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MANAGING ANIMALS IN DISASTERS

IMPROVING PREPAREDNESS, RESPONSE AND RESILIENCE THROUGH INDIVIDUAL AND ORGANISATIONAL COLLABORATION

Annual project report 2015-2016

Dr Mel Taylor

Macquarie University

Bushfire and Natural Hazards CRC





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EXECUTIVE SUMMARY

The first year of the MAiD project comprised an extensive scoping phase. We identified the challenges and needs of responders and stakeholders, we reviewed plans, policies, and initiatives, and identified a number of priority areas with our project end-users and other stakeholders.

In the second year of the project we transitioned to a series of four field work studies. The first two studies are looking at the experiences of people and animals in recent Australian disaster events. The first is focussed on informal volunteers who converge to help animals and the issues this can cause for communication and integration in the formal emergency management system and the effective utilisation of community skills and capacity. The second is focussed on the experiences of animal owners impacted by two recent bushfires in South Australia. These two studies will document problems, issues, and positive outcomes and, with end user support, will hopefully influence engagement, guidance, and practice.

The remaining, third and fourth, field studies are more ambitious. These are looking to develop methodologies and processes.

The third study is developing human-animal risk mapping in bushfire prone areas in Tasmania; combining animal ownership distributions and owners' behavioural intentions for themselves and their animals. This is a multi-stakeholder study intended to assist planning and resource allocation decision-making for emergency services, primary industries, local councils, and police. If the methodology is successful it should be applicable to all hazards.

The fourth study is supporting the development of an Animal Ready Community (ARC) in the Blue Mountains in New South Wales. This study is facilitating, supporting, and evaluating the impacts of a community-led project to raise awareness of, and engagement in, animal-related emergency preparedness and planning. If successful this could provide a blueprint for similar ARCs to be set up in other interested communities.

In addition to our four field studies we also have PhD research being conducted in South Australia investigating animal owner-responder interactions during bushfires, seeking to understand owner decision-making and assist responders in supporting animal owners before, during, and after disaster events.



END USER STATEMENT

Andrew Richards, *State Manager, Community Engagement, New South Wales State Emergency Service*

The MAiD project team has made good progress in key areas over the past year, maintaining the heat to a simmering interest by many of the formal agency end users attached to the project. The team has done well to stimulate action in key areas aligning with the most engaged of these end users, recent disasters and researcher proximity including seeking community input and feedback following recent fires in TAS, SA, and NSW. The diversity of other project key stakeholders such as Department of Primary Industries, RSPCA, Vets, breeders, boarding kennels and other key stakeholders also seem to have provided key insights and interest throughout the project.

I believe it is important for the project team to continue to balance the emotional considerations of animal owners (and their community groups), the livelihood considerations of livestock owners (and their industry groups), the animal service providers and the priorities and constraints of emergency services (and other related government organisations). This creates a complex interface of interests, issues and priorities for the team to navigate, however ongoing dialogue with end-users should allow key priorities to emerge. End-users have recently indicated that it would be great to see the team explore animal management in a range of different emergency and disaster types, plot where high concentration of animal and hazard interfaces are, and how these communities connect.

The past year has seen some contact through project teleconference with end-users, surveys and field studies with selected communities, contact with fellow academics at conferences, stakeholder workshops, one on one agency briefings, workshops and presentations at the Research Advisory Forum, newsletters, hazard notes and a strong presence on social media. I feel it is important for the project to continue to stimulate interest and foster opportunities for dialogue and greater ownership by the end-users throughout the duration of the project.

Current utilisation seems to be working towards Emergency Management Guidelines and Workshops for Managing Animals in Disasters as part of the utilisation road map developed in Hobart. I would also encourage persistence with a broader, more pro-active and sustainable utilisation agenda.

Well done MAiD team, keep up the good work!

INTRODUCTION

The issue of animals in disasters and animal emergency management

Consideration of animals (pets, commercial animals, livestock and other animals, including wildlife) can impact on people's decision making and behaviour during disasters and emergencies. Added to this, the management of animals in disasters is complex; involving many stakeholders and requiring clear roles and responsibilities for all concerned and a high degree of co-ordination. In Australia, despite increasing levels of interest and activity in this area there is a general lack of integration of animal emergency management in the emergency management system and no nationally-agreed approach.

Its significance

A lack of preparedness by some animal owners combined with the severity of the emergency situation and strong attachment to animals can lead to issues for public and responder safety. Animal owners may risk their lives to save animals, may fail/refuse to evacuate, may abandon or release animals, may have unrealistic expectations if they evacuate with their animals, and may try to return before it is safe to rescue or tend to their animals.

The interface between animal owners/wildlife-concerned general public and response agencies is important in preparedness and response. Engagement materials for some owner groups, specifically households with pets, is widely available; although their effectiveness in terms of improved preparedness and planning is not clear. However, in emergency response, responders can be faced with difficult dilemmas and highly emotionally-charged situations. In addition, if there is a lack of co-ordination in response there can be confusion for animal owners and responders and further potential for risky or impulsive decision-making and poor animal welfare outcomes.


Communities frequently perceive gaps in animal emergency management response and this leads to emergent informal volunteering to rescue or move animals. Sometimes this occurs in risky conditions and by well-intended, but chaotic means, and can add to the workload of, and cause distraction to, official response agencies at critical times.

Finally, animal rescues and animal-related issues generate a great deal of media interest, in mainstream/traditional media as well as social media. This can lead to sporadic public outrage when expectations around the emergency response to, or recovery of, animals are not met.

Our approach

Given the breadth of the problem and the lack of a body of Australian research in this area the Managing Animals in Disasters (MAiD) project team has been actively working to establish an evidence-base in this emerging research area in Australia. It is hoped that this will provide support for an informed dialogue and lead to improvements in policy and practice.

We anticipate that aspects of human behaviour and decision-making are likely to be similar in Australia to other western countries and cultures; and therefore comparable to findings from research in the United States, where most research



in this area to date has been centred. However, the organisational contexts, operational emergency management systems, and funding and governance structures are quite different leading to different impacts and requiring different solutions. We have deliberately kept our research Australia-centric so that our findings are relevant to our end users and are practically-focussed.

Through our focus on animal emergency management in the MAiD project, we advocate for greater acknowledgement of animal emergency management as a 'people' issue and look to assist in the national dialogue and production of training materials to support better integration of animal emergency management into the Australian emergency management system.

PROJECT BACKGROUND

Research in this area is required as there is a paucity of evidence to guide policy development and training needs. This project has leveraged off recent initiatives and programs, nationally, and existing research on prevention and preparedness by providing complementary research on the impact of animals on response and recovery for the community as well as responders.

In this project 'animals' include domestic pets, commercial animals, livestock, and wildlife. Animal owners may include pet owners, small-scale animal related business owners, livestock producers, and those concerned with and interested in wildlife (e.g. wildlife carers, rural dwellers). Similarly, responders may be drawn from a broad range of groups, such as emergency services, Local Government, RSPCA officers, Parks and Wildlife rangers, NGOs (Red Cross, Salvos), GPs, veterinarians, established volunteer organisations, and spontaneous (emergent) responders. Within these groups there is a variation in preparedness and potential vulnerabilities. The project has been designed to provide the empirical evidence required to determine what constitutes best practice and to start to develop approaches to identified gaps and needs.

The MAiD project commenced in January 2014 and will run for three and a half years. The project is divided into a number of sequential, but overlapping, stages.

- Scoping and exploration: to review, explore, and scope issues. Identify priorities and needs suitable for development of support tools/materials.
- Field work: to gain an in-depth understanding of priority areas and inform support tools/materials development.
- Project utilisation planning - identifying and prioritising project outputs.

Project Aim and Goal

The MAiD project is seeking to identify and build best practice approaches to animal emergency management to enable engagement with animal owners and other stakeholders in disasters and emergencies.

The goal is to improve outcomes for public safety and the resilience of responders, animal owners, those with animal-related businesses, and their communities.

PROJECT OVERVIEW

Scoping, auditing, and exploration

The project was designed to be broad in its initial scope to enable a comprehensive audit of current research, initiatives, and programs across Australia (and internationally) in relation to animal emergency management across the emergency management system. The project has identified what is currently known, what is already underway, and what gaps still remain.

This information has been supplemented with data from four exploratory studies:



- The preparedness and evacuation behaviour of Australian pet owners in disasters and emergencies (undertaken ahead of the MAiD project),
- The preparedness, planning and experiences of South Australian livestock owners in bushfire,
- A scoping survey of the experiences of emergency services personnel in supporting animals and their owners in disasters, and
- A national survey of Australian response organisations and stakeholders on the challenges of managing animals and their owners.

In addition, this audit has incorporated findings from a knowledge exchange workshop where we explored and discussed the perceived needs and priorities in this area of a broad range of stakeholders.

FIELD WORK STUDIES

Field work study areas have been identified through consideration of end-user priorities, the outcomes of the knowledge exchange workshop, and the surveys noted above.

A set of four field work studies are currently underway; each focusses on different animal emergency management-related issues.

These are

- **Collaboration, communication, and integration in animal emergency management.** This is a study of the integration of emergent informal volunteer groups into animal emergency management.
- **Planning for animals: a multi-stakeholder study of peri-urban animal owners in bushfire-prone areas in Tasmania.** This is a study in which we are developing a method to collect data to map animal ownership distributions with an overlay of owners' behavioural intentions in bushfires.
- **Animal owner experiences in recent South Australian bushfires.** This study is investigating the experiences of horse owners impacted by the Sampson Flat bushfire in January 2015 and, more broadly, animal owners impacted by the Pinery bushfire in November 2015.
- **Building an ARC: establishing a community-led Animal Ready Community (ARC).** In this study we are working alongside a community group in the Blue Mountains in NSW (Blue ARC) to facilitate, support, and evaluate the impacts of a community-led push to raise awareness of, and engagement in, animal-related emergency preparedness and planning.

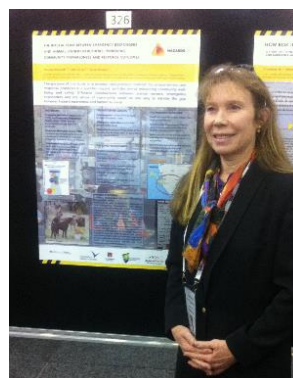
The field work studies involve mixed methods approaches, including surveys, interviews, workshops, data-mining, mapping, and field-based data collection.

PhD research

In addition to the scoping and field study research in the MAiD project plan of work outlined above, another important component of the project is the work being conducted by our BNHCRC PhD scholar and animal emergency management practitioner Rachel Westcott.

Rachel is investigating the interactions between, and challenges facing, animal owners and emergency responders in bushfire situations, to determine if new or enhanced mitigation measures can be integrated into arrangements to promote human safety and support community well-being.

Rachel has been conducting research field work this year in the Port Lincoln/Eyre Peninsula area in South Australia.



*Rachel Westcott at
BNHCRC/AFAC Conference,
Adelaide Sep 2015.*

PROJECT UTILISATION PLANNING - IDENTIFYING AND PRIORITISING PROJECT OUTPUTS

The outcomes of the MAiD field work studies will be discussed with the project end-users and other key stakeholders to reach a consensus on a prioritised approach to the development of usable project outputs, such as tools, guidance, training etc. Preliminary discussions took place at the BNHCRC Research Advisory Forum in May 2016.

POTENTIAL MAiD PROJECT OUTPUTS (UTILISATION POTENTIAL)

As the area of animal emergency management is still developing, and the MAiD project has encompassed a broad range of study areas, the project has the potential to translate its findings into a range of practical and usable outputs. The challenge for the MAiD project team and end users at this time is to select a small subset of those that should be prioritised for further scoping and initial development within the timeframe and resources of the project.

Focussing on the four field studies and the PhD research, each could make a useful contribution to future policy and practice:

- The multi-stakeholder peri-urban study will serve as a 'proof of concept' approach to 'human-animal risk mapping'. It is hoped that this study may result in a GIS mapping and planning approach that will assist multiple stakeholders in their key areas in human and animal emergency management. If successful, the methodology has the potential to be extended to all hazards, and lead to the development of GIS mapping tool and App development for community involvement.
- The emergent volunteer field work and SA animal owner experiences research are primarily directed towards identifying challenges, directing dialogue and action, and identifying solutions to problems that have

been encountered in the past. These findings may result in generic codes of conduct and/or guidelines for improvement in these areas. The former field study would be focussed on volunteer groups and stakeholder agencies and the latter could focus on animal owner engagement materials and training.

- The Animal Ready Community (ARC) research will assess the feasibility and impact of community-led action in the area of animal owner engagement in preparedness and planning. The goal of this field study is to document the stages and provide brief guidance and generic support tools to communities that wish to take a similar approach.
- The PhD research is uncovering valuable insights into animal owner decision-making, as well as their perspectives, and expectations of response agencies. Understanding owner decision-making and behaviour provides opportunities for training for responder groups, as well as for development of owner-focussed resources and engagement.

In addition to the specific studies undertaken in the field work studies, there is potential for the project to support broader issues around the integration of animal emergency management into the Australian emergency management system and requirements for training and doctrine for emergency response personnel. The development of an Animal Emergency Management Handbook has been broadly supported in recent discussions with nominated project end users and representatives from other BNHCRC partner organisations. The breadth of the research conducted by the MAiD project to establish an evidence base in this area provides a useful platform from which to develop such a resource.

The final priorities and direction of the project with regard to utilisation will be informed by end user preferences and guidance from the BNHCRC.

MAID PROJECT ACTIVITIES

In this section we briefly report on the in-year activities of the MAiD project team. This year most of our focus has been on planning, commencing and progressing the four field studies. Later in this section we outline changes to the project team, project dissemination activities, publications, and team member awards and achievements.

FIELD STUDY DEVELOPMENT

The field study phase of the project followed-on from the scoping studies, the AEM audit report, and the Knowledge Exchange workshop conducted in the first 12 months of the project. At the end of this period a set of potential field study ideas was generated by the MAiD team and these were discussed and prioritised with the project end users. Initially two field studies were chosen for further development, but with a lack of clear consensus about priorities, numerous issues worthy of attention, and a generally willingness to support the research four field studies were eventually identified and have been progressed.

Table 1 below shows a mapping of challenges encountered in animal emergency management (identified in scoping surveys) to the four field studies currently in progress and the MAiD PhD research.

Challenges in AEM	1. Informal volunteers	2. SA animal owners	3. Multi-stakeholder planning	4. Building an ARC	5. Owner-responder Interface (PhD)
a. The physical management/rescue of animals in natural disasters	X	X			X
b. Interactions with animal owners during disaster response		X		X	X
c. Interactions with animal owners in disaster preparedness and planning		X	X	X	
d. Interactions with members of the general public	X				
e. Post-disaster impacts in management of animals or their owners				X	
f. The logistics available to respond to animals in natural disasters	X			X	X
g. Unclear policy or operational responsibilities	X		X		X
h. Inter-agency coordination around the management of animals or their owners in natural disasters	X		X		X
i. Co-ordination with non-emergency service agencies	X				X
j. Managing/dealing with untrained /spontaneous animal-related responders	X				X

TABLE 1. MAPPING ANIMAL EMERGENCY MANAGEMENT CHALLENGES TO RESEARCH PROGRAM (CROSSES INDICATE AREAS ADDRESSED IN STUDY, RED CROSSES INDICATE MAJOR FOCUS)

Field studies commenced from March 2015. All needed Human Ethics approvals. As these field studies were planned and started at different times they are at different stages now. In the next section the four field studies and the PhD research study will be briefly summarised and the current progress reported.

1. THE INTEGRATION OF EMERGENT INFORMAL VOLUNTEER GROUPS INTO ANIMAL EMERGENCY MANAGEMENT

Focus: Response, co-ordination, communication

Aim: To investigate the integration of formal and informal organisations/groups in animal emergency management.

Overview: Initially, this study began as an interview-based study of a broad range of formal response agencies, extending organisations, and informal emergent volunteer groups who were involved in the animal emergency management response to the Sampson Flat bushfire in January 2015.

The study has primarily been looking at the roles of, communication with, and integration of informal groups and the benefits and challenges encountered. A total of 12 in-depth interviews have been completed with representatives from formal response organisations SAPOL, PIRSA, CFS, and SAVEM. Interviews were also undertaken with established animal-related organisations that extended their activities into AEM, e.g. RSPCA, Animal Welfare League, Horse SA and Adelaide Zoo, and three fully volunteer groups.

Identification and access to volunteer groups was problematic, which reduced the representation of these groups in the study. Therefore we decided to extend the study, using an online survey to reach people who volunteered to help animals during recent disaster events, e.g. bushfire events in SA (Pinery), VIC (Wye River), WA (Waroona), and floods in Dungog/Hunter Region.



The survey content was developed from the initial findings of the interview study, and the survey is currently live. Through the survey we are hoping to learn more about people who help animals during disasters and emergencies (a group of people we know little about), the skills they have and how they might be better utilised/integrated within current EM system(s).

Expected output/s: Advice and guidance to support better integration of emerging groups and extending organisations in animal emergency management.

2. ANIMAL OWNER EXPERIENCES IN RECENT SOUTH AUSTRALIAN BUSHFIRES



Focus: Preparedness and Response

Aim: To assess the preparedness and actions of horse owners impacted by the January 2015 Sampson Flat bushfire and the preparedness and actions of a broader set of animal owners impacted by the November 2015 Pinery bushfire .

Overview: This study was undertaken with support from Horse SA and built on data collected in post bushfire research conducted with the SA Country Fire Service in 2014. Horse owners are a group identified by emergency responders as a priority group due to their strong bonds to their animals and logistical/practical issues related to size of their animals.

The study involved an online survey of horse owners affected by the Sampson Flat bushfire and was used to assess ownership and property characteristics, owners' levels of preparedness, and the actions taken during the bushfire. The infographic (left) includes some summary data from the study and is available at

<https://www.facebook.com/SavingAnimalAndHumanLives/photos/a.151844781634500.35442.149774535174858/582750865210554/?type=3&theater>

The main survey findings were that

- A large majority of respondents included their horses in their bushfire plan, but few had their plan in written format.
- Most people did not actually evacuate but preferred to wait and see.
- Horse owners had high levels of attachment to their horses.
- Most had some form of ID for their horses and
- Most had the means of transporting their horses if necessary.

Following the Sampson Flat survey administration, the Pinery bushfire occurred. The team recently decided to extend data collection by modifying the questionnaire survey to include all animals, not just horses, and inviting animal owners affected by the Pinery bushfire to take part in the study. An ethics amendment was submitted and approved and this survey is currently live.

Expected output/s: Guidance and advice for horse owners, presentations to emergency service organisations and other stakeholders.

3. PLANNING FOR ANIMALS: A MULTI-STAKEHOLDER STUDY OF PERI-URBAN ANIMAL OWNERS IN BUSHFIRE-PRONE AREAS IN TASMANIA

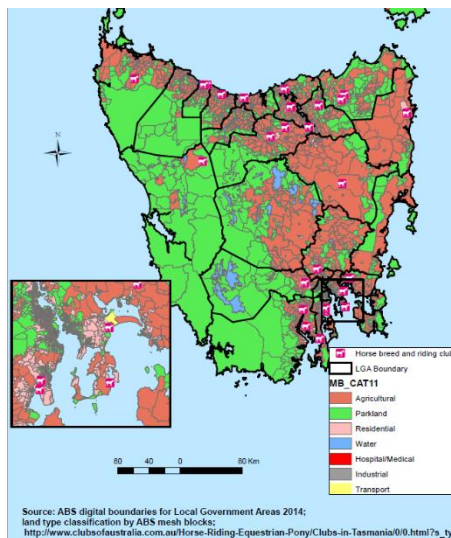
Focus: Planning, logistics, community preparedness

Aim: To map peri-urban animal populations in a bushfire prone area with an overlay of owners' behavioural intentions.

Overview: Successful animal emergency management requires community engagement and the integration of multiple stakeholders. This study involves collaboration between MAiD, Tasmania Fire Service (TFS), Department of Primary Industries, Parks, Water and Environment (DPIPWE), local councils, and peri-urban animal owners.



We are teaming up with TFS in their next round of Bushfire Ready Neighbourhoods to select areas within one or two LGAs with high peri-urban animal ownership. We will be surveying and mapping animal ownership using existing DPIPWE and Census data. In addition, at the community level we will be surveying households about their bushfire preparedness and evacuation planning intentions for themselves and their animals. We will integrate these data to form a human-animal risk map.



It is hoped that if this study is successful we, along with relevant stakeholders, will be able to estimate demand for capacity at local animal evacuation sites, identify potential road/traffic issues, and identify emergency service animal 'hot spots' that may require greater assistance or coordination in a bushfire response or in greater engagement ahead of any bushfire. The focus is on, but not limited to, larger animals, such as horses, alpacas, and 'pet' livestock as these have been identified as a greater priority, and challenge, for emergency responders.

This project is still in development pending selection of the target communities and therefore local councils. Some detailed animal property mapping is currently underway with the assistance of DPIPWE. Property Identification Code (PIC) data for Tasmania showing the geocoded locations of different types of stock animals (horses, cattle, sheep, alpacas, goats, working dogs, aquaculture and poultry) is being prepared for overlay with cadastre and Census and other small area social indicator data (drawing on the resources provided by AURIN www.aurin.gov.au).

Expected output/s: a methodology for planning – anticipating demand and capacity for animals in evacuations suitable for use in all hazards.

4. BUILDING AN ARC: ESTABLISHING A COMMUNITY-LED ANIMAL READY COMMUNITY (ARC).

Focus: Awareness, preparedness, planning and recovery

Aim: To assist with, and document, the setting-up of an Animal Ready Community.

Overview: This study is embedded within a community-setting in the Blue Mountains. We are working with the Blue ARC community group, Springwood Neighbourhood Centre, the Mountains Community Resilience Network and the City of Blue Mountains Council.



In this study we are working to support and document the setting-up of a community-led group that is looking to progress animal emergency management in the mountains. Activities include identifying community needs – through their experiences of the 2013 bushfires. Identifying and liaising with official emergency management stakeholders and identifying key community contacts. Supporting the development of resources for local animal owners, and providing information and support for those who lost animals in the 2013 bushfires.



Ethics approval for this study was granted in May 2016, initial discussions have been held with a people in key positions in the local council, NSW RFS, NGOs, and a number of community organisations. A survey for local animal owners is currently being developed and is planned for release in July/August 2016.

Expected output/s: A 'how to' guide for communities to assist them in setting-up an ARC, with survey tools, checklists, information sources, hints and tips.

5. PHD STUDENT RESEARCH

Investigating the application of Protection Motivation Theory to animal owners and emergency responders in a bushfire natural hazard

Focus: Response and Engagement

Aim: To investigate the behaviour of animal owners, and the interactions between animal owners and emergency responders, in the context of bushfires threats.

Overview: This study is being conducted by BNHCRC PhD student Rachel Westcott. Rachel is investigating the interactions between, and challenges facing, animal owners and emergency responders in bushfire situations, to determine if new or enhanced mitigation measures can be integrated into arrangements to promote human safety and support community well-being. The field work for this study is focused in the Port Lincoln area in SA – an area that has experienced a number of serious bushfires in the last decade.



In phase one of her research Rachel has been conducting a series of interviews and focus groups with a range of animal owners and emergency responders to explore their bushfire experiences, issues around preparedness and their interactions with each other. She conducted extensive field work in the Port Lincoln/Eyre Peninsula region during the period July – September 2015. The owner groups have included farmers, commercial animal-related business owners, horse owners and pet owners. The emergency responder groups have included those in emergency services, primary industries, environmental departments, and vets.

Data analysis is currently underway. The final stage of the research includes survey-based follow-up with livestock producers (farmers) across SA, as a special group of interest. The goal of this stage of the research is to learn from their knowledge and experiences with bushfires and other hazards, focus on their challenges, assist in supporting better preparedness and planning, and identify ways to improve Responder approaches and support to this group.

RESEARCH TEAM AND END USER UPDATE

At the start of the reporting period there were a number of team changes. Mel Taylor moved to Macquarie University and continued leading the project in this new position. Brad Smith, our team post doc at CQUni was promoted and left the team to move to Rockhampton, and in September Megan McCarthy moved to Macquarie University to join Mel.



We welcomed Lisel O'Dwyer to the team in September 2015. Lisel is a Senior Research Fellow at CQUni and she has a PhD in human geography. Lisel has worked in a range of social science fields over the last 20 years including housing, ageing, public health and social policy. Lisel is working with Kirrilly Thompson on the Animal owner studies in South Australia and the multi-stakeholder study on peri-urban animal owners in Tasmania.

During this period we had a couple of changes in our nominated end users. Katrina Beard, our AEMI end user ceased involvement with the project due to the closure of AEMI, we would like to thank her for her support, especially with the emergent informal volunteer research. Our ACT ESA end user, Andrew Stark, moved to CFS and was replaced by Phil Canham. We would like to welcome Phil to the team.

PROJECT DISSEMINATION

The project team has been actively disseminating scoping study findings and early findings from some of the field studies at conferences and invited presentations to groups and committees during the year. Peer-reviewed journal publications have not been a focus for the project this year, as scoping research is already published and field studies are still in progress and not ready for final formal publication at this stage.

Media coverage has included some discussion of research findings, awareness raising and building local engagement in PhD field work, and reporting of impacts of bushfire events on animals and animal emergency management.

Project dissemination and broader public engagement material in this subject area has been broadcast via a mix of radio, television, and social media; with team members administering a number of Facebook pages and groups and being active on Twitter, LinkedIn, and ResearchGate.

CONFERENCES

Project team members have kept BNHCRC partners, end users, stakeholders, and the research community aware of activities and project findings through attendance and presentations at a number of conferences. This year the team has delivered nine oral presentations and five poster presentations at conferences.

Two oral presentations were delivered at international conferences and four were delivered at nationally recognised emergency management conferences, i.e. ANZDMC, BNHCRC/AFAC conference, Australian Natural Hazard Management, and Emergency Media and Public Affairs (EMPA).



Mel Taylor and Megan McCarthy at BNHCRC/AFAC, Adelaide, Sep 2015

In addition to emergency management -

focused audiences, team members also presented MAiD research at two national professional conferences in other discipline areas. Rachel Westcott

presented at the Australian Veterinary Association national conference (May 2016) and Lisel presented at the Institute of Australian Geographers National Conference (June 2016).



The team was also very pleased to be able to support end user agency conferences, i.e. the NSW RFS Australian Community Engagement and Fire Awareness (ACEFA) conference and the VIC DELWP Living with Bushfire Community Conference.

Mel Taylor at ACEFA, Albury, May 2016.



We presented MAiD research at two international conferences. Kirrilly Thompson presented at The British Animal Rescue and Trauma Care Association (BARTA) conference in Prague, Czech Republic (Dec 2015) and Mel Taylor presented at the People in Disasters conference in Christchurch, NZ (Feb 2016).

Kirrilly Thompson at BARTA, Prague, Dec 2015.

MEDIA

Team members regularly give interviews to the media and have been included in news articles and radio broadcasts. Links to some of these radio/news interviews are given below.

Mel Taylor. ABC Rural podcast - <http://www.abc.net.au/news/2015-09-02/mel-taylor-macquarie-university-volunteers-animal-emergencies/6743246>

Rachel Westcott. Two (of many) pieces of media on animal emergency management from Rachel Westcott during the Pinery fire response (Nov 2015)

<https://radio.abc.net.au/programitem/pe42LYYAGL?play=true>

<http://www.abc.net.au/news/2015-11-30/rescuing-animals-affected-by-the-pinery-bushfires/6985820>

Rachel also gave numerous radio and TV interviews during PhD field work on Lower Eyre Peninsula in South Australia.

These included:

- ABC Radio 1485 Rural Report. 22 June 2015.
- ABC Radio 1485 interview. 7 August 2015.
- Southern Cross Television News. 22 July and 25 August 2015. (photo)
- Stock Journal, article p19. 25 June 2015.
- Port Lincoln Times. 9 July 2015.
- The Advertiser, SA Weekend p10. June 6 2015.



PRESENTATIONS TO COMMITTEES AND WORKING GROUPS

Team members were also invited to present to formal committees and working groups this year. Some examples include:

- North West Metropolitan Regional Emergency Management Committee. Riverstone Police Station, Riverstone, NSW. 3 June 2016 (Mel Taylor)
- Resilience and Preparedness Working Group. Mountains Community Resource Network, Lawson, Blue Mountains, NSW. 6 April 2016 (Mel Taylor)
- Eastern Adelaide Zone Emergency Management Committee, Norwood, SA 12 May 2015 (Rachel Westcott)



ACHIEVEMENTS AND AWARDS

Individual members of the MAiD team were recognised for their contributions as academics and practitioners during the year. These achievements are broader than their specific contributions to the BNHCRC MAiD project, although their recognised expertise and profiles serve to enhance our team's national standing.



Rachel Westcott - MAiD PhD student Rachel Westcott was nominated for a Pride of Australia award, for her work after South Australia's Sampson Flat bushfire. Rachel finished third in the Environmental Category of the South Australian awards, which are run by News Corp. Along with her team from South Australian Veterinary Emergency Management (SAVEM), Rachel, who is a veterinarian, helped save - and sadly, euthanase - hundreds of suffering and burnt animals, including western grey kangaroos, koalas, possums, livestock and domestic pets after the bush fire in January 2015. Rachel started SAVEM, a not-for-profit organisation, after Victoria's Black Saturday bushfires in 2009, to help animals after natural disasters.



Kirrilly Thompson - Dr Kirrilly Thompson was recognised by CQUni for her outstanding research efforts and commitment. She was among several CQUni staff acknowledged as part of the Vice Chancellor's Awards for Outstanding Researchers which recognises those who have made a significant contribution to enhancing and supporting activities at CQUni. Kirrilly received the Mid-Career Research Award.



PUBLICATIONS LIST

BNHCRC REPORTS

Taylor M, Eustace G, McCarthy M. (2015) Animal Emergency Management in Australia: An audit of current legislation, plans, policy, community engagement resources, initiatives, needs, and research dissemination. Report for the Bushfire and Natural Hazards Cooperative Research Centre. Melbourne, VIC. Australia.

Taylor, M. (2015) Managing Animals in Disasters: Improving Preparedness, Response and Resilience through individual and organisational collaboration. Annual project report 2014-2015. Report for the Bushfire and Natural Hazards Cooperative Research Centre. Melbourne, VIC. Australia.

CONFERENCE PRESENTATIONS (ORAL)

O'Dwyer, L. and Thompson, K. 2016 'Understanding SA Horse Owners' Plans and Actions in the 2015 Sampson Flat Bushfire - Implications for Emergency Responders', Frontiers in Hazard, Risk and Disaster Research Session, Institute of Australian Geographers National Conference, June 29 June – 1 July 2016, Adelaide.

Taylor M. (2016) Communicating to animal owners. Presentation and workshop exercise in the use of narrative in communication. Emergency Media and Public Affairs Annual Conference, Melbourne, VIC. May 2016.

Westcott R. Triage, treat and then what? Bushfire, wildlife and SAVEM. Australian Veterinary Association Annual Conference. Adelaide, SA. May 2016.

Taylor M. (2016) How to build an ARC (and other animal business). NSW Rural Fire Service Conference. Australian Community Engagement and Fire Awareness Conference, Albury, NSW. May 2016.

Taylor M, Eustace G, Burns P, McCarthy M. (2016) The Importance of managing animals in Disasters to improve human outcomes: from response to recovery. People in Disasters Conference – Response, Recovery, Resilience. Christchurch, New Zealand. February 2016.

Thompson K. (2015) How do Horse Guardians Respond to Bushfire Threat – Lessons Learnt from Five South Australian Fires, 6th International Large Animal Rescue Conference, British Animal Rescue and Trauma Care Association. Prague. December 2015.

Westcott R. (2015) The Sampson Flat fire January 2015: real world experience meets ground-breaking research. Australian Natural Hazard Management Conference, Perth. October 2015.

Taylor M, McCarthy M, Eustace G. (2015) The integration of informal volunteers into Animal Emergency Management: Experiences from the 2015 South



Australian Sampson Flat bushfire. Bushfire and Natural Hazards Cooperative Research Centre Forum, Adelaide, SA. September 2015.

Westcott, R. (2015) Veterinary emergency management at the Sampson Flat bushfire in South Australia, January 2015. Bushfire and Natural Hazards Cooperative Research Centre Forum, Adelaide, SA. September 2015.

CONFERENCE PRESENTATIONS (POSTERS)

O'Dwyer L. (2016) Sampson Flat bushfire: survey of horse owners. Australian and New Zealand Disaster and Emergency Management Conference. Gold Coast, Queensland. May 2016.

Westcott R. (2016) Narrowing the awareness-preparedness gap: investigating an other-directed application of protection motivation theory (PMT) for animal owners and emergency responders in bushfire emergencies. BNHCRC Research Advisory Forum, Hobart, TAS. May 2016.

Westcott R. (2015) The interactions between emergency responders and animal owners in bushfire: Improving community preparedness and response outcomes. Bushfire and Natural Hazards Cooperative Research Centre Forum / AFAC 2015. Adelaide, SA. September 2015.

Taylor M, McCarthy M, Burns P, Thompson K, Eustace G. (2015) Managing animals in disasters: Improving preparedness, response, and resilience through individual and organisational collaboration. Bushfire and Natural Hazards Cooperative Research Centre Forum / AFAC 2015. Adelaide, SA. September 2015.

Westcott R. (2015) The interactions between emergency responders and animal owners in bushfire: Improving community preparedness and response outcomes. Living with Bushfire: A community conference. Churchill, VIC. October 2015.

ADDITIONAL OUTPUTS: PODCASTS, BLOGS, THESES, NON-PEER REVIEWED JOURNAL ARTICLES, NEWSLETTERS

Thompson K. (2016) Helping hands, hurting hooves: Large Animal Rescue. Asia Pacific Fire Magazine E-newswire. Issue 56 – January 2016.

MAiD Aware. Project Newsletter February 2016.

<http://www.bnhcrc.com.au/news/2016/managing-animals-disasters-newsletter>

PhD student blog from the ANHMC conference

<http://www.bnhcrc.com.au/news/blogpost/rachel-westcott/2015/getting-front-foot-science-pointy-end>

BNHCRC Hazard note Issue 11. Turning warnings into action. October 2015

http://www.bnhcrc.com.au/hazardnotes/011?utm_source=HazardNews&utm_campaign=ca290fdd9e-



[Hazard Note 1110 21 2015&utm_medium=email&utm_term=0_8199986967-ca290fdd9e-168705261](http://www.bnhcrc.com.au/resources/presentation-audio-video/2422)

Managing animals in disasters – project overview video. BNHCRC website.
<http://www.bnhcrc.com.au/resources/presentation-audio-video/2422>

REPRESENTATION ON COMMITTEES AND ASSOCIATIONS

Kirilly Thompson. President Elect. Society for Risk Analysis Australia and New Zealand.

Greg Eustace. RSPCA Representative. Queensland State Disaster Coordination Group.

Penny Burns. Chair. World Association for Disaster and Emergency Management, Oceania Region.

Penny Burns. Member. NSW General Practitioners' Disaster Response Group.

Penny Burns. Member. NSW Mental Health Disaster Advisory Committee.

Rachel Westcott. Member. Community Reference Group, Service Providers, Sampson Flat bushfire.

ADDITIONAL PEER-REVIEWED PUBLICATIONS

Papers not specific to MAID/MAID data – but linked to animals in disasters and the human-animal bond (MAID team member authors in bold).

Every D, Due C, **Thompson K**, Ryan G. (2016) "I know it sounds silly, but my pets mean the world to me": Conflicting perspectives on animal rescues in natural disasters. *Society and Animals*.
<http://booksandjournals.brillonline.com/content/journals/10.1163/15685306-12341417>

Trigg J, **Thompson K**, **Smith B**, Bennett P (2016) An animal just like me: The importance of preserving the identities of companion-animal owners in disaster contexts. *Social and Personality Psychology Compass*. 10/1 (2016): 26-40.
<http://onlinelibrary.wiley.com/doi/10.1111/spc3.12233/full>

CURRENT TEAM MEMBERS

The full integrated project team comprises the academic research team, a senior advisory panel and practitioner end users from relevant end user organisations.

Research Team



Dr Mel Taylor
Psychology
Department,
Macquarie
University

(Project Leader)



**Dr Kirrilly
Thompson**
Appleton
Institute,
Central
Queensland
University



Dr Lisel O'Dwyer
Appleton
Institute,
Central
Queensland
University



Dr Penny Burns
General Practice,
School of
Medicine,
Western Sydney
University



Megan McCarthy
Psychology
Department,
Macquarie
University



Greg Eustace
State Emergency
Coordinator
RSPCA
Queensland



Rachel Westcott
Western Sydney University
UWS PhD Scholar
BNHCRC Scholar

Senior Advisory Team



**Professor
Beverley
Raphael,**
Australian
National
University



**Professor Kevin
Ronan,**
Central
Queensland
University



**Associate
Professor
Pauleen Bennett,**
LaTrobe
University

End user organisations

