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# MANAGING ANIMALS IN DISASTERS

Annual project report 2014-2015

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Cover: How can emergency services better work with animal owners, whether it be livestock or pets, during emergencies?

Photo: Ashley Hosking CFS Promotions Unit



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## EXECUTIVE SUMMARY

### **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. In addition 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 of 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 are 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.

### **Our approach**

Given the breadth of the problem and the lack of a body of Australian research in this area we are following a phased approach in the MAiD project. Initially we have scoped the area; identifying the challenges and needs of responders and stakeholders, reviewing plans, policies, and initiatives and identifying priority areas with our project end-users and other stakeholders.

We have now transitioned to the field work stage in the research program to focus on the experiences and issues around the integration of emergent informal volunteers into animal emergency management, using the Sampson Flat fire as a case study. In addition we are developing a multi-stakeholder research project in Tasmania to focus on peri-urban animal owners. We are developing a method to collect data, and hopefully map, animal ownership distribution and owners' intentions in bushfires to support planning for Tasmania



Fire Service, the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and local government. Following this 'proof of concept' study we plan to test this approach in another jurisdiction and another hazard, e.g. flood or cyclone, to assess whether this can be flexibly applied across different contexts.

In addition to our two main field studies we have a PhD student in South Australia investigating the animal owner-responder interface in the Port Lincoln area; which has been experienced numerous fire events in the last decade. We also have a number of smaller studies underway in South Australia with horse owners and with livestock producers, being undertaken by team members and students.

As outlined above, the MAiD project has, and continues, to produce a valuable evidence-base for animal emergency management in Australia. We will work with our end users to produce usable techniques/methods and materials to support the integration of different stakeholders in this area. In addition, through our focus on animal emergency management, we will 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.



## CLUSTER LEAD END USER STATEMENT

*Andrew Richards, NSW State Emergency Service, NSW*

The MAiD Project, led by Mel Taylor, is seeking to identify and build best practice approaches to animal welfare emergency management to enable engagement with animal owners, and other stakeholders in disasters.

The team has actively pursued involvement from end-users since its inception using a wide variety of communication methods to attract and retain interest from agencies, professional associations, clubs, researchers and community organisations in Australia.

As the Communications and Warnings Cluster Lead End User I sense a good level of satisfaction from end users involved in the project that have been consulted during the scoping phase, field work and development of the audit of existing Animal Emergency Management in Australia.

Other opportunities for end-user engagement that I am aware of have included:

- a knowledge exchange workshop with end-users in Sydney
- newsletters to end-users informing them of project progress, regular social media activity and a feature in AJEM
- stakeholder and responder surveys
- presentations at the Research Advisory Forum, AFAC and ANZDMC Conference and to AFAC stakeholder groups such as the Community Engagement Technical Group.
- Individual agency briefings to better target the priority research areas in South Australia, NSW and Tasmania
- Regular teleconferences with other researchers in the cluster that result in cross-project collaboration

The proposed utilisation outputs of the Managing Animals in Disasters Project include:

- training or workshop materials for animal owners or responders and/or
- guidelines for animal owners or responders and
- community engagement materials.

This is a project which has the potential to influence the hearts and minds of 63% of people that own pets in Australia, plus reduce the impacts of disasters upon livestock owners, responders and enhance animal welfare. It is therefore a key piece in the puzzle of holistic management of disasters and their impacts.

Well done MAiD team, keep up the good work!



## INTRODUCTION

Australia is characterised annually by 'droughts and flooding rains' that are expected to intensify with climate change [1]. It also has some of the highest pet ownership levels in the developed world [2]. If 63% of 8.6million Australian households own pets, the combination of natural disaster and pet ownership is of concern for over 5 million households.

In times of fire and flood, animal owners may put their own lives at risk to save animals. Research from the United States indicates that animal owners are less likely to evacuate during natural disasters than non-owners [3] and if they do evacuate without their animals, are likely to return to try to rescue them [4]. In Australia, Howlett and Turnbull found that more than 80% of animal owners would risk their lives to save their animal [5]. Indeed, more than 8% of fatalities from floods alone resulted from people's attempts to save 'stock, property or pets' even when the animal or pet was not their own [6: 406]. Frequently, these efforts can put other people's lives on the line too [7]. As we lack a comprehensive understanding of the impact of animals on human disaster behaviours, we do not have sufficient knowledge to develop effective best practice support tools to aid the survival of community members and assist the personnel working to protect them.

Recent research in Australia [8] has focused on prevention and preparedness. However, there is no current published research addressing the impact of animals on response, or the impacts of having/losing animals on disaster recovery. Recently published data on the preparedness and evacuation behaviour of Australian pet owners in emergencies and natural disasters [9] found that pet ownership composition was complex, with multiple combinations of pets in many households, and only 15% of owners reported being well prepared for emergencies. Around a third of owners who were advised by authorities to evacuate did not evacuate, and around 5% left a household member behind at home with the pets whilst others evacuated. In addition, around 10% left pets behind in the home when they evacuated, and a further 6% either released pets or couldn't catch them, leaving them behind. Those who lost pets in disasters (deceased or not found) felt that their recovery was adversely impacted by the loss of their pets.

Animals (pets, livestock and wildlife) also impact on the roles of multiple responder groups in disasters. In addition to documented cases of failure to evacuate and threats to public (and responder) safety, responders increasingly have to deal with animal owners who have expectations and demands regarding the needs of their animals in disasters. Responders are also called on to manage large-scale situations in the context of livestock. These situations present logistical and practical considerations during response, issues of animal welfare, and mass euthanasia.

Responders, including emergency services personnel, rangers, government and private veterinarians, local government personnel, and official and unofficial volunteers face challenges in coordinating their activities. Animal emergency management is now being identified as an area that requires additional focus within Australian emergency management.



## PROJECT BACKGROUND

Research in this area is required as there is a paucity of evidence to guide policy development and training needs. This project will leverage off current 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.

The MAiD project commenced in January 2014 and will run for three and a half years and is structured in four sequential 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 understand of priority areas and inform support tools/materials development.
- Development: Development of prototype tools/materials with project end users.
- Assessment and evaluation: of the support tools/materials.

## 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 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 three field work studies are currently in the process of being conducted and planned; each focusses on a different animal emergency management-related issue.

These are

- **A study of the integration of emergent informal volunteer groups into animal emergency management.** This study is using experiences from the January 2015 Sampson Flat fire in South Australia as a case study to look at the challenges and potential advantages of integrating informal volunteers into animal emergency management.
- **A multi-stakeholder study of peri-urban animal owners in bushfire-prone areas in Tasmania.** In this study we are developing a method to collect data and map animal ownership distribution and owners' intentions in bushfires.
- **A survey of horse owners in the Sampson Flat bushfires.** This study is investigating the experiences of horse owners that reside in peri-urban areas that were impacted by the Sampson Flat bushfire in January 2015.

The field work involves mixed methods approaches, e.g. surveys, interviews, workshops, and field-based data collection.

### Development of tools, training, support materials

The outcomes of the field work studies will be discussed with the end-users and the extended team to reach agreement on the best tools or supports to develop further.



## Preliminary assessment and evaluation of tools, training, support materials

This final project stage will include assessment or evaluation of the project outputs.

It is currently anticipated that the multi-stakeholder peri-urban study will serve as a 'proof of concept' study that will be refined and extended into another hazard area and jurisdiction. It is hoped that this study may result in a GIS mapping/planning tool that will assist multiple stakeholders in their key areas in animal emergency management. From the outset, consideration is being given to integration of such a tool with existing software/GIS platforms being used by stakeholders.

The emergent volunteer field work and horse survey may result in generic codes of conduct and/or guidelines for improvement in these areas. The former would be focussed on either volunteer groups or stakeholder agencies and the latter would possibly focus on horse owner engagement materials and training.

In addition to the specific studies undertaken in the field work stage of the project, 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 for emergency response personnel. The final priorities and direction of the project will be informed by end user preferences and guidance from the BNHCRC.

## PhD research

Finally, and in addition to the formal MAID project plan of work outlined above, another important component of the project is the work being conducted by our BNHCRC PhD scholar Rachel Westcott.

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

Rachel is using the Port Lincoln area in SA as the focus for her research field work.



*'Makybe Diva', A Port Lincoln animal icon*



## MAID PROJECT ACTIVITIES

In this section we briefly report on the in-year activities of the MAiD project team, this includes activities undertaken to complete the scoping and exploration phase of the project, the development and commencement of the field work phase, project collaboration, news of changes to the project team, project dissemination and publications, and team member awards and achievements.

### SCOPING STUDIES - COMPLETED

#### The preparedness, planning and experiences of South Australian livestock owners in bushfire

As part of the SA Country Fire Service (CFS) and BNHCRC community taskforce, team members from CQUni (Kirrilly Thompson and Brad Smith) assisted in interviewing community members threatened by significant bushfires in January 2014.

During the current reporting period, and specifically as part of the MAiD project, interviews undertaken with 41 livestock producers at three field sites were analysed to determine their levels of preparedness, expectations and their experiences during the fires.



*SA livestock affected by bushfire*

Top level findings were:

- Few livestock producers had formal bushfire plans
- Generally there was a low level of concern for bushfire threat
- Livestock producers reported high levels of self-efficacy
- Generally they planned to stay and defend, but few had a 'Plan B'
- Most were under-insured or not insured at all for animal losses
- Some reported conducting risky behaviour, moving sheep and defending property at the last minute
- They generally didn't utilise bushfire preparedness materials/information or attend to warnings, or attend community programs or meetings
- They tend to rely heavily on local networks

Results of this study were presented at the Society for Risk Analysis Australia New Zealand 8<sup>th</sup> Annual Conference and were published in a special edition of the Australian Journal of Emergency Management on animals in emergencies in April 2015 [10]. Further analysis is currently being undertaken and written up for publication.



## Scoping survey of the experiences of emergency services personnel in supporting animals and their owners in disasters

This study assessed emergency services personnel's attitudes towards operational responsibility for animals and scoped the range and extent of the challenges faced by emergency services personnel in their interactions with animals and their owners. The goal of the study was to gather the views and experiences of a broad cross-section of emergency services personnel operating across Australia and all hazards. Data were collected between May and July 2014 from 165 respondents.

Responders reported details of a range of interactions with animals, animal owners, and the broader public in relation to wildlife.

Top level findings were:

- There was a need for education/clarification and clearer communication about the role and responsibilities of emergency services organisations with regard to animals
- A cultural shift was required in emergency service organisations to meet changing public attitudes and expectations
- Identification of specific challenges for responders included
  - The logistics available to respond to animals in disasters/emergencies
  - Unclear policy or operational responsibility
  - Interactions with owners during response

During this year data from this study were analysed and the findings were presented at the BNHCRC Research Forum/AFAC 2015 and published in the conference proceedings [11].

The study also included specific questions about large animal rescue training and perceived needs. These data were analysed separately and published in PLoS Currents: Disasters in January 2015 [12].



*NSW SES Large Animal Rescue training*

## A national survey of Australian response organisations and stakeholders on the challenges of managing animals and their owners

A comprehensive national survey of Australian Response Organisations and other relevant stakeholders involved in the management of animals and their owners in emergencies and disasters was undertaken. The study aimed to identify and prioritise the challenges encountered by these organisations in the management of animals and animal owners. Data were collected in July – August 2014.

In total 98 respondents from 68 organisations took part in the survey. Organisations were categorised to compare issues across stakeholder groups.



Top level findings were:

- The main challenges identified in the management of animals and their owners were
  - the logistics of animal management (personnel and equipment),
  - the physical management and rescue of animals,
  - interactions with owners during disaster response, and
  - post-disaster impacts in the management of animals and their owners (distress, emotional issues)
- Different categories of stakeholders experienced different challenges, but issues were reported across all categories of organisation, irrespective of their formally assigned roles and responsibilities in this area.
- There is a need for the sector to improve the clarification and communication of roles and responsibilities for managing animals during disasters and emergencies.

During the reporting year 2014-2015, data were collected, analysed and were published in a special edition of the Australian Journal of Emergency Management on animals in emergencies in April 2015 [13].

### Knowledge Exchange Workshop

A Knowledge Exchange Workshop for the Managing Animals in Disasters (MAiD) project was held on Tuesday 19 August 2014 at the Rydges Sydney Central.

More than 30 people, representing 24 stakeholder organisations from around Australia, attended to discuss the challenges and needs of stakeholders in managing animals and their owners in disasters. Participants represented diverse organisations within the police and emergency services, primary industries, local government, and animal advocacy and welfare organisations.

The workshop agenda included presentations and plenary discussions. Presentations provided an overview of the project and the major issues we sought to explore; providing participants with an overview of the initial scoping activities of the project and the initial results of surveys conducted with responders, stakeholders, and livestock producers and companion animal owners.

Participants formed small groups to discuss pertinent issues on the topics of: current legislation, policies, procedures, initiatives and research; the needs, experiences and priorities of stakeholders, responders, individuals, communities and animal related business owners; and the need for tools, training and support materials.



*BNHCRC Research Manager, Michael Rumsewicz, Opening the MAiD knowledge exchange workshop*

A great deal of information was provided and suggestions emerged from the discussions. The team was able to gain a greater understanding of the current



context the participants are working in and the challenges related to community engagement. Amongst the many needs and priorities identified, the need for greater education and training, better uptake and use of technology, and improvements in consistency in response and coordination were broadly supported.

A summary report of the workshop was produced as a BNHCRC Report [14]. Findings were used to help prioritise the subsequent field work studies and were incorporated into the project audit report on animal emergency management.

### **Audit Report - Animal Emergency Management in Australia**

Findings from the activities outlined above, in addition to further internet and document searches, were used to prepare an audit report on the current legislation, plans, policy, community engagement resources, initiatives, needs, and research dissemination in animal emergency management in Australia.

This report was prepared to the draft stage during the reporting period 2014-2015, with final release in September 2015 [15]. The report outlines a number of findings and includes a number of recommendations.

Top level findings were:

- Within the emergency management system animal emergency management needs better integration and greater acknowledgement of its status.
- There is a need for the sector to improve the clarification and communication of roles and responsibilities for managing animals during emergencies.
- The 'non-core' status of animal emergency management leaves the area more prone to unstable funding and organisational structures.
- There are multiple messages from multiple stakeholder organisations within jurisdictions leading to a lack of clarity and consistency, and potential for public confusion.
- There is an apparent disconnect between many initiatives and engagement with communities, with likely duplication of effort and no available evidence of evaluations of effectiveness.
- Animal emergency management is a 'people' issue and needs to be reframed as such. Animal welfare is only part of the picture and a rigid focus on this leads to discounting and disengagement by emergency response organisations.
- Greater acceptance of animal emergency management could lead to greater opportunities for emergency service organisations' through
  - broadening of roles offered in the organisations; increasing the scope of volunteering and attracting new demographics.
  - increasing the opportunities for community involvement and providing coordination and guidance to support this.



- There are a number of gaps and priority areas for further engagement and planning; e.g. peri-urban residents with 'pet' livestock and commercial animal businesses – kennels, breeding, retail etc.
- There are opportunities for better use of technology, e.g. re-unification systems, management of emergent informal volunteers, and there is a need for better data collection, e.g. to improve estimations of animal populations, sheltering capacity.

## FIELD STUDIES - IN PROGRESS

Field work studies were discussed with project end-users following scoping and exploration activities in December 2014. Three field studies are currently underway or in development.

### The integration of emergent informal volunteer groups into animal emergency management

The aim of this study is to explore the integration of informal volunteers into animal emergency management. The Sampson Flat bushfire will be used as a case study to explore questions regarding the challenges for, and strengths and limitations of, informal volunteering in this context.

The study involves a series of semi-structured interviews with the following participants;

- Coordinators/administrators of emergent informal volunteer groups (social media coordinated groups)
- Members of established animal organisations, e.g. RSPCA, Animal Welfare League, Adelaide Zoo
- Members of the formally-tasked volunteer group South Australian Veterinary Emergency Management (SAVEM)
- Trained emergency services personnel and personnel from key government agencies, e.g. fire (CFS), police (SAPOL), agriculture/primary industries (PIRSA), environment (DEWNR)

Ethics approval for this study was granted in April 2015 and data collection is currently underway.

### A multi-stakeholder study of peri-urban animal owners in bushfire-prone areas in Tasmania

In this study we are developing a multi-stakeholder research project in Tasmania to focus on peri-urban animal owners. We will be developing a method to collect data, and hopefully map, animal ownership distribution and owners' intentions in bushfires to support preparedness and planning for Tasmania Fire Service (TFS), the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and local government.

In June we held a teleconference with our TFS end user and the Deputy Chief Veterinary Officer of DPIPWE to discuss initial plans for the project, and project planning is ongoing.



## A survey of horse owners in the Sampson Flat bushfires

This study will investigate the experiences of horse owners living in the peri-urban areas impacted by the Sampson Flat bushfire in January 2015. This study will help inform the other two field studies and investigate the behaviours of horse owners; 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.

During the reporting period our MAiD team members from CQUni (Kirrilly Thompson and Brad Smith) have been developing the survey tool in collaboration with Horse SA and an application for ethics approval has been drafted.

## STUDENT RESEARCH

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

Our MAiD PhD student Rachel Westcott is investigating the interactions and challenges facing animal owners and emergency responders, to determine if new or enhanced mitigation measures can be integrated into arrangements to promote human safety and support community well-being.

During the reporting period Rachel has held a number of start-up meetings with her formal research end users and other stakeholders in SA to discuss the project and gain their support. Rachel was kept busy with the Sampson Flat bushfire response in January and February and passed her Confirmation of Candidature at UWS in March 2015. She applied for ethics approval shortly after and this was approved in April.

Towards the end of the reporting period Rachel was recruiting participants for the first phase of her research field work which is being conducted in the Port Lincoln area in SA in July-September.

### Honours research

During the year two undergraduate Honours students have worked alongside the MAiD project team.

Monica Sultana completed her thesis at UWS in October 2014 on 'Pet owner experiences of bushfire preparedness and pet-owner relationship' [16]. This research focussed on a bushfire prone community living within the boundaries of Royal National Park south of Sydney.

Brett Bodsworth started his Honours research at CQUni investigating "The influence of livestock on livestock owners' decisions during bushfires". Brett is looking at how farmers view/perceive livestock and how this influences action during bushfires. He is also reviewing recommendations given to livestock producers and how these differ from what they do in disasters and emergencies.



## BNHCRC CROSS-COLLABORATION

In addition to the formal MAiD research activities, team members have been actively collaborating with other research projects in the BNHCRC. We are working with Illy McNeil who has included animal-ownership and other related questions in her bushfire preparedness and evacuation planning research this year. We have also worked with other BNHCRC researchers to support the inclusion of animal-related questions in their research projects, specifically Kevin Ronan at CQUni on a project relating to Tropical Cyclone Marcia, and Deanne Bird at Risk Frontiers on a community resilience project.

The emergent informal volunteer project currently underway in our field studies is also being conducted in collaboration with researchers from the non-traditional volunteering area in the BNHCRC (John Handmer, Blythe McLennan and Josh Whittaker). This team is incorporating some of our animal emergency management questions into their case studies in SA with primary responder groups, and we have an arrangement to share data when our studies are completed.

## RESEARCH TEAM AND END USER UPDATE

In September 2014 the last funded team vacancy was filled and the project team was joined at UWS by post doc Megan McCarthy. Megan is an anthropologist with experience researching the human-animal bond.



In November 2014 the MAiD project was joined by an additional end user organisation, the Department of Environment, Land, Water and Planning, Victoria. Michael Hodder, Wayne Buckman and Leah Roberts have all contributed to the direction of the project in the months since joining.

At the end of the reporting period three further team changes were in the pipeline; Mel Taylor is moving to Macquarie University and will continue leading the project in this new position, Brad Smith was promoted at CQUni and will be leaving the project team and moving from Adelaide to the CQUni campus at Rockhampton, and SAFECOM was expected to be joining the project as a new end-user organisation.



## PROJECT DISSEMINATION

The project team has been actively disseminating scoping study findings in publications and presentations, and has contributed to discussions on animal emergency management issues in a range of media, including radio, television, podcasts, and social media. During the reporting period the team contributed extensively to a special edition of the Australian Journal of Emergency Management of animals in emergencies (April 2015 edition).

## CONFERENCES

During the period July 2014 – June 2015 the team presented at a range of conferences including the BNHCRC Research Forum/AFAC in Wellington, New Zealand in September 2014 and the Australia and New Zealand Disaster and Emergency Management Conference at the Gold Coast in May 2015.

*Right: Megan McCarthy - Stakeholder perspectives on the management of animals and their owners in disasters (ANZDMC 2015)*



Left: Rachel Westcott - Animal Emergency Management: Response and Recovery Experience and lessons from the Sampson Flat Fire, South Australia, January 2015 (ANZDMC 2015)

Brad Smith presented of SA livestock farmers at the Society for Risk Analysis Australia and New Zealand 8th Annual Conference held in Palmerston North, New Zealand just ahead of AFAC 2014.

Mel Taylor presented at the Bushfire and Natural Hazards CRC Research Forum in Wellington New Zealand in September 2014 on the experiences of emergency services personnel in supporting animals and their owners in disasters.



Mel also presented at the BNHCRC Research Advisory Forum held at NSW RFS in April 2015 (left) and she presented to the National Advisory Committee for Animals in Emergencies (August 2014).



## MEDIA

During the year team members gave a number of interviews to the media and were included in news articles and radio broadcasts. Details of two radio interview are given below.

**Brad Smith and Rachel Westcott.** Radio National Bush Telegraph (15/10/14) Researchers seek trigger to help farmers prepare better for bushfires: are registered vets one solution?

<http://www.abc.net.au/radionational/programs/busstelegraph/finding-farmer-fire-trigger/5815826>

**Brad Smith.** Reported in local news in NZ about livestock farmers, in a major horse magazine/online media group for horse owners on the large animal rescue work, and more generally about people and the bond with their pets on ABC Radio National.

<http://www.stuff.co.nz/business/farming/agribusiness/10451807/Farming-hazard-behaviours-studied>

<http://horsetalk.co.nz/2015/03/13/concerns-around-large-animal-rescue-identified-in-australian-study/#axzz3mdFymxBL>

<http://www.abc.net.au/radionational/programs/animalpeople/animal-people-pet-power/5617624>

**Mel Taylor.** Radio New Zealand National (01/09/14) Evacuation plan for pets.

<http://www.radionz.co.nz/national/programmes/afternoons/audio/20147931/evacuation-plan-for-pets>

**Kirrilly Thompson.** Kirrilly gave a number of radio interviews and was quoted in a range of news media during this reporting period. Links below are to two examples, a Radio National interview with Fran Kelly on Pets and Risk, and an article covered in a number of online news outlets about the aftermath of TC Marcia.

<http://www.abc.net.au/radionational/programs/breakfast/top-5-under-40-pets-and-risk/6292846>

<http://www.themorningbulletin.com.au/news/how-should-we-rebuild-cyclone-marcia-devastation/2579399/#/0>

**Rachel Westcott.** Rachel gave numerous interviews in the days and weeks following the Sampson Flat bushfire about the animal emergency management response.

<http://www.abc.net.au/news/2015-03-27/joeys-to-be-released-into-the-wild-after-adelaide-bushfires/6354756>

<http://www.abc.net.au/news/2015-01-05/animal-welfare-teams-enter-adelaide-hills-fire-zone/6000716>

<http://www.wnyc.org/story/australian-bushfires-leave-koalas-and-kangaroos-badly-burned/>



## PUBLICATIONS LIST

### PEER-REVIEWED PUBLICATIONS

Westcott R. (2015) Animal Emergency Management: Response and Recovery Experience and lessons from the Sampson Flat Fire, South Australia, January 2015. Proceedings of the Australia and New Zealand Disaster and Emergency Management Conference. Gold Coast, Queensland.

Taylor M, McCarthy M, Burns P, Thompson K, Smith B, Eustace G. (2015) The challenges of managing animals and their owners in disasters: The perspectives of Australian Response Organisations and Stakeholders. *Australian Journal of Emergency Management*, 30:2, 31-37.

<https://ajem.infoservices.com.au/items/AJEM-30-02>

Smith B, Thompson K, Taylor M. (2015), Risk perception, preparedness and response of livestock producers to bushfires: A South Australian case study. *Australian Journal of Emergency Management*, 30:2, 38-42.

<https://ajem.infoservices.com.au/items/AJEM-30-02>

Smith B, Thompson K, Taylor M. (2015) What's the Big Deal? Responder Experiences of Large Animal Rescue in Australia. *PLoS Currents Disasters*. 2015 Jan 22. Edition 1. doi: 10.1371/currents.dis.71d34082943fa239dbfbf9597232c8a5.

<http://currents.plos.org/disasters/article/whats-the-big-deal-responder-experiences-of-large-animal-rescue-in-australia/>

Taylor M. Eustace G. Smith B. Thompson K. Westcott R. Burns P. (2015) Managing Animals in Disasters (MAiD): The experiences of emergency services personnel in supporting animals and their owners in disasters. Proceedings of the Bushfire and Natural Hazards CRC Research Forum. Wellington, New Zealand. (1 September 2014) <http://www.bnhcrc.com.au/publications/biblio/bnh-1562>

### BNHCRC REPORTS

Taylor, M. (2014) 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.

Taylor M, Eustace G, McCarthy M (2014) Knowledge Exchange Workshop Summary Report. Report for the Bushfire and Natural Hazards Cooperative Research Centre. Melbourne, VIC. Australia.

### CONFERENCE PRESENTATIONS (ORAL)

McCarthy M, Taylor M, Thompson K, Smith B, Burns P, Eustace G. (2015) Stakeholder perspectives on the management of animals and their owners in disasters. Australia and New Zealand Disaster and Emergency Management Conference. Gold Coast, Queensland. (3-5 May 2015)

Westcott R. (2015) Animal emergency management: response and recovery experience and lessons from the Sampson Flat fire, South Australia, January



2015. Australia and New Zealand Disaster and Emergency Management Conference. Gold Coast, Queensland. (3-5 May 2015)

Taylor M, Burns P, Thompson K, Smith B, Eustace G. (2014) Managing Animals in Disasters (MAiD): The experiences of emergency services personnel in supporting animals and their owners in disasters. Bushfire and Natural Hazards Cooperative Research Centre Forum. Wellington, New Zealand. (2 Sep 2014).

Smith B, Taylor M, Thompson K. (2014) Risk management for livestock producers during natural disasters. Society for Risk Analysis – Australia and New Zealand 8<sup>th</sup> Annual Conference. Palmerston North, New Zealand. (26-27 Aug 2014)

Taylor M, Burns P, Lynch E, Fogarty C, Eustace G, Thompson K. (2014) Having pets does influence decision making: Recent studies of the preparedness, expectations, and experiences of pet owners in natural disasters. Australian Community Engagement and Fire Awareness Conference. Wollongong, NSW. (22-24 May 2014)

### **CONFERENCE PRESENTATIONS (POSTERS)**

Taylor M, Burns P, Thompson K, Smith B, Eustace G. (2014) Managing animals in disasters: Improving preparedness, response, and resilience through individual and organisational collaboration. Bushfire and Natural Hazards Cooperative Research Centre Forum / AFAC 2014. Wellington, New Zealand. (2-4 Sep 2014)

Taylor M, Burns P, Thompson K, Smith B, Eustace G. (2014) Managing animals in disasters: Improving preparedness, response, and resilience through individual and organisational collaboration. Australian and New Zealand Disaster and Emergency Management Conference. Gold Coast, Queensland. (5-6 May 2014)

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

Emergency Management Australia (2015) Podcast. Episode 10. Attorney-General's Department <http://www.buzzsprout.com/19389/286078-emergency-management-australia-podcast-episode-10>

Westcott R. (2015) People and their animals in emergencies: snapshots from past emergency events. Australian Journal of Emergency Management, 30:2, 60-65. <https://ajem.infoervices.com.au/items/AJEM-30-02>

Westcott R. Animal emergency management in bushfire. EM Knowledge Blog. February 2015. <http://emknowledgeblog.com/2015/02/>

Sultana, M. (2014) Pet Owners Experiences of Bushfire Preparedness and the Pet-Owner Relationship. Bachelor of Psychology (Honours) Thesis. University of Western Sydney. October 2014.

Taylor M, Burns P. Management of animals in disasters. World Association for Disaster and Emergency Medicine. Oceania Newsletter. June 2014. [http://www.wadem.org/oceania/june\\_2014.pdf](http://www.wadem.org/oceania/june_2014.pdf)



## ACHIEVEMENTS AND AWARDS

Individual members of the MAiD project 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.

**Kirrilly Thompson** – *Top 5 under 40* winner. This competition aimed to discover Australia's next generation of science communicators. It is an Initiative of the University of New South Wales and ABC Radio National.



The photo shows Kirrilly (right) with another winner (Amber Bevis) at the RN studios in Sydney undertaking a 10-day media program as 'Scientist in Residence'.



The photo shows Kirrilly (right) with another winner (Amber Bevis) at the RN studios in Sydney undertaking a 10-day media program as 'Scientist in Residence'.

<http://www.abc.net.au/radionational/programs/scienceshow/top-5-under-40-winners/6286204>

Link to the radio program Kirrilly produced during her residence at RN.

<http://www.abc.net.au/radionational/programs/allinthemind/horses-and-healing/6656388>



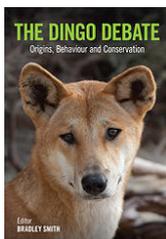
**Rachel Westcott** – Finalist in Pride of Australia Medal. Rachel (centre, in photo) was nominated for her work, and that of her team, as part of the Sampson Flat fire response.

Rachel's work with South Australia Veterinary Emergency Management (SAVEM) is nationally recognised and SAVEM was able to reduce the suffering of many animals after the

Sampson Flat fire and provide support to local communities by caring for the needs of wildlife and other animals affected by the fire. The Pride of Australia Medal is sponsored by News Corporation Australia to acknowledge the contributions and achievements of members of the Australian community.

<http://www.adelaidenow.com.au/news/pride-of-australia/nominate-your-hero-for-the-pride-of-australia-awards/story-fniv59yp-1227396499672>

**Brad Smith** – Published a CSIRO book "The Dingo Debate: Origins, behavior and conservation". The book explores the story of the dingo and its interaction with human societies.



As well as being a MAiD team member, Brad is the director of the Australian Dingo Foundation.



SBS video coverage of the book launch can be found here.

<https://www.youtube.com/watch?v=yK85kPPtsVI>



## THE MAID TEAM

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 Bradley Smith**  
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





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12. Smith B, Thompson K, Taylor M. (2015) What's the Big Deal? Responder Experiences of Large Animal Rescue in Australia. *PLoS Currents Disasters*. 2015 Jan 22. Edition 1. doi: 10.1371/currents.dis.71d34082943fa239dbfbf9597232c8a5. <http://currents.plos.org/disasters/article/whats-the-big-deal-responder-experiences-of-large-animal-rescue-in-australia/>
13. Taylor M, McCarthy M, Burns P, Thompson K, Smith B, Eustace G. (2015) The challenges of managing animals and their owners in disasters: The perspectives of Australian Response Organisations and Stakeholders. *Australian Journal of Emergency Management*, 30:2, 31-37. <https://ajem.infoservices.com.au/items/AJEM-30-02>
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15. 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.
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