

Emergency Management of Companion Animals in Remote Communities of the Northern Territory: Situational Analysis

April 2025



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About AMRRIC

AMRRIC (Animal Management in Rural and Remote Indigenous Communities Ltd) works to support **healthy animals, healthy proud communities** through best practice companion animal health and management programs, including veterinary services, education and training, and community-driven research and advocacy. AMRRIC is a national not-for-profit organisation that has over two decades of experience partnering with rural and remote Indigenous communities to deliver co-designed, culturally responsive programs.

About this document

Commencing in 2022, AMRRIC undertook a Northern Territory Risk Reduction Program funded project to develop a guide for local government authorities and municipal service providers, to assist them in managing companion animals in emergency events.

At the time of writing, the development of this document represents a once-off project for completion by 2025 and there is no designated authority or resourcing for next steps (e.g. development of tailored local companion animal emergency management plans).

The development of this document involved representatives from NT Government, local government authorities, an Indigenous land council, Indigenous housing organisations, animal welfare organisations and Veterinary Service Providers.

The document may be used by the NT Government, the NT Animal Welfare Functional Group, local government authorities of the Northern Territory, as well as other remote Indigenous community stakeholders, to aid in emergency management planning and response for companion animal welfare.

As part of the broader project, AMRRIC:

- undertook a literature review of emergency management response for companion animals in the context of remote and isolated communities.
- established a reference group of key stakeholders, including NT Government, Local Government Association NT and relevant regional local authorities.
- with input from the reference group, developed Emergency Management of Companion Animals in Remote Communities of the Northern Territory: Situation Analysis (i.e. this document).

Other project outputs and resources are available on AMRRIC's [Companion Animal Emergency Management information hub](#).

Visit www.amrric.org for more information.

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1. Introduction

Australia has high rates of pet ownership. This includes remote Indigenous communities, where dogs, and increasingly cats, are popular companion animals.

On a global scale, and with a changing climate, the issue of how pets are managed in emergency events has been receiving increasing attention. Acknowledging the importance of human-animal bonds, supported by published literature, there is general widespread acceptance of the need to better integrate pets in emergency management. Most guidance and advice centres on the need for pet owners to include their pets in household emergency plans.

However, one issue that has received relatively scant attention is emergency animal management in remote Indigenous communities in Australia. Emergency animal management in a remote Indigenous community context presents a unique set of challenges. The available information and AMRRIC's experiences in emergency events has been collated into this situational analysis for use and consideration by local governments in remote Indigenous communities in the Northern Territory, however other locations may also find utility in the document.

This situational analysis was prepared by Animal Management in Rural and Remote Indigenous Communities (AMRRIC). It was developed with input from a stakeholder reference group comprising representatives from local and NT governments, veterinary services, Indigenous land councils, animal welfare, and an Indigenous housing organisation.

This document is not intended to be an exhaustive source of information. Rather, it collates relevant information into a single place and summarises considerations for companion animal emergency management in remote areas. We recognise the range of barriers and challenges, particularly resource and geographic constraints for emergency management in remote Indigenous communities. We highlight that having local community animal and Environmental Health Workers in remote Indigenous communities will underpin improved companion animal management, including in emergency events. We encourage all three tiers of government to work closely with and empower local community groups (such as Indigenous Rangers and health organisations), as an important step in working towards more collaborative emergency management in the NT.

2. Definitions

This document applies to “emergencies” as defined in Division 3 of the NT *Emergency Management Act 2013*:

“An event that requires a significant coordinated response using the combined resources of the Territory and non-government entities within the Territory” (1).

The term “companion animal” is not included or defined in NT legislation. Here, we focus on dogs and cats as the most common companion animals in remote Indigenous communities.

3. Purpose and scope

This situational analysis collates relevant information for organisations that play a crucial role in an emergency (excluding biosecurity/animal disease events which have specific mechanisms for management) that occurs within the Northern Territory.

We are providing this document as an online resource to make it readily available to those on the ground. This document collates existing information for the emergency management of companion animals (cats and dogs), with a specific focus on remote Indigenous communities in the Northern Territory. It aims to improve knowledge and understanding about how to manage companion animals in disasters and the response for animals in disasters. Livestock and native wildlife are outside the scope of this project.

4. Context

4.1 Socio-cultural and economic

The Northern Territory (NT) has a population of 232,605 people, 26.3% of whom are Aboriginal and/or Torres Strait Islander people (2). The Northern Territory is the jurisdiction which has the highest proportion of population who identify as Aboriginal and/or Torres Strait Islander people in Australia (2). Under the Australian Statistics Geography Standard, most of the Northern Territory is classified as remote or very remote, as characterised by relative geographic access to services (3). This includes an absence of emergency management infrastructure and services, and limited (or no) access to veterinary services.

Companion animals are intrinsic to the fabric of remote Aboriginal and Torres Strait Islander communities. While AMRRIC holds various data on remote Indigenous community dog and cat populations, there is no centralised source of data for the number of companion animals across the NT. Australia-wide, the most recent pet population estimates (as of 2022) are 6.3 million dogs and 5.3 million cats (4). The most popular companion animals in remote Indigenous communities are the same as on a national level, with dogs being the most common animal, followed by cats. Companion animals are much loved and valued: as pets and valued companions, sources of warmth in cold weather, as hunting companions/aids, for their role in teaching children about responsibility, and in some cases, their role in control of introduced rodents, or for deterring snakes from houses. Companion animals can also be conferred special cultural significance – as part of Dreaming stories, as totems or by being integrated into kinship systems.

An important consideration for emergency animal management, linked to remoteness, is socio-economic disadvantage, which is defined as people's access to material and social resources, and ability to participate in society (5). The Australian Bureau of Statistics outlined some broad trends which are pertinent to emergency management in the Northern Territory:

- it is more common for Aboriginal and Torres Strait Islander households to have more than one family living together in the same household;
- Aboriginal and Torres Strait Islander households are larger on average than other households and may comprise of extended families;
- the NT has the highest proportion of overcrowded Aboriginal and Torres Strait Islander households of any jurisdiction in Australia;
- Aboriginal and Torres Strait Islander households in the Northern Territory have the lowest proportion of households able to access the internet from their dwelling, of any jurisdiction in Australia;
- 10% of Aboriginal and Torres Strait Islander respondents reported speaking an Australian Indigenous language at home; proficiency in English varies by age group;
- the NT has the lowest proportion of Aboriginal and Torres Strait Islander Year 12 completion rates, compared to other parts of Australia; this is an important component of overcoming disadvantage; and
- the household income of Aboriginal and Torres Strait Islander people is lower than the income of non-Indigenous people (5).

These factors have implications for emergency management, for people as well as for companion animals.

4.2 Environmental

Tropical cyclones, floods and heatwaves are a part of the Top End's weather, but are becoming more frequent as a result of climate change (6). Bushfires are part of the Northern Territory's environment (7). Fire regimes have changed significantly since colonisation, through depopulation and loss of traditional mosaic burning practices over vast areas (8). A notable consideration for emergency management is that introduced pasture grasses (gamba grass and buffel grass) are widespread in the landscape, and in combination with climate change, significantly increase the intensity and severity of fire (6,9). Events such as severe storms, earthquakes, droughts and tsunamis may also affect the Northern Territory and may necessitate an emergency response.

4.3 Political

4.3.1 Policy and legislation

Every state and territory in Australia has emergency and disaster response legislation in place, which authorises officials to declare and respond to an emergency. Other relevant

frameworks for emergency animal management, where they are in place, include specific plan/s for the management of animals during an emergency, and companion animal legislation.

In the NT, emergencies are managed under the *NT Emergency Management Act 2013* (the Act). The Act reflects an all-hazards approach to the management of emergencies (natural and human-related). The four phrases of emergency management are generally referred to as prevention/mitigation, preparedness, response and recovery (10) and these terms are used in this document.

The Northern Territory Emergency Management Act 2013 is operationalised within the Territory Emergency Plan. Under this plan, the NT is divided into two emergency management regions (Northern and Southern) that each have Regional Emergency plans (11). Each local government area is then represented within the 46 Territory wide Local Emergency plans, which underpin the local response in terms of evacuations, communication, infrastructure and so on, and align to NT Policing boundaries. Hazard specific plans and functional group plans, including a Territory Animal Welfare Emergency Plan (not publicly available), also support the delivery of the NT's emergency management framework. (11) (Figure 1)

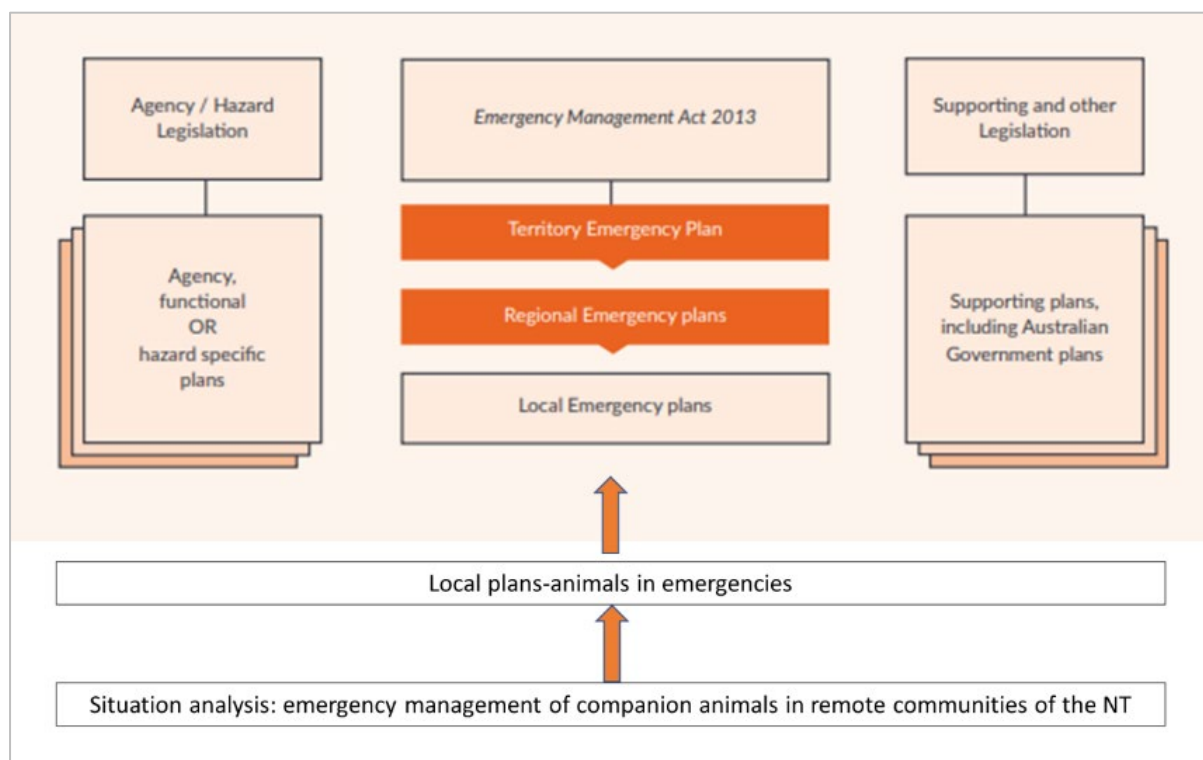


Figure 1: Emergency planning framework in the Northern Territory. We suggest this situation analysis (and accompanying resources) can be used to help develop companion animal emergency management plans that align to Local Emergency plans and as part of functional group planning (Figure modified from Territory Emergency Plan 2022; orange background denotes NT legislation and government planning documents).

4.3.2 State/territory animal emergency plans and legislation

The issue of how animals are managed during an emergency is gaining more attention in Australia. In recent years, some states and state governments (Northern Territory, South Australia, Western Australia and Victoria) have developed plans for the management of animals in emergencies, and all states/territories have developed information guides and template plans to assist pet owners prepare for disasters, that reinforce the importance of including pets in household emergency planning.

All states and territories have formal emergency management frameworks in place but vary as to whether they have specific consideration of remote Indigenous communities, whether they have emergency animal management plans, and whether they have a specific working group or committee to support the implementation of such plans (Table 1).

The jurisdictions that have an emergency animal management plan in place also have a mechanism to enact the plan. These mechanisms vary between jurisdictions and are summarised in Table 2.

A relevant consideration for emergency companion animal management is that the NT does not have companion animal legislation in place. A limited number of local governments may have local regulations in place for animal management. AMRRIC suggests the development of companion animal legislation in the NT would have far-ranging benefits for informing emergency management response and as a key enabling mechanism for local governments to encourage responsible pet ownership, noting that adequate resourcing for implementation, education, compliance, and enforcement are required for legislation to be effective.

Under NT legislation, all animals in the NT are entitled to a minimum level of care that provides for their welfare, health and safety, under the *Animal Protection Act 2018* and *Animal Protection Regulations 2022* (12). The responsible authority is the Department of Agriculture and Fisheries.

As recognised in other jurisdictions, emergency situations can compromise the ability to meet animal welfare standards. We highlight the importance of companion animal owners considering potential hazards and encourage planning and preparedness by companion animal owners, supported by relevant stakeholders (such as local government) wherever possible.

Table 1: Summary of emergency management plans by jurisdiction (as of Jan 2024), with consideration of whether a specific framework is in place for (i) remote Indigenous communities; (ii) emergency animal management, and (iii) emergency animal management in remote Indigenous communities.

Jurisdiction	Formal emergency management framework specifically for remote Indigenous communities?	Specific emergency animal management plan?	Specific working group (or similar) in place to enact emergency companion animal management in place?	Advice/information available to pet owners?	Specific recommendations for animals in remote communities?
ACT	No	No	No	Yes - general guidance	No
NSW	No	No – Advice only: ‘Animal Emergency Plan’ template available for pet owners	No	Yes - plan on a page, accommodation options (‘animal safe places’) for animals, videos	No
NT	No Embedded within local area plans and included in the Territory Animal Welfare Emergency Plan managed by the Animal Welfare Functional Group	Yes – Territory Animal Welfare Emergency Plan (<i>not publicly available</i>) Advice included: Pets not to accompany owners in forced evacuations from remote communities	Yes (see Table 2)	Yes - general guidance	Yes – the Plan notes that for ‘remote community pets where owners are evacuated under emergency declarations, the Animal Welfare Functional Group will act to provide basic food and water (if necessary)’ and that ‘a temporary kennel may need to be set up depending on factors such as the type of hazard, and whether the community has been evacuated’
QLD	No, but remote Indigenous communities fall under Local Disaster Management Groups (LDMGs) which are often coordinated by Aboriginal or Torres Strait Islander Local Governments.	No – Advice included in other plans: Pets listed as at risk by hazards Pets given thought within preparedness community education	No	Yes - videos, pet emergency kit checklist	No
SA	No State Emergency Management Plan includes a ‘People at Risk in Emergencies’ section, which includes consideration of Aboriginal and Torres Strait Islander peoples.	Yes ‘Managing Animals in Emergencies: A Framework for South Australia 2018’	Yes (see Table 2)	Yes - developing an animal emergency plan	No
TAS	No	No	No	Yes - general guidance	No
VIC	No	Yes ‘Victorian Emergency Animal Welfare Plan 2019’	Yes (see Table 2)	Yes - emergency planning, kits and advice for evacuation/pets remaining on property.	No
WA	No Remote communities are included as part of state level plan.	Yes ‘Animal Welfare in Emergencies: State Support Plan 2021’	Yes (see Table 2)	Yes - factsheets, template plans and helpful links	No

Table 2: General information about state and territory mechanisms (committees/working groups) to enact emergency companion animal management.

Jurisdiction	Department/s	Mechanism	Purpose	Membership
NT	Department of Agriculture and Fisheries	Animal Welfare Functional Group	Provision of NT-wide capability, coordination and management of animal welfare during declared emergencies in the NT.	NT Government (representatives from relevant departments), local government authorities, NT Police, Fire and Emergency Services, interstate and federal primary industry departments, primary industry peak bodies (e.g. NT Cattlemen's Association, NT Farmers Association, NT Seafood Council), animal welfare organisations (RSPCA, PAWS, AMRRIC), private veterinary clinics, wildlife care groups.
SA	Department of Primary Industries and Regions, South Australia	Agriculture and Animal Services (AAS)	May provide immediate animal relief services in affected areas, focusing on livestock. With other 'participating agencies' provide assistance for most types of animals, including companion animals.	South Australian Veterinary Emergency Management Inc. (SAVEM); Royal Society for Prevention of Cruelty to Animals South Australia (RSPCA SA), Animal Welfare League (AWL) and Primary Producers SA (PPSA).
VIC	Department of Job, Skills, Industry and Regions	Victorian Emergency Animal Welfare Committee (VEAWC)	Consultative forum to develop, maintain and review the Plan and support its implementation. This includes the development and dissemination of information designed to improve the capacity of animal owners to protect and provide for their animals during an emergency.	Department of Environment, land, Water and Planning, RSPCA-Victoria, Municipal Association of Victoria, AV, Australian Veterinary Association, Victorian Farmers Federation and representative local government authorities.
WA	Department of Primary Industries and Regional Development Committee	Committee for Animal Welfare in Emergencies	Assist to build and maintain the state's capability and capacity in support of the State Support Plan-Animal Welfare in Emergencies, by providing a multi-agency forum to promote communication and collaboration and the integration of animal welfare consideration into emergency management.	Emergency management sector organisations (operational and policy), wildlife sector, commercial livestock sector, equestrian sector (sport and community), companion animal welfare, local government authorities and veterinary sector
		Animal Welfare Emergency Group	A multi-purpose organisation liaison group formed to assist in coordinating animal welfare services during an emergency where the State Support Plan-Animal Welfare in Emergencies has been activated.	As above

4.3.3 National Planning Principles for Animals in Disasters

In 2013, an interim National Advisory Committee for Animals in Emergencies was established in Australia. The committee included members with expertise in livestock, companion animals and wildlife, and its vision was:

“animal welfare is accepted as core to emergency management and there are improved outcomes for animals in emergencies” (13).

The mission of the committee was to “work collaboratively to incorporate animals into emergency management planning at all levels of government, and to encourage those responsible for animals in emergencies to accept their responsibilities” (13).

The National Advisory Committee for Animals in Disasters developed national principles for animals in disasters (13) (section 4.7). These were developed as a non-prescriptive tool to assist jurisdictions in the preparation of specific plans for animals in disasters (13).

The national planning principles were reviewed in 2021. The review found that there was moderate awareness of the principles, and low to moderate implementation of these in planning processes and arrangements for animal welfare (14).

The national principles are a useful tool that can be used by jurisdictions; but are largely focused on emergency management in an urban, peri-urban and regional context, and are based on the general convention that pet owners are responsible for managing their animals in emergencies.

In Section 5.2 we suggest some amendments to the National Planning Principles for Animals in Disasters for a remote Indigenous community context.

4.4 Relevant agencies/groups for animal emergency management

4.4.1 The National Emergency Management Agency (Australian Government)

At a national level, there has been a significant change in emergency management arrangements, with the establishment of the National Emergency Management Agency (NEMA) on 1 September 2022 (15). This agency combines the efforts of the National Recovery and Resilience Agency and Emergency Management Australia, to ‘create a single, enduring, end-to-end agency to better respond to emergencies, help communities recover, and prepare Australia for future disasters’ (15). The NT Government works closely with NEMA to prepare for and respond to emergencies. The NEMA website notes the following intentions: funding of programs and initiatives, working with communities, industry and non-government organisations (NGOs), providing national leadership and providing round the clock all-hazards monitoring and operational coordination (15). The agency has a ‘disaster ready fund’ which may be able to support improved emergency animal management or other priority projects in remote Indigenous communities.

4.4.2 The Northern Territory Government

In the NT, the NT Government has lead responsibility for emergency management and the emergency management framework in the Northern Territory is through the *Emergency Management Act 2013*. Under this Act, hierarchical emergency plans provide a basis for coordinated emergency and recovery operations at the Territory, regional and local levels (11). The overarching plan is the Territory Emergency Plan (TEP), which provides the basis for regional, local, hazard-specific and functional group plans (11).

It should be noted that the NT government's key responsibility for emergency management is unlike other jurisdictions, where emergency management legislation confers key responsibility to local government authorities.

4.4.3 The Animal Welfare Functional Group

Under the Territory Emergency Plan (TEP), the role and responsibility for coordinating animal welfare in emergencies has been assigned to the Animal Welfare Functional Group (AWFG), with the lead agency for this group being the Department of Agriculture and Fisheries (DAF) (11).

The AWFG is one of 13 functional groups established under the TEP. These groups provide a mechanism to support a coordinated response to operations which are outside the capacity or capability of the NT Government agency with overarching responsibility preparation and response operations for each emergency event (11). Functional groups may be activated before and during response operations; some may continue to operate throughout the recovery phase, depending on the needs of the impacted community (11).

The role of the AWFG is the provision of NT wide capability, coordination and control to animal welfare emergencies (11) (Table 3). Government and non-government members of AWFG contribute a wide range of veterinary and animal health and welfare expertise to enable AWFG to coordinate appropriate animal welfare for domestic, commercial and wildlife animals in cases of disaster (11). The group meets annually for a preparedness meeting held in advance of cyclone season in October-November, and as-needed during emergency events.

Table 3: Key responsibilities and membership of the Biosecurity and Animal Welfare Functional Group (5)

Responsibilities	The prime responsibilities of the Animal Welfare Functional Group are: <ul style="list-style-type: none">• The coordination of relief and recovery in respect of animal welfare for companion animals, livestock and wildlife in the event of a natural disaster or emergency• coordinate the care, treatment and disposal (where appropriate) of companion animals, livestock and wildlife through the activities of government, veterinary clinics, private animal care organisations, local governments and contractors at the request of the incident controller.
Participating organisations	Department of the Chief Minister and Cabinet Department of Health Department of Lands, Planning and the Environment

	Department of Tourism and Hospitality Department of Logistics and Infrastructure Local and Regional Councils Northern Territory Fire and Emergency Services Northern Territory Police Department of Treasury and Finance
Supporting organisations	Interstate and federal primary industry departments Primary industry peak bodies (e.g., NT Cattlemen's Association, NT Farmers Association, NT Seafood Council) Animal welfare organisations (RSPCA, PAWS, AMRRIC) Private veterinary clinics Wildlife care groups Private contractors

4.4.4 Local government authorities

While local governments within the NT have no legislative responsibility to manage or control an emergency event under the NT emergency management legislative framework, with their astute local knowledge, local government authorities play a key role in emergency management activities and this is particularly the case for companion animal management.

Outside of emergency events, it is typically local governments, as well as some homeland service providing organisations, which deliver or arrange sub-contracted animal management activities across their communities. It is therefore local government authorities and homelands service providing organisations which have the greatest knowledge of their communities' companion animal populations, and how best to support local communities and their companion animals, during emergency events.

5. A different central tenet for emergency animal management: accounting for a remote community context

Worldwide, the generally applied convention is that pet owners hold the primary role and responsibilities for planning ahead and preparing for the safety and welfare of pets and livestock in emergency situations (13). This convention forms the basis of emergency planning advice to pet owners in all jurisdictions of Australia. Emergency planning advice for pet owners is typically based on the assumption that they have appropriate resources for this (e.g., own vehicle, cages/crates/leads for transportation, supplies of pet food and medicine).

There have been recent examples of emergency events in the Northern Territory (e.g., Cyclone Lam in 2016 and Cyclone Trevor in 2019) in which remote Indigenous community residents have been mass evacuated to Darwin, on aircraft managed by the Australian Department of Defence. In both of these events, pets have been left behind in communities and cared for in-situ by the AWFG.

AMRRIC highlights that emergency planning advice, as well as emergency management frameworks, regional and local area emergency planning plans, need to consider the capacity of differing groups to meet their pet owner responsibilities during emergencies.

In a remote Indigenous community context, socioeconomic and geographic factors can significantly compromise individual animal owners' capacity to meet responsibilities of animal care in emergency situations (for example, if communities are mass evacuated); accordingly, these responsibilities will fall to others.

In the NT, this responsibility is managed by the AWFG in accordance with the Territory Animal Welfare Emergency Plan.

5.1 Contextual factors influencing companion animal emergency management in remote Indigenous communities

There are a range of factors affecting emergency management, and it is important to recognise that there are substantial variations across Australia in disaster resilience. A tool that assesses capacity for disaster resilience is the [Australian Disaster Resilience Index](#), which has assessed the NT's capacity for disaster resilience as low (17) (Figure 2).

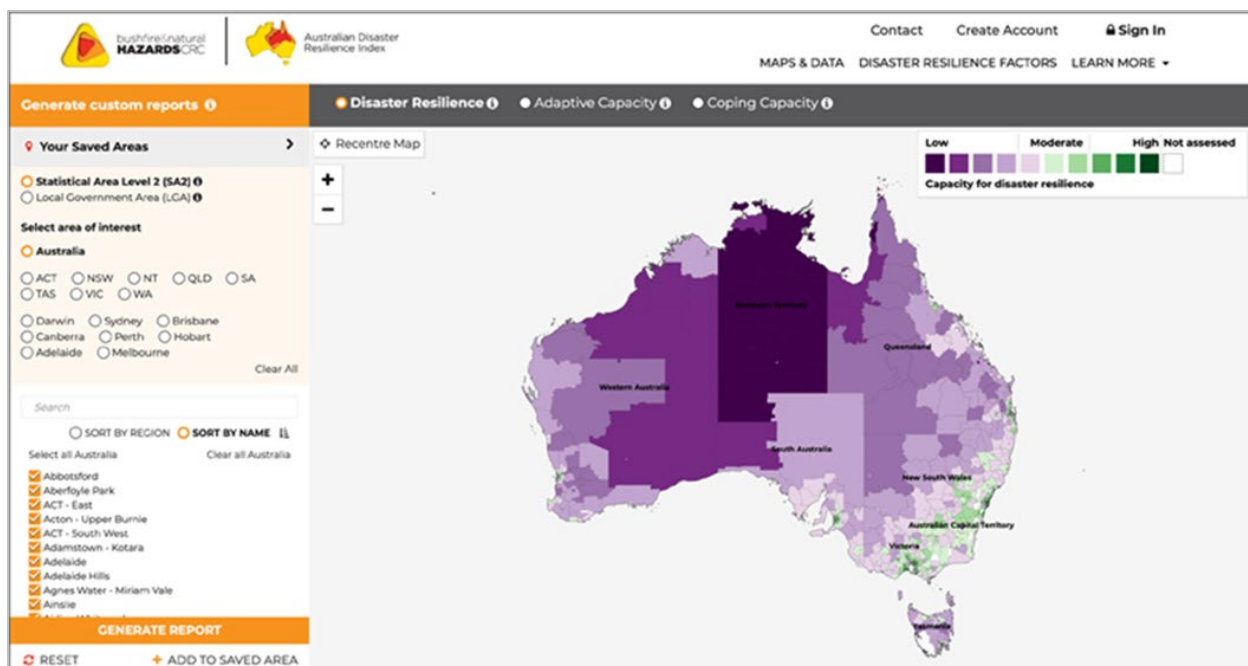


Figure 2: The Australian Disaster Resilience Index assesses disaster resilience; interactive mapping and allows for compilation of tailored reports, strengths and barriers to disaster resilience (Bushfire and Natural Hazards Cooperative Research Centre and the University of New England, accessed February 2023).

The Australian Disaster Resilience Index is based on eight factors; and may provide a useful framework for considering disaster resilience in the NT (17).

In a remote Indigenous community context, the following factors pertinent to emergency animal management should also be taken into account:

- Companion animals in remote Indigenous communities are typically free-roaming and are generally not used to being confined nor handled, so physical handling of animals (including for evacuation) would be difficult and potentially dangerous.
- The availability of commercial pet food in remote Indigenous communities is variable and often not in large quantities necessary to sustain populations during emergency events.
- High levels of socio-economic disadvantage limit the ability of pet owners to prepare an 'emergency kit' for their household, or their pets. This includes pet food and other basic supplies.
- In some situations (e.g., mass evacuations), companion animals will remain in remote communities without their owners.
- A lack of Territory-wide companion animal legislation means that the systems (e.g. microchipping for identification and reunification, registration systems for data on populations) by which animals may otherwise be managed are often non-existent.
- Large-scale evacuation of remote Indigenous communities may involve transport to emergency shelter facilities in Darwin, Katherine or Alice Springs. While some evacuation shelters accept owners who have self-evacuated with their pets, most government-facilitated emergency transport options and many emergency shelters in the NT do not allow pets (except for assistance animals).

5.2 Considering the National Planning Principles for Animals in Disasters in a remote Indigenous community context

One of the aims of this project was to review the National Planning Principles for Animals in Disasters in the context of remote Indigenous communities.

The Principles (Box 1) are based on the generally accepted convention that “the (13) individual in charge of an animal is ultimately responsible for its welfare in disasters”. In a remote Indigenous community context, the application of this principle is challenging; accordingly, this document is based on the likelihood of owners who are evacuated from remote areas being unable to care for their animals, and that responsibility of care will require management by others.

Stated differently, **the ability of pet owners in remote communities to care for their pets is readily compromised during some emergencies, and alternative care arrangements need to be factored into emergency management.**

In declared emergency events, this responsibility will be managed by the AWFG.

The planning process should:

- explicitly recognise that integrating animals into emergency management plans will improve animal welfare outcomes
- explicitly recognise that integration of animals into emergency management plans will help secure improved human welfare and safety during disasters
- aim to clearly identify roles and responsibilities within command-and-control structures in sufficient detail to allow for effective implementation of animal welfare measures
- recognise the wide range of parties involved in animal welfare at each stage of the disaster cycle and ensure these organisations are consulted during writing or reviewing disaster plans
- respect the role of local government authorities as ‘first responders’ in disasters and acknowledge local government expertise in understanding local needs and resource availability, especially with reference to animal welfare and animal management arrangements within the local area
- consider how best to ensure effective integration and implementation of the plan by, for example, extensive consultation during the planning process or inclusion of an animal welfare element in requirements for disaster training exercises
- include effective communication about plan implementation with those parties who may be involved as well as those who may be impacted by disasters
- be communicated in language that is accessible to all stakeholders including the general public.

The disaster plan should:

- make reference to, and situate the plan within, the local area and/or jurisdictional regulatory and legal frameworks
- take an ‘all hazards’ humane approach to all species and encompass a wide range of possible disaster-type situations that may impact upon the welfare of livestock, companion animals, wildlife and other categories of animals such as laboratory animals
- use a definition of disaster that aligns with the National Strategy for Disaster Resilience
- include a statement of scope that excludes animal disease and large-scale biosecurity emergencies from the plan
- emphasise that biosecurity requirements are of utmost importance in disasters and that quarantine and biosecurity protocols must be followed wherever practicable
- appropriately plan for animals taking into consideration the types of disasters most likely to be experienced in the particular jurisdiction

- provide for a staggered scaling up of response and resources in line with the scale and severity of disasters and their impact on animal and human welfare
- include a vision statement that makes reference to the importance of securing animal welfare outcomes in disasters
- include a brief rationale statement that includes reference to the benefits of the plan for animal welfare, human safety and wellbeing, and for the economy
- include consideration of animals at all stages of the disaster cycle including preparedness, response, recovery and mitigation
- outline command and control structures in language that is accessible to the general public
- specify that the individual in charge of an animal is ultimately responsible for its welfare in disasters
- outline the processes for interagency co-operation at all stages of the disaster cycle
- include a system for formalising arrangements with animal welfare support organisations
- take into consideration logistical challenges that may impact upon implementation of the plan during disasters, for example, in the event that key infrastructure or personnel are not able to be deployed, communication is affected, or shelters are destroyed or otherwise unavailable
- include requirements and arrangements for regular testing and review of the animal welfare in disasters plan.

Based on AMRRIC's review, we suggest the following amendments for consideration in future revisions of the guiding principles to account for a remote Indigenous community context:

- Existing command and control structures for emergency management should be revised in collaboration with and include Indigenous community representatives. They should be developed in a way that is accessible and understood by the community.
- Local Indigenous community representatives (e.g., Animal and Environmental Health Workers, Indigenous Ranger Groups) hold social licence and have an integral role in community liaison/engagement, communication and at all stages of emergency response in remote Indigenous communities.
- 'First response' efforts should be co-developed and implemented with Indigenous community representatives (e.g., Animal Health Workers and Environmental Health Workers, Indigenous Ranger Groups) as well as experienced Veterinary Service Providers from affected communities.
- Emergency management plans should be community driven, in a format accessible to remote Indigenous communities, and readily available in a culturally safe space (e.g., shared via community radio stations, online, and at community hubs such as ranger stations).

- Roles and responsibilities need to consider the capacity of differing groups to perform those roles/responsibilities (e.g., socioeconomic, and geographic factors) significantly influence an individual animal owners' capacity to meet responsibilities around animal care and management (Note: this is the central tenet of animal emergency management in the NT, as described in Section 1).
- Having up-to-date data on local populations is a critical component of animal management and assists with disaster preparedness in remote communities.

5.3 Adoption of the NT Emergency Plan recovery principles

The Territory Emergency Plan states 'recovery operations in the NT are underpinned by the following national principles for emergency recovery' (11):

- Understand the context: understanding the community context, with each community having its own history, values and dynamics;
- Recognise complexity: responsive to the complex and dynamic nature of both emergencies and the community;
- Use community-led approaches: community centred, responsive and flexible, engaging with community and supporting them to move forward;
- Coordinate all activities: planned, coordinated and adaptive approach, between community and partner agencies, based on continuing assessment of impacts and needs;
- Communicate effectively: effective communication between the affected community and other partners; and
- Acknowledge and build capacity: recognises, supports and builds on individual, community and organisation capacity and resilience (11)'.

While these principles are specifically focused on recovery, it is recommended that they be integrated into the emergency management plan at all stages where possible, not only at the recovery stage.

6. Recommendations for companion animal emergency management in the NT

In this section, we identify key stakeholder groups and outline some suggested actions for improved companion animal emergency management in the NT. This information is based on AMRRIC's experience of emergencies and the delivery of delivering veterinary services in remote communities, as well as suggestions put forward by the working group for this project. While we recognise that in any emergency response, the preservation of human life has primacy and this activity will dictate the amount of resources available to support animal welfare objectives, we also highlight the growing global recognition that securing animal welfare aids in securing human safety and wellbeing.

We use the terminology used in the [Australian Government Crisis Management Framework](#), with the considerations being grouped under the management phases: **preparedness**, **response** and **recovery**, with additional **cross-cutting considerations** also outlined.

6.1 Cross-cutting recommendations

6.1.1 Awareness of the mental health impacts

Emergency responses involving companion animals can take a significant mental toll on all involved, including for events occurring in remote communities in Australia. The intense emotional connection people have with their pets often amplifies the stress and trauma experienced during crises. Responders may face emotionally traumatising situations, from rescuing animals in distress to witnessing the grief of pet owners. Staff may have been involved in previous traumatic events and could be triggered by current events, as these can resurface unprocessed trauma or bring back difficult memories.

It is crucial to acknowledge this mental strain and ensure adequate support systems are in place. Managers can play a pivotal role in supporting staff experiencing this mental load by providing regular training on coping mechanisms and resilience building and ensuring access to mental health resources such as counselling services and employee assistance programs. Encouraging open dialogue and creating a safe environment for staff to express their feelings and share experiences without fear of judgment can help mitigate psychological impacts. Implementing debriefing sessions after incidents allows team members to process their emotions collectively. Additionally, cultivating a supportive work culture that recognises and rewards the efforts of staff can help alleviate stress. By prioritising mental health and offering comprehensive support, managers can help their teams navigate the emotional challenges of emergency responses more effectively.

6.1.2 Utilisation of existing stakeholders

While at the time of writing, local capacity for animal management is not consistently resourced across the Northern Territory, where they exist, local staff who are routinely involved in animal management activities have an integral role to play in any event requiring emergency management of companion animals. These staff may be routinely employed by local government authorities or Aboriginal organisations as Animal Health Workers or Environmental Health Workers. In some instances, Indigenous Rangers Groups are also involved in companion animal management activities. Irrelevant of their role title, the people engaged in these roles have expert knowledge of their communities and associated animal populations, and are often the conduit between the community and visiting animal health/management services. Additionally, for communities where a Veterinary Service Provider is routinely engaged to deliver animal health services, the Veterinary Service Provider will have developed a good working knowledge of the community's animal populations and their likely welfare needs in emergency events.

As a trusted ‘face’ of routine animal management activities, all of these roles and their good standing within the community should be leveraged for communicating companion animal emergency management advice to the community. Where possible, these roles should also be integrated into animal welfare response teams. Some operate pieces of equipment which can assist in companion animal emergency management (such as vehicles with animal cages for transport and/or animal handling equipment). They can also serve as an important source of community information, identifying and escalating companion animal health and welfare needs to relevant stakeholders.

At the time of writing, collaborative emergency management is a proposed concept (18). There is currently no formal mechanism for the utilisation of Indigenous Ranger Groups, Animal and Environmental Health Workers and/or each community’s regular Veterinary Service Provider in emergency management within emergency responses. While consideration of formal mechanisms for collaborative emergency management are out of the scope of this analysis, AMRRIC is supportive of the concept and strongly supports the utilisation of existing animal management capacity within companion animal emergency management events, additionally advocating that where utilised, these roles should be appropriately remunerated for their involvement.

6.1.3 Suggested One Health communications collaboration

Remote Indigenous communities may have variable knowledge about the increased risk of zoonotic and vector-borne diseases following natural disasters, particularly events which produce humid climatic conditions favourable to the reproduction of parasites. Heavy rainfall and flooding can create favourable conditions for mosquitoes, ticks, parasites and rodents, which are all vectors for disease. Natural disasters may also compromise hygiene and sanitation services and food and water supplies, so it is important to share clear information about how community residents can stay safe and protect their animals throughout such events.

Under the Territory Emergency Plan (TEP), the Public Health Functional Group holds responsibility for monitoring and preserving public health and hygiene standards, providing an environmental health service, providing a disease control service and providing public health information. Currently, the [SecureNT](#) website includes some resources, including audio files (in Eastside Kriol) on melioidosis and mosquito-borne diseases. There is scope to develop additional resources for other diseases associated with rainfall events, including those which impact animals. These resources could potentially be developed through a One Health focused Animal Welfare Functional Group, Public Health Functional Group and Public Information Functional Group collaboration. These resources would ideally be available in a range of local languages, for local governments, community health centres and other stakeholders to use and share. Such resources could additionally be provided to people while they are still in evacuation centres.

Important health risk actions include, but are not limited to:

- Communicating the risks associated with floodwaters, and the importance of avoiding contact with floodwater for both people and animals.
- Communicating the importance of wearing waterproof footwear when walking in mud and flood affected areas, wearing protective clothing and maintaining sound hygiene practices while cleaning up.
- Implementing appropriate measures to control mosquito, tick and rodent breeding after floods, storms and cyclones.
- Delivery of targeted anti-parasitic programs for companion animals.
- Encouraging washing of companion animals which may have been in contact with floodwaters with a suitable pet shampoo to remove contaminants; and
- Sharing information about common infectious and zoonotic diseases associated with heavy rainfall events, such as leptospirosis, melioidosis, giardia, cryptosporidiosis, gastroenteritis, Ross River virus, Barmah Forest virus, Japanese encephalitis, cellulitis, dengue fever, tetanus, bacterial and skin infections, and communicating relevant preventative measures.

Beyond NT government agencies, there are 20 Aboriginal Community Controlled Health Organisations (ACCHOs) in the Northern Territory which play an integral role in supporting communities through the recovery stage. There remain significant challenges with accessing health support services in remote Indigenous communities and it is highlighted here as an area requiring urgent attention and support, particularly given the high vulnerability of these communities to natural disasters, and the risk of compounding disasters. Collaboration with the public health and environmental health sectors, within and outside of government, is encouraged as part of a holistic, One Health approach to emergency management.

6.2 Preparedness

The Territory Emergency Plan (11) defines preparedness as:

Arrangements to ensure that, should an emergency occur, all resources and services that are needed to respond to the effects can be efficiently mobilised and deployed.
Supporting owners to develop emergency management plans for their pets

While socioeconomic and geographic factors in remote Indigenous communities often compromise individual animal owners' capacity to meet responsibilities of animal care during emergencies, to promote responsible pet ownership and manage expectations around the care of companion animals during emergency events, it is essential that pet owners understand that planning for their pets is both their responsibility and a critical preparedness activity.

Pet owners in remote Indigenous communities can be encouraged to develop an emergency management plan and prepare an emergency kit for the household including any companion animals.

AMRRIC has developed remote-Indigenous-community-focused communications resources outlining preparedness actions that pet owners can take during different types of emergency events: <https://www.amrric.org/emergency-management/>. The Northern Territory Government additionally provides [information](#) for pet owners to help plan for emergency situations.

6.2.1 Animal Welfare Functional Group preparedness actions

As noted in other jurisdictional plans for companion animal welfare in emergencies, established networks and productive collaboration between agencies and organisations are integral to the provision of animal welfare support services in emergency situations.

In addition to their functional group legislated responsibilities for coordinating biosecurity and animal welfare within emergencies, the NT AWFG plays an important role in preparing for emergency events, by establishing networks and facilitating inter-agency collaboration well in advance of events themselves. Suggested general preparedness actions to be undertaken by AWFG in advance of emergency events include:

- undertaking an annual capacity analysis of AWFG’s members and extended network, including determining how veterinary and animal welfare responder capacity will be resourced where required;
- stakeholder mapping and engagement to ensure all companion animal local stakeholders, including Regional and Local Controllers, are identified and aware of AWFG’s capability to support animal welfare during emergency events;
- encouraging LGAs and other local stakeholders to develop Companion Animal Emergency Management sub-plans (see 6.1.4.1), that align to their relevant Local Emergency Plan;
- collating animal census data where available (see 6.1.4.3), or otherwise utilising member-expertise to estimate the total populations of companion animals likely to be present in each region. Knowledge of total companion animal populations facilitates efficient planning and resource allocation;
- securing access to large quantities of commercial pet food ready to be deployed within responses as required;
- strengthening connections to other functional groups:
 - strengthening connections to the Survey, Rescue and Impact Assessment Functional Group, to support the integration of animal welfare assessment within Impact Assessments by Rapid Assessment Teams (see also section 6.3.7.2);
 - strengthening connections to the Public Health Functional Group and Public Information Functional Group to collaborate on the development and dissemination of information about zoonotic diseases and safety risks which may be exacerbated by emergency events (see also section 6.1.3);
 - strengthening connections to the Welfare Functional Group, to explore the integration of information and updates about pets that have been left in-situ,

within evacuation centre communications and support services (see also section 6.3.8);

- advocating for and participating in emergency exercises which include consideration of remote community companion animal emergency management during mass-evacuations;
- considering recommendations from previous-event debriefs in order to improve future companion animal emergency management.

6.2.2 Preparedness actions for local government authorities and other local stakeholders

6.2.2.1 Local Emergency Plans and Companion Animal Emergency Management Sub-plans

All local government regions in the NT are represented within the Territory's 46 Local Emergency Plans. Currently, Local Emergency Plans are written in technical English, are developed by the NT Emergency Service, Planning and Preparedness Command, and a hard copy is kept in each local community police station or a digital copy available [online](#). To improve physical, cultural and linguistic accessibility of these plans, AMRRIC suggests that Local Emergency Plans for remote Indigenous communities are co-developed with local governments and Traditional Owners, and that the plans are made available in multiple locations within the community.

A suggested approach to complement existing emergency plans is having a 3D, colour coded model of the community as a visual tool and accessible in a community hub or local government office, that can be used to plan and guide emergency management. 3D printed landscapes in combination with projected spatial data are used for fire management planning in northern Australia (19). A 3D model can have a range of applications in emergency management planning, including for companion animal management (e.g. for identifying high ground in flood events, where food can be distributed away from flood waters).

As the stakeholder with the strongest responsibilities for companion animal management, LGAs (or other local stakeholders such as homelands service providers) are encouraged to develop a Companion Animal Emergency Management Local Sub-plan to support existing Local Emergency Plans. To assist in this regard, AMRRIC has developed a template Local Sub-plan – Companion Animal Emergency Management, which LGAs and other relevant stakeholders are encouraged to complete in preparation for emergency events. The template addresses companion animal emergency planning considerations through all phases of emergency events. It is recommended that where they exist, Indigenous Ranger Groups, Animal Health Workers and/or Environmental Health Workers should also be involved in the development of Companion Animal Emergency Management Local Sub-plans.

The sub-plan template is available at: www.amrric.org/emergency-management.

6.2.2.2 Planning the organisation's approach to pet food (and water)

Within any Companion Animal Emergency Management Local Sub-plan, an important consideration is around the sourcing and distribution of pet food prior to any emergency event impacting pet owners' ability to care for their animals. Securing animal welfare through the coordination and provision of pet food is a core function of AWFG once activated, however in an emergency event, especially where supply chains have been disrupted, LGAs and other local stakeholders are likely to be able to action the distribution of pet food more rapidly than AWFG.

Given that many NT emergency events occur during the wet season when road access to remote communities is often significantly challenged, if local stakeholders opt to source and store pet food in preparation for emergency events, it is recommended this occurs before the onset of the wet season. Where pet food has been sourced, prior to emergency events, plans will need to be developed around how, by who and under what circumstances it will be distributed. Consideration should also be given to how and where the food will be safely stored (weatherproof, vermin-proof storage is essential), as well as the need to concurrently supply bowls and/or containers for pet food and water. Further guidance on pet food planning is included in AMRRIC's template Local Sub-plan – Companion Animal Emergency Management, available: www.amrric.org/emergency-management.

6.2.2.3 Collecting and maintaining up-to-date companion animal census data

The availability of high-level companion animal census data (e.g. total numbers by species and age) facilitates efficient planning and resource allocation within emergency events. Alongside identification collars and microchip registries, detailed companion animal census data (e.g. which animals live at which house) can assist first responders to undertake animal welfare checks, and enables the communication of updates to pet owners.

Undertaking regular companion animal censuses is beneficial for monitoring animal management activities implemented by LGAs and other local stakeholders, but is also critical in informing companion animal emergency response efforts. All LGAs (or other relevant local stakeholders) are encouraged to undertake a companion animal census at least annually. AMRRIC has developed [guidance on undertaking censuses](#). AMRRIC has also developed a custom-designed digital application which allows for the capture and reporting of remote community companion animal population data. For more information about the use of the AMRRIC App, please contact info@amrric.org.

6.2.2.4 Disseminating information to residents to guide preparations

As a trusted local source of information, LGAs and other local organisations play a critical role in communicating emergency preparation information to residents. LGAs and other local organisations are also experts in communicating with their communities in a format that is culturally and linguistically accessible to their communities.

LGAs and other local stakeholders can include general companion animal emergency preparation guidance within their annual communication plan, including ramping-up pet preparation communications in the lead up to high-risk periods. All pet owners should be encouraged to consider what they will do with their pets during emergency events, as well as compile pet essentials within their household emergency kit.

LGAs and other relevant local stakeholders are welcome to utilise the resources that AMRRIC has developed, that address the various preparedness actions that remote community pet owners can take during different types of emergency events: <https://www.amrric.org/emergency-management/>. Secure NT is another source of relevant emergency preparation information, including information about the proactive management of companion animals: <https://secure.nt.gov.au/prepare-for-an-emergency/emergency-planning/animals-in-emergencies/pets>.

6.3 Response

The Territory Emergency Plan (11) defines response as:

Actions taken in anticipation of, during, and immediately after an emergency to ensure that its effects are minimised, and that people affected are given immediate relief and support.

6.3.1 Guidance to pet owners

6.3.1.1 Self-evacuation with pets

Where there is sufficient notice (e.g., in a cyclone watch stage) and self-evacuation is being encouraged, pending the availability of pet-friendly accommodation options, some community residents may be able to safely self-evacuate with their pets. Where feasible, this option avoids the burden of caring for pets falling to others, and usually results in the best possible welfare outcomes for both the pet owners and their pets. Owners of animals with special needs (e.g. very young or very old animals, or those on regular medication) should be especially encouraged to self-evacuate with their pets. Pet owners need to be aware that in the event of a mass-evacuation, it is unlikely that first responders will have sufficient capacity or resources to provide anything beyond basic first aid and husbandry, and depending on the circumstances, even this is not guaranteed.

6.3.1.2 Preparing animals that will remain in otherwise evacuated communities

Recognising that many remote Indigenous communities do not have adequate emergency shelters locally, in significant emergency situations, the residents of remote Indigenous communities may be evacuated to evacuation centres in regional centres (11). In situations

where human evacuation is necessary, but pet-owning community residents are unable to safely self-evacuate with their animals, it is advisable to ensure evacuating residents know how to best manage their animals that will soon be left behind. This is important not only to minimise risks of harm to their animals during the event, but also to mitigate potential hazards for first responders (e.g. to mitigate pack formation by hungry dogs).

The specific advice that is provided to pet owners should be tailored depending on the type of event and with consideration to the likely timeframes between evacuation and when first responders will be able to access the community again. In general, the advice to pet owners should include guidance on containing their animals in a safe, but accessible location; identifying their animals where possible (e.g. by collar); and ensuring they have supplied sufficient food and water for the likely duration of the evacuation. Example advice is included in Box 2.

Box 2: Advice for pet owners who are preparing to evacuate without their animals

For cyclone and storms:

Self-evacuation with your pets is the best option. If you can't self-evacuate, as you are leaving your house:

- If possible, leave your pets in a safe, secure room, with small windows and good airflow. It is best if dogs and cats are kept in separate parts of the house. Move their beds/blankets and any special toys into the room with them.
- Give your pets enough dry food and water to last at least one week. Put the food and water in bowls or containers that cannot be tipped over – use rocks to make the bowls heavier so they can't be tipped over. If the room has a tap, set the tap to drip slowly so that the water bowl stays full.
- Where available, put an identification collar on each of your pets. Write your phone number on the collar.
- Make sure you have some photos of your pets so that you can share these photos if they get lost.
- If it is safe, leave the room with your animals in it unlocked so that first responders can check on your pets.
- To help first responders, if you can, leave a note attached to your door with information about the type and number of animals inside the house, and your contact details.
- Do not tie up your pets if leaving them outside.

For flooding:

Self-evacuation with your pets is the best option. If you can't self-evacuate, as you are leaving your house:

- If your house is going to flood, leave pets outside. Do not tie them up. Do not confine them in a vehicle without you.
- Leave enough dry food and water (for about one week) for them, in bowls that cannot be tipped over, in undercover areas.
- If the flood waters are likely to rise up to your house, leave your pet where it can access high-ground.

6.3.2 Local Emergency Committee – companion animal response coordination

A Local Emergency Committee is established by a Local Controller under Section 80 of the *NT Emergency Management Act 2013* to oversee emergency planning and operations in each locality.

A suggested role of the Local Emergency Committee is to facilitate communication between the AWFG and local companion animal management stakeholders (e.g. Veterinary Service Providers, Animal Health Workers, Environmental Health Workers, Indigenous Ranger Groups) to plan and implement animal welfare support actions, both in anticipation of impacts and immediately after emergency events.

It is further recommended that the Local Emergency Committee utilise local Indigenous Rangers, Animal Health and/or Environmental Health staff (where available), to communicate key messages to community members, including the proposed approach for companion animal management (and potentially assisting in distribution of pet food supplies).

6.3.3 Integration of veterinary capacity within response structures

The Controlling Authority (i.e. the NT Government agency with delegated responsibility to direct or undertake response to a specified hazard) holds responsibility for overall direction of activities, including immediate response actions (11). Activation of the NT Emergency Management arrangements may trigger the deployment of Functional Group liaison officers into the nominated Emergency Operations Centre (11). A recommendation from the working group for the Animals in Disaster project was to consider AMRRIC/veterinary officer presence within the Emergency Operations Centre where possible (13). As AMRRIC is a member of AWFG, this could be facilitated through the nomination of an AMRRIC representative as a AWFG liaison officer. Functional group liaison officers complement and support an Incident Management Team by promoting an integrated approach to response and recovery operations (11). Ideally this role should be fulfilled by a veterinarian experienced in the unique and nuanced delivery of remote Indigenous community dog and cat population management.

The Animals in Disaster report additionally recommended increased AMRRIC and/or veterinary on-ground presence during evacuations in emergency situations in remote Indigenous communities (13). This measure assists in reassuring animal owners that are having to leave behind their animals, and increases the opportunity to gauge household animal numbers and speed up post-event household animal welfare checks (13). Ideally this role should be fulfilled by the community's regular Veterinary Service Provider, and should report to the Local Emergency Controller to enable the escalation of relevant animal welfare needs as required.

6.3.4 Animal Welfare Functional Group pre-event response actions

In the lead up to emergency events, AWFG to play an important role:

- ensuring local stakeholders are identified and companion animal census data for the impacted region is available to facilitate response planning;
- collaborating with the Public Information Functional Group, as well as relevant local stakeholders to ensure pet-owner-directed-messaging is included in official mass-communications. For remote Indigenous communities it is essential this information is culturally, contextually and linguistically appropriate;
- in the event of mass-evacuations, readying capacity and providing regular updates to members to facilitate efficient activation of veterinary teams and pet supplies (e.g. food, water, identification methods) where required. Wherever veterinary capacity is activated, this should preferentially engage the community's regular Veterinary Service Provider.

6.3.5 Local government authorities pre-event response actions

Once an emergency event is imminent, LGAs and other relevant local stakeholder can:

- escalate likely animal health and welfare needs to AWFG via the Local Emergency Committee;
- disseminate guidance to pet owners through local communications channels (e.g. local radio, social media, community posters etc);
- utilise local Animal Health Workers, Environmental Health Workers or Indigenous Rangers (i.e. staff who are known to the community and their pets) to distribute pet-focused messages during any planned door-to-door engagement;
- distribute pet food supplies to households;
- distribute suitable food and water bowls/tubs/buckets;
- distribute temporary identification measures for pets (e.g., plastic collars with identification/lot number/contact information), and;
- in situations where animals will be confined to houses, to assist first responders, encourage pet owners to leave a note on their door detailing the number and types of pets inside, as well as the owner's contact details. This note should be waterproof (e.g. a laminated sheet) and securely fastened.

All of these actions are outlined in AMRRIC's template Local Sub-plan – Companion Animal Emergency Management available: <https://www.amrric.org/emergency-management/>.

6.3.6 Movement of animals in harms-way

In flooding events where there is some warning, animals may be encouraged to move to higher ground by establishing a feed, water and shelter station at a location within or nearby the community but above the anticipated flood height. Ideally this station would provide

shelter from the rain and wind and allow animals to access food and water over as large an area as possible, to minimise aggressive behaviours between animals trying to access the same resources.

As noted in section 5.1, companion animals in remote Indigenous communities are typically free-roaming and are generally not used to being confined nor restrained, so physical handling of animals (including for evacuation) may be difficult and potentially dangerous. Other constraints to the use of rescue equipment are the availability of facilities in which to house the animals once evacuated, as well as long distances between communities and evacuation centres, the stress for animals and the expense/limited practicality of transporting small numbers of animals at a time. As such, any attempts to move animals need to be carefully considered and should be guided by veterinarians familiar with the context, as well as factoring in the wishes of the animals' owners.

6.3.7 Post-event access and assessment of animals

6.3.7.1 When to deploy animal welfare focused responses

There may be delays in accessing emergency-affected areas and in situations where communities have been evacuated, it can be days or weeks before they are able to return. The welfare of animals that remain in communities becomes increasingly compromised the longer they are without care. Hungry free-roaming animals also pose a safety risk to first responders from pack formation and attack. AMRRIC has developed [decision trees](#) to guide animal welfare focused responses following emergencies, outlining the recommended maximum timeframes before animal health assessments and food and water provision should occur.

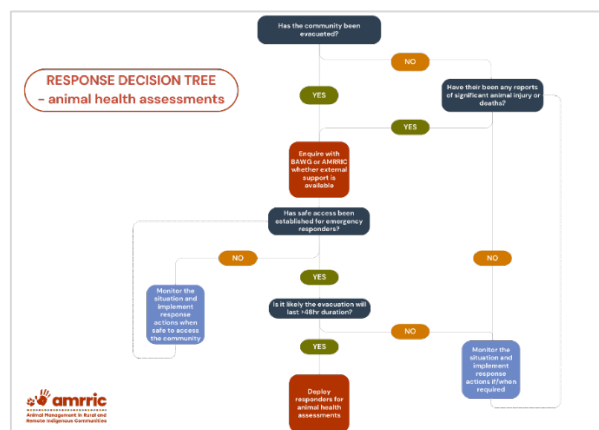


Figure 3: Response Decision Tree - animal health assessments. To view this, download the PDF copy at: <https://www.amrric.org/wp-content/uploads/2024/11/202411-RESPONSE-DECISION-TREE-animal-health-assessments-A3.pdf>

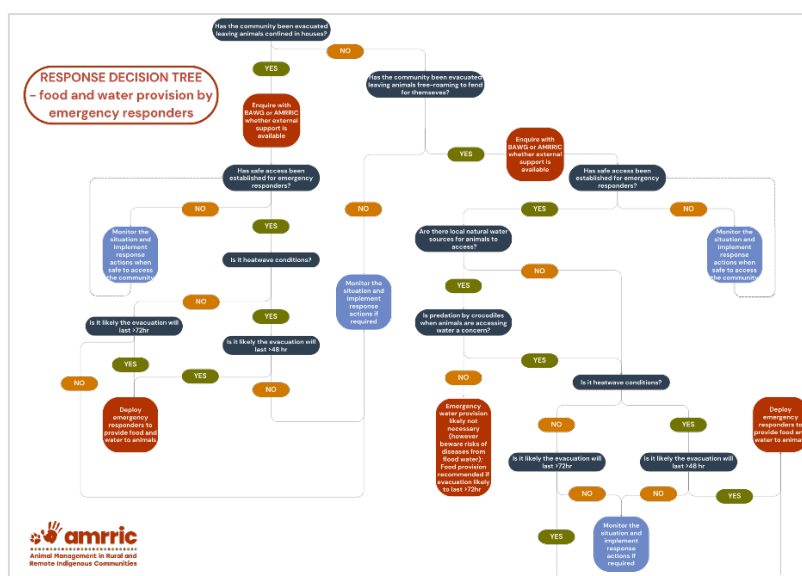


Figure 4: Response Decision Tree - food and water provision by emergency responders To view this, download the PDF copy at: <https://www.amrric.org/wp-content/uploads/2024/11/202411-RESPONSE-DECISION-TREE-food-and-water-provision.pdf>

These timeframes work on the assumption that residents have been able to follow pre-event pet preparation advice; the timeframes should be shortened in situations where no pet preparation has been able to be actioned by pet owners prior to their evacuation. Animal welfare, as well as first responder safety, will be secured the sooner animal health assessments and emergency food and water provision can occur. The decision trees are available here: <https://www.amrric.org/emergency-management/>.

While the AWFG will coordinate the provision of pet food and arrange for feeding of animals in evacuated communities during declared emergency events, local stakeholders may wish to utilise these decision trees for events not managed by AWFG.

6.3.7.2 Animal welfare response teams

Assessment and provision of food, water and animal first aid should be included as an essential part of any response in situations where communities have been evacuated. Ideally, assessment of animals and support to pet owners should also be available in situations where the community hasn't been evacuated but has still suffered impact from the emergency event.

AWFG plays a key role in 'coordinating the care, treatment and disposal (where appropriate) of domestic and commercial animals and wildlife through the activities of government, veterinary clinics and private animal care organisations at the request of the incident controller' (11), and therefore, where required, plays a pivotal role in coordinating animal welfare response teams during emergency events. Recognising that the Survey, Rescue and Impact Assessment Functional Group is responsible for coordinating rapid impact

assessments (11), AMRRIC recommends exploration of collaboration between AWFG and the Survey, Rescue and Impact Assessment Functional Group to further embed assessment and support of animal welfare focused support within emergency responses.



Figure 5: First responders following Cyclone Trevor included AMRRIC veterinarians undertaking veterinary assessment and animal first aid.

Based on AMRRIC's experience in previous events, it is recommended that animal welfare response teams be trained in both animal health/welfare, as well as emergency response, be appropriately remunerated for their involvement, and ideally include:

- The community's regular Veterinary Service Provider (and, depending on the scale of the event, additional experienced veterinarians and veterinary nurses familiar with the context);
- Where they exist and are involved with regular local companion animal management activities, Animal Health Workers, Environmental Health Workers and/or Indigenous Rangers who are familiar with the community and its animals.

Key response actions may include, but are not limited to:

- triage assessment and treatment of impacted animals, including cases where euthanasia may be warranted; and,
- provision of emergency food, water and first aid;

- providing updates on the health/welfare of animals that can be communicated to evacuated residents via official channels.

Other response actions may include:

- disposal of any deceased animals;
- identification of houses where cleaning of rooms where animals have been confined will be required.

In circumstances where deployment of animal welfare response teams is likely to be delayed due to logistics, basic animal assessments and provision of food and water could potentially be initially undertaken by Rapid Assessment Teams, coordinated by the Survey, Rescue and Impact Assessment Functional Group. In these circumstances, the community's regular Veterinary Service Provider (or in their absence, experienced veterinarians familiar with the context) could be engaged to provide telemedicine-based advice to on-ground responders (see section 7.1). While telemedicine offers a potential avenue for provision of advice, it should be noted that without on-ground veterinary presence and access to medicines, the range of treatments (including euthanasia) that a non-veterinarian can administer is limited.

6.3.8 Community updates/information

Under the NT Emergency Plan (11), The NT Department of Chief Minister and Cabinet is responsible for the management of public information during an emergency. Information about the state and welfare of animals will be provided to evacuated residents through the AWFG. However, there is no current formal mechanism for providing information on the process to facilitate owners to be reunited with lost animals.

Community feedback from previous mass-evacuation events suggests that information about companion animals remaining in communities is a high priority for evacuated community residents. AMRRIC encourages consideration of how this information could be better integrated within the Northern Territory Government's emergency public information/communications. Exploration of collaboration between the BAWG and other functional groups including the Survey, Rescue and Impact Assessment Group, Public Information Group and Welfare Group is suggested. As the stakeholder with closest links to communities, leveraging LGA communication channels to share information on companion animals is also recommended. One potentially useful mechanism for information sharing is via community disaster dashboards (see section 7.3).

6.4 Recovery

The Territory Emergency Plan (11) defines recovery arrangements as:

The coordinated process and measures for supporting emergency-affected communities in reconstruction of the physical infrastructure and restoration of social, economic and physical well-being.

6.4.1 Guidance to pet owners

Following a disaster, animals may be traumatised, and their behaviour may change. Here, we note some specific considerations after natural disasters. Please note, the information provided here is not comprehensive, and it is recommended to seeking expert advice from your local Veterinary Service Provider as required.

6.4.1.1 Post flood/cyclone

There are a range of health risks associated with floodwaters – they can contain bacteria, parasites and chemicals that can be harmful to both humans and animals, as well as create ideal breeding conditions for parasites and mosquitoes. Both people and animals should avoid contact with flood waters. Pet owners whose animal may have come into contact with floodwaters should:

- Wear protective clothing, gloves and if possible, safety glasses and wash pets thoroughly with pet shampoo.
- Watch out for signs of sickness in their pets and seek advice from their veterinarian or AMRRIC.

There is also an increased risk of parasites following a flood or cyclone; the delivery of anti-parasitic treatments for animals is an important action post-flooding. It is also important to raise community awareness about health risks associated with flood waters, preventative measures that can be applied, and about diseases associated with flood events (see section 6.1.3).

6.4.1.2 Post fire

Following a bushfire, pet owners should be encouraged to monitor animals for signs of burns, as well as smoke inhalation and subsequent illness, and seek veterinary advice as required.

6.4.2 Animal Welfare Functional Group recovery actions

The AWFG supports recovery operations for companion animals in remote Indigenous communities. This includes:

- Assisting with securing pet food supplies until evacuated communities return;
- Liaising with local, regional and Territory agencies to include animal welfare consideration into recovery planning and implementation;
- Addressing post-emergency impacts as required (e.g., increased incidence of parasites due to favourable climatic conditions); and
- Participating in post-emergency debriefs and reviews.

AMRRIC recommends collaboration with other functional groups, including the Public Health Group, Public Information Group and Welfare Group to leverage synergies and explore development of collaborative processes to support these actions.

6.4.3 Local government recovery actions

Local government authorities are encouraged to:

- Collaborate with local stakeholders and community members to identify animal welfare needs in recovery planning and implementation. Such needs may include (but are not limited to):
 - Supporting AWFG's ongoing provision of food and water to animals until residents can return and resume their duty of care;
 - Assisting returned residents to access pet food where supply chains remain disrupted;
 - Provision of anti-parasitic treatments;
 - For events resulting in protracted periods of resident evacuation, identifying the community's wishes regarding the ongoing management of their animals;
- Liaise with the AWFG via the Local and/or Regional Recovery Coordination Committee to implement animal-focused recovery actions;
- Consider if any changes are required to their regular animal management programs because of the event.
- Contribute their perspectives regarding the emergency management of companion animals - what worked well, what didn't, and lessons learnt - into event debriefs.

7. Emerging technologies that may support companion animal emergency management

7.1 Telemedicine

Telemedicine systems are increasingly being used in Australia, made possible due to improvements in communications and technology. For situations where veterinarians are not immediately locally available, telemedicine can potentially facilitate the provision of veterinary triage advice to local stakeholders. AMRRIC is aware that the West Australian Department of Primary Industries and Regional Development is currently piloting a star-link based telemedicine veterinary triage system for deployment to emergency responses involving animals.

7.2 Drones

We also note there has been rapid growth in the use of drone technology globally and in Australia. While we are unable to determine whether the use of drone technology is a realistic, feasible and practical option in a remote area context, there are international examples of drones being used in disaster management, for example, to transport medical, veterinary or emergency supplies in advance of during or following a disaster in some areas (21). They may also serve a transport role in the supply chain, if key road or barge links are affected in a disaster. In an animal management context, drones could be used, with concurrent telemedicine systems, for transport of pet food supplies and veterinary medicines.

7.3 Disaster dashboards

Local government authorities hold an integral role for sharing information and providing guidance and directions in emergency events. In some parts of Australia, a growing number of local government websites include interactive disaster dashboards which provide a user-friendly interface and centralised source of information on:

- emergency news
- weather warnings
- emergency contacts
- weather radar, river heights and rainfall information
- road conditions
- power outages
- pets and animals
- evacuation centres

Such dashboards provide an opportunity to share resources tailored for different needs. For example, many local government authorities in Queensland have a broadly consistent ‘one stop shop’ template for emergency management dashboards (with varying levels of detail) across the state; they include short videos on disaster preparedness with Auslan interpretation, and in video resources in multiple languages (Figure 6).

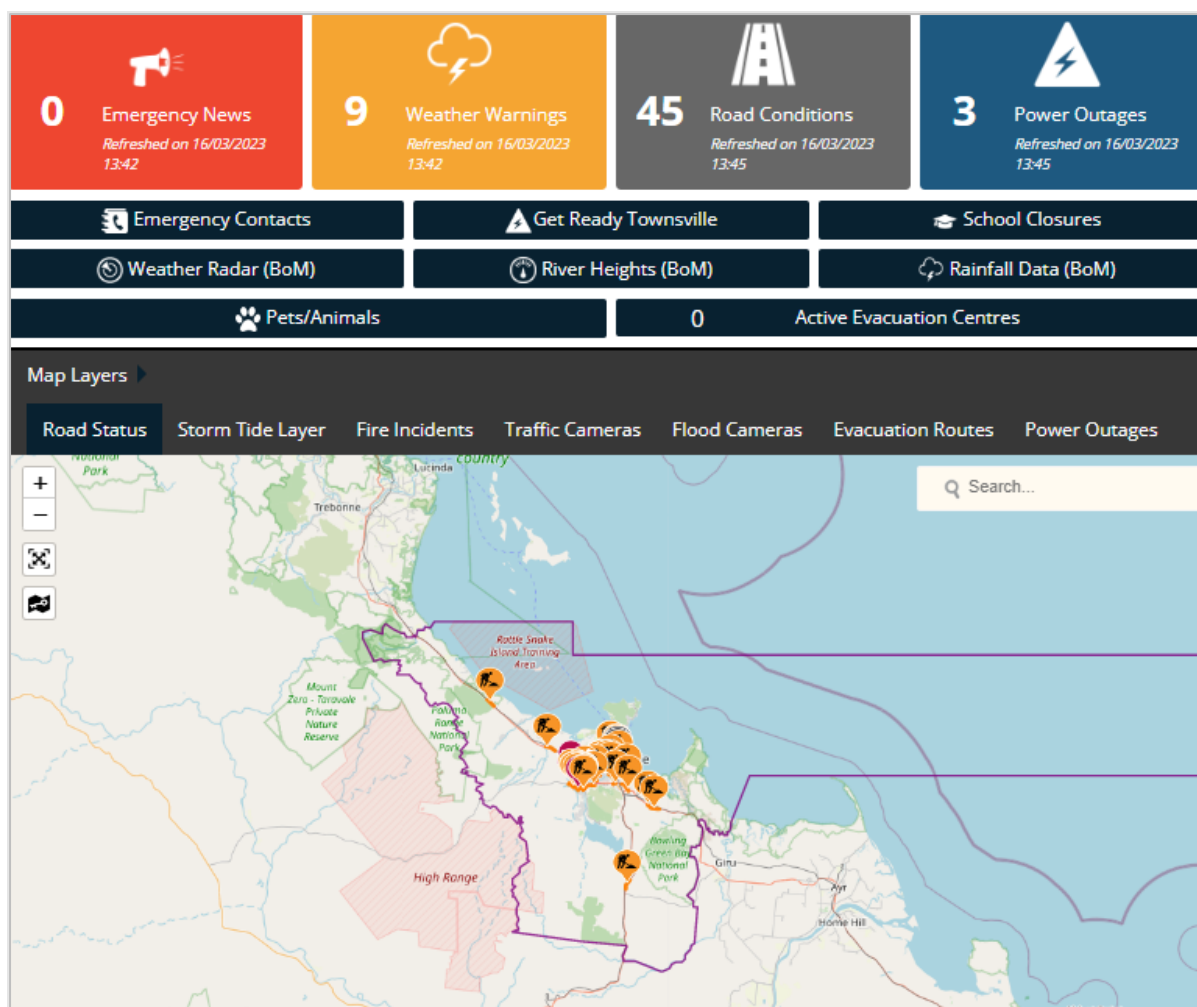


Figure 6: Example of an interactive Emergency Management and Disaster Dashboard for Townsville, QLD; this includes translated resources in a range of languages.

For the NT, Secure NT currently provides a similar, territory-scale function, and comprehensive community resilience/emergency preparedness films for Beswick, Groote Eylandt, Kintore, Pirlangimpi and Wurrumiyanga are available on the NT Police Fire and Emergency Services website.

While emergency management communications are coordinated by the NT Government, the provision of local-scale information through local government websites/portals warrants consideration. Local government authorities have the strongest connections with local communities and this approach allows for tailoring to different local circumstances. These could include a map with key notifications in a similar format to those for Queensland, and could include short disaster information videos in Indigenous languages.

Given that arranging translation of information is a timely process, such resources would not be event-specific, but could provide generic information on what to bring (in case of an evacuation) and how best to prepare houses/pets (in case of an evacuation). Most resources still rely on proficiency in technical English; there is scope to consider the development of audio-file based websites in Indigenous languages for key messages.

8. Support and resources available from AMRRIC

8.1 Companion animal emergency management support available from AMRRIC

AMRRIC exists to assist and empower rural and remote Indigenous communities to meet their needs for companion animal health, care and safety, including in relation to emergency events. AMRRIC is able to provide support to NT based emergency events impacting rural and remote Indigenous communities as both its own entity, and as a member of the Animal Welfare Functional Group. In relation to companion animal emergency events, AMRRIC can offer a range of support, including (but not limited to):

- development and provision of freely accessible resources to assist with planning and implementation of companion animal emergency management – see 7.2.2.;
- identifying, supporting and coordinating communication between relevant stakeholders;
- coordinating provision of census data information, where captured in the AMRRIC App database;
- coordinating access to donated or discounted pet food and other response supplies;
- securing donated or discounted anti-parasitic treatments;
- veterinary response capacity, including coordination of surge capacity where required, utilising staff and volunteers experienced with the context of companion animal health and management in rural and remote Indigenous communities; and,
- assisting on-ground stakeholders with advocacy, to escalate animal health and welfare needs;
- offering support staff carrying the burden of companion animal emergency response efforts in remote Indigenous communities, and identifying additional support channels where required.

8.2 AMRRIC Emergency Management Information Hub

AMRRIC has developed an information hub: [Companion Animal Emergency Management Resources](#). The hub features a range of freely available resources to support remote Indigenous community stakeholders, including:

- companion animal emergency management planning resources for local government authorities, including the template Local Plan – Companion Animal Emergency Management and response decision trees;
- community-focused communications materials on preparing animals for cyclones, flooding and heatwaves;
- training resources to support staff involved in emergency responses; and,
- information on zoonotic diseases associated with flooding.

9. Concluding remarks

There are a range of ways in which emergency management is changing in Australia. In 2022, the National Emergency Management Agency was established in recognition of more frequent disasters and to better respond to them, help communities recover, and help prepare Australia for future disasters. In late 2024, the Australian Institute for Disaster Resilience published a handbook that outlines nationally agreed principles and best practice for including animals in emergency management (22).

There is no one-size-fits-all approach or model for emergency companion animal management. Each situation will be different and will depend on the nature and extent of the emergency and local community circumstances. Having a clear mechanism for responding to the emergency (e.g. via the NT AWFG) is beneficial. Suggested additional measures that can provide increased clarity on emergency animal management to local government authorities and community members include:

1. making publicly available, the Territory Animal Welfare Emergency Plan.
2. revising the information on the SecureNT website to include information on community evacuation situations, and actions pet owners can take to assist first responders.

It is essential to recognise that linked to remoteness, and high levels of socio-economic disadvantage, there are immense day-to-day challenges in remote Indigenous communities. Simultaneously, these communities are located in areas that are vulnerable to natural hazards.

At a national scale, there is a pressing need to better recognise these challenges, support co-developed tailored community approaches to emergency management and empower Indigenous communities in emergency management, and provide appropriate funding and resourcing for implementation of such approaches by the National Emergency Management Agency.

Local government authorities have an important role in emergency management, being the closest level of government to communities and holding local knowledge and expertise. Local government authorities can also be important in enacting change; by supporting Indigenous empowerment and working in collaboration with Indigenous communities for improvements in local issues.

There are ongoing challenges with companion animal management in emergencies impacting remote communities; local stakeholders (e.g. local government authorities) can assist in all stages of emergency management as described in this document, particularly in preparedness and planning.

Given there are known cases of people refusing to leave their animals behind or hiding small animals in bags during evacuations in the NT, we suggest there is a need to expand access to evacuation shelters which will accept and safely house animals alongside their owners. Simultaneously we recognise that not all remote community companion animals are

habituated to confinement and so alternative situationally-responsive arrangements are also required. We support the view that “consulting with vulnerable groups in the development of policy and procedure in relation to disasters and animals or pets belonging to or cared for by vulnerable groups”, including Indigenous Australians, warrants consideration by governments (23).

It is our hope that this document provides considerations for all stakeholders involved with remote community companion animal emergency management, that can be tailored for local circumstances, and evaluated and modified as required.

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Appendix 1

Glossary of Terms

Term	Definition
Animal Health Worker	Staff with responsibilities in improving companion animal health and control issues, including through parasitic treatments, providing assistance to veterinarians, collecting animal census data.
companion animal	Any animal kept for companionship in remote communities. Within this document, we focus on dogs and cats as the most common companion animals in remote Indigenous communities.
emergency	An event that requires a significant coordinated response using the combined resources of the Territory and non-government entities within the Territory (5)
Environmental Health Worker	Staff with responsibilities including monitoring drinking/potable water supplies, sewage and wastewater disposal, waste management, community housing/infrastructure inspections and other environmental health issues (noting may include animal management responsibilities).
Indigenous Rangers	Aboriginal and Torres Strait Islander people employed to undertake a diverse range of land and sea management activities, such as the management of weeds, feral animals and fire, biosecurity compliance, monitoring of culturally significant and threatened species, protection of cultural sites and more.
Remote Indigenous communities	Remote Indigenous communities are defined by some or all, but are not limited to, the following characteristics, which present complex emergency risks and challenges: <ul style="list-style-type: none">• Entrenched levels of disadvantage• Geographic isolation• Lack of services or infrastructures• Lack of access to services• Restricted or limited accessibility• Vulnerability and exposure to hazards• Low economic base and• Unique cultural or communication issues (12)

Acronyms

Acronym	Meaning
AEIMN	Animal Emergency Incident Management Network established in 2022, with a key purpose being to ‘advance practices and knowledge in all aspects in incident management involving animals, including research, policy, education, planning, safety and practices to improve animal welfare’.
AIDR	Australian Institute for Disaster Resilience is a national institute for disaster risk reduction and resilience, currently working on an <i>Animals in Disasters</i> handbook
AMRRIC	Animal Management in Rural and Remote Indigenous Communities
AWFG	Animal Welfare Functional Group, the functional working group for animal welfare for domestic, commercial and native animals in disasters, under the Territory Emergency Plan
LGA	Local government authorities in Australia, such as local councils, and are responsible for providing services and facilities, making local laws, and monitoring community needs.
NEMA	National Emergency Management Agency, established on 1 September 2022 as a single, enduring, end-to-end agency to improve response to emergencies, assist community recover and prepare for future disasters (13).
NPPAD	National Planning Principles for Animals in Disasters, designed as a non-prescriptive tool aimed at promoting best practice for integrating animals into disaster planning and to support national consistency.

Appendix 2

Recent disasters in northern Australia and known emergency responses for animals and people (based on available ABC media reports)

Emergency name and date	Main affected communities	Emergency management response for people	Emergency management response for animals
Flooding, Nauiyu (Daly River), December 2015	Nauiyu, Palumpa	Evacuation of community residents to Darwin	Around 60 dogs airlifted from community using a large cage slung under a helicopter and taken to nearby kennels. Food drops for pets remaining in community. Reports of some pets being taken by crocodiles (number unknown).
Tropical Cyclone Trevor (Category 4), Gulf of Carpentaria, March 2019	Nhulunbuy, Alyangula, Numbulwar, Ngukurr, Borroloola, Robinson River	State of emergency declared; mass evacuation of over 2,500 residents from Groote Eylandt, Borroloola, Numbulwar, Port McArthur, McArthur River Mine, Cape Crawford, Port Roper to Darwin by the Australian Defence Force and by bus and road	An estimated 2,000 pets left behind, most of which were confined to houses with food and water. The vast majority of pets were found safe and well by first responders; approximately 20 reported cattle deaths in Barkly region
Flooding (following Tropical Cyclone Ellie) in Fitzroy Crossing, WA, January 2023	Fitzroy Crossing, Noonkanbah, Bungardi	Evacuation of 150 community residents to Broome and Derby	Some pets were evacuated along with owners; many left in communities. Food drops for pets remaining in community. Media reports mention drowned livestock, pigs and native wildlife.
Flooding, Gulf of Carpentaria, QLD, March 2023	Burketown, Doomadgee, Normanton	88 community residents of Burketown evacuated to Mount Isa; around 60 residents remained in Burketown	Remaining residents looking after pets. Food drops and mustering of livestock were attempted; reports of widespread livestock drownings (exact number unknown).
Flooding, Victoria River District NT, March 2023	Kalkarindji, Daguragu,	About 700 community residents airlifted to Darwin.	An estimated 100 pets left behind in communities.

	Pigeon Hole, Yarralin		Food drops and veterinarian visits for pets remaining in communities (funded by NT Government).
Flooding, Gulf of Carpentaria, QLD, March 2023	Burketown, Doomadgee, Normanton	88 community residents of Burketown evacuated to Mount Isa; around 60 residents remained in Burketown	Remaining residents looking after pets. Food drops and mustering of livestock were attempted; reports of widespread livestock drownings (exact number unknown).
Flood event following Cyclone Jasper, Wujal Wujal and surrounding communities, QLD, Dec 2023	Wujal Wujal Degarra Ayton Bloomfield	300 (almost all) Wujal Wujal residents evacuated by helicopter at short notice. Significant damage to the community meant residents were unable to return for several months.	Pets cared for by Wujal Wujal Aboriginal Shire Council's Animal Management Worker and a locally-based AMRRIC vet nurse until reunions or foster-care arrangements could be made. Telemedicine veterinary support provided by AMRRIC. Food and veterinary supplies donated by various NGOs – initially helicoptered in due to lack of road access. On-ground staff time reimbursed through Queensland Reconstruction Authority disaster recovery arrangements .
Flooding in Borroloola, NT Cyclone Megan, March 2024	Borroloola and surrounds	380 residents evacuated to Darwin by the Australian Defence Force.	Remaining residents looking after pets.