benefits to the community and to the emergency services themselves.14

Another interesting outcome was the routine use of emergency service volunteers in assisting first responder active shooter exercises. In the USA I saw several examples of emergency service volunteers assisting in major active shooter exercises through the provision of first aid and assistance with moulage. Although Australia is not at the same stage as the USA with respect to these events, the increased involvement of emergency service volunteers in specific police hazard exercises where appropriate, may benefit both organizations.15

From the NZ experience the concept of reviewing and enhancing each stage of the volunteer management spectrum over a long-range project is an excellent one and could translate directly to those arrangements under which the NT SES and Northern Territory Fire and Rescue Service volunteers operate.16

The lessons learned from the What’s the Plan Stan initiative in NZ provide a perfect example for enhanced in-school disaster resilience initiatives in the Northern Territory. A core task of any future volunteer educator team should be to develop a set of self-sustaining teaching materials similar to What’s the Plan Stan for delivery in Northern Territory schools.

10 Referred to in Section 2.3
11 Referred to in Section 2.3
12 Referred to in Section 2.4
13 Referred to in Section 2.4
14 Referred to in Section 2.5
15 Referred to in Section 2.7
16 Referred to in Section 2.10
This would require the support and consent of the Northern Territory Department of Education. Based on the NZ experience there is certain potential to make the Northern Territory’s disaster-related public education more streamlined and broader reaching across the target groups.\textsuperscript{17}

The hierarchy of stakeholders discussed during the WREMO visit and philosophy of “putting all energy into the leader who can influence the change” has proven in NZ to be a definite force multiplier. This concept is directly translatable into the Northern Territory environment and should be a key factor in the design of the emergency service volunteer educator program. This is particularly applicable across remote indigenous communities.\textsuperscript{18}

Finally, the NZ experience in their changing profile of emergency service volunteers, in particular those attached to firefighting organisations, is directly applicable to the creation of emergency service volunteer educators. It was recognized in all jurisdictions visited that emergency service volunteer organisations attract a diverse range of individuals possessing a broad range of skills and attributes. To not embrace this diversity is to miss out on achieving the most suitable and flexible volunteer workforce.\textsuperscript{19}

4 Conclusion

There is little debate in Australian emergency management circles with respect to the frequency and intensity of natural disasters. In the context of the most recent Productivity Commission report into the funding of disaster etc. in Australia, it is also apparent that the preparedness element of the comprehensive approach to emergency management\textsuperscript{20} is now clearly on the national agenda. The most recent Australian Government Productivity Commission Report into Natural Disaster Funding\textsuperscript{21} acknowledged that every dollar spent upfront creates $13 in economic benefits. The importance of preparedness and prevention to mitigate damage cannot be understated and as has been demonstrated in this fellowship, emergency service volunteers have a strong role to play in this space.

This Churchill Memorial Trust project set out to take a practical organizational and community problem existing in the Northern Territory and deliver a solution based on overseas experience gained through this fortunate opportunity. The Northern Territory is a geographically significant jurisdiction faced with a range of natural hazards. While the true value of SES volunteers has been a known quantity for decades, the Northern Territory is yet to completely harness the value of SES volunteers in delivering public disaster preparation and awareness education.

Any study of preparedness cannot focus solely on the managerial mechanics of service delivery. A much broader understanding of disaster and hazard related public education is required, and that is where the visited countries (Japan, USA and New Zealand) provided a unique opportunity to study how other countries, all of which have experienced the highest order of contemporary natural disasters, have shaped their preparedness policies through the true paradigm of public education and preparedness.

In terms of time this fellowship was undertaken in an extremely compacted timeframe of 4 weeks. This was done so in order to ensure the author was back in the Northern Territory for the commencement of the 2015-16 Cyclone Season. Accordingly this experience involved little downtime and would not have been possible without the genuine hospitality, support and interest of all host agencies. The lessons learned will be directly translated into a dedicated NT SES volunteer program and on that basis, I thank all individuals and agencies involved for making this fellowship such an insightful and rewarding experience.

In conclusion, the experiences gained during this fellowship have provided a myriad of new concepts and learnings. At the heart of our future success lies the perpetual goodwill of our emergency service volunteers on one hand, and a need to emphasize preparation and public education on the other. As the operating environment continues to change, an increased emphasis on emergency service volunteers building resilient communities will save more lives than we perhaps envisage.

\textsuperscript{17} Referred to in Section 2.10
\textsuperscript{18} Referred to in Section 2.10
\textsuperscript{19} Referred to in Section 2.10
\textsuperscript{20} Prevention, Preparedness, Response and Recovery as detailed in the NT Emergency Plan
\textsuperscript{21} http://www.pc.gov.au/inquiries/completed/disaster-funding#report
5 Recommendations

The key recommendations emerging from my Churchill Fellowship are:

1. To develop and implement an emergency services volunteer educator team within the Northern Territory Emergency Service incorporating the lessons learned from the USA, NZ and Japanese visits.

2. To investigate the applicability of volunteer interpreters and translators in diverse and remote indigenous communities to assist community resilience building and the flow of information during emergencies.

3. To propose the development of an iPad-based fire, cyclone and flood simulation application for use by primary school aged children in the Northern Territory.

4. To implement an enhanced emphasis on “taking action” as a result of disaster-related public education in the Northern Territory.

5. To explore the use of amateur radio operators as emergency service volunteers.

6. To explore the applicability of engaging suitably qualified emergency service volunteers as paid adjunct trainers as a supplement to existing training resources.

7. To implement a long-term review of the volunteer management spectrum across the Northern Territory Emergency Service and with a view to continuous improvement.

8. To develop an in-school disaster resilience program similar to the NZ experience applicable to the Northern Territory operating environment.

9. To re-visit the target audiences for the delivery of disaster resilience education in the Northern Territory and ensure that resources are targeted at the groups with the greatest “force multiplier” potential.

10. To establish an ongoing partnership and volunteer exchange program between the Northern Territory Fire and Emergency Services agencies.