



30th July 2020

Standing Committee on the
Environment and Energy
House of Representatives
c/ Committee Secretariat
PO Box 6021
Parliament House
Canberra ACT 2600

Dear Sir/Madam

BirdLife Australia submission to the Standing Committee on the Environment and Energy House of Representatives inquiry into the problem of feral and domestic cats in Australia.

Thank you for the opportunity to provide comment on the impact of feral and domestic cats in Australia. BirdLife Australia's long history of science-driven conservation and collaborative research networks provides us with data-driven evidence to specifically address the following Terms of Reference.

- b. the impact of feral and domestic cats including on native wildlife and habitats;
- c. the effectiveness of current legislative and regulatory approaches;
- g. public awareness and education in relation to the feral and domestic cat problem
- h. the interaction between domestic cat ownership and the feral cat problem, and best practice approaches to the keeping of domestic cats in this regard.

Recent research has indicated that combined, cats kill 377 million Australian animals every year – including 61% of federally listed threatened species. Whilst feral cats are responsible for $\frac{3}{4}$ of these predation events, we are only now starting to understand the significant role that domestic cats play in the injury and death of staggering numbers of native Australian birds.

Cats are undoubtedly important and valued as companion animals, providing huge benefits to their owners. However management strategies that aim to keep free-roaming cats (be that feral or domestic) at supposed manageable or stable levels in the landscape are not compatible with native species conservation. Efforts need to shift towards managing irresponsible pet owners through awareness and behaviour change campaigns alongside cat management regulations and strategies that are tailored to the specific cat ownership categories that exist in Australia.

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To reduce the potential significant impacts on our native Australian birds and other wildlife, as well as improve the welfare of our domestic cats, BirdLife Australia is therefore calling for a national framework on cat management in our attached submission and put forward the following recommended reforms:

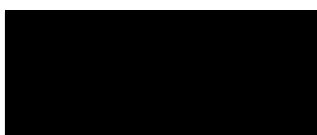
1. Common legislative definition for cat classifications - division into feral and domestic is too simplified. Recognising differing groups will allow for tailored, effective strategies.
2. Declaring feral cats as a pest in all states and territories in addition to their current status as a key threatening process under the EPBC Act 1999.
3. Consider domestic (pet, nuisance, and stray) cat predation also be included as a key threatening process in EPBC Act 1999.
4. Mandatory pet cat registration, with fee structures that incentivise desexing. Registration fees can be used towards management of cats.
5. Mandatory desexing of pet cats before they reach sexual maturity.
6. Limiting the number of pet cats per household (2 per household, except for licenced breeders).
7. Prioritise transition to cat-free areas and mandatory cat containment areas in new suburbs and in areas with significant environmental values (e.g. seabird colonies, populations with ground nesting birds).
8. 24 hour containment/curfews, and resourcing for compliance/enforcement, fines for non-compliance.
9. Promoting and incentivising cat containment options. Registration fees (as in recommendation 3) can be used by local government to enforce management of cats.
10. Do not allow TNR programs.
11. Encouraging and promoting community-wide acceptance of responsible cat ownership practices.
12. Supporting and resourcing local governments to reduce populations of stray cats.
13. Investment into research identifying of sources and sinks of cat populations in the landscape, to prioritise actions that minimise interactions between non-domestic cats and domestic cats and other wildlife populations, including birds.

Should you require more information or have any questions please contact

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Yours sincerely



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BirdLife Australia



Submission to the House of Representatives Standing Committee on the Environment and Energy:

Inquiry into the problem of feral and domestic cats in Australia.

About BirdLife Australia

BirdLife Australia is a non-partisan, science-based, grass roots, bird conservation organisation with over 185,000 supporters. We are the peak body for native bird conservation and science in Australia, with over 100 years of experience, and are the national partner for BirdLife International, the world's largest conservation partnership.

BirdLife Australia has played a major role in the conservation and monitoring of Australia's birdlife throughout our almost 120-year history. We have invested in long-term threatened bird conservation programs, often in partnership with other organisations and communities, bringing together research, education, on-ground remediation, advocacy and campaigning. Our strengths include:

- Bird monitoring and research – We rely on thousands of volunteers and citizen scientists who play a key role in delivering our bird conservation programs. Our Birddata platform (<https://birddata.birdlife.org.au/>) holds over 20 million of bird records, surveyed over five decades by dedicated citizen scientists. Within these records, Birds in Backyards surveys in gardens have been documenting cat access and owner behaviour for 20 years.
- Conservation planning and partnerships – We apply a multi-stakeholder, collaborative approach to conservation and recovery efforts for native birds. Together with our partners, cats have been assessed within our Conservation Action Plans as a major threat for several priority bird groups, including many threatened species. Strategies to address threats include working with local councils to reduce predation pressure from cats, often thwarted by current legislation.
- Public engagement and advocacy – We leverage our knowledge and our reach for better outcomes for our wildlife. Our education programs, such Birds in Backyards (<https://www.birdsinbackyards.net/>) engage the general public in best practice approaches to responsible cat ownership and instil an appreciation of Australia's native birds. We work with like-minded organisations to deliver initiatives that increase awareness and influence positive behaviour change, and advocate for appropriate legislative change.

Response to the House of Representatives Terms of Reference

BirdLife Australia welcomes the opportunity to provide a submission to the inquiry into the problem of feral and domestic cats in Australia. Our long history of science-driven conservation and our collaborative research networks provide us with data-driven evidence to specifically address a number of the Terms of Reference. We have focused on the following as key areas for national reform to improve coordinated efforts and reduce the impact of feral and domestic cats on Australian birds. Each item listed is discussed in detail below.



- b. the impact of feral and domestic cats including on native wildlife and habitats;
- c. the effectiveness of current legislative and regulatory approaches;
- g. public awareness and education in relation to the feral and domestic cat problem;
- h. the interaction between domestic cat ownership and the feral cat problem, and best practice approaches to the keeping of domestic cats in this regard.

b. the impact of feral and domestic cats including on native wildlife and habitats;

Feral and pet cats are a key threatening process to Australian wildlife (Olsen et al. 2005; Legge et al. 2017) and have contributed to the extinction of 20 native Australian mammal species (Department of Agriculture, Water and the Environment, 2015). However, it is important to acknowledge that extensive land clearing and habitat loss are historical and remain a major threat to Australia's wildlife and habitats (McIntyre et al. 2002; Olsen et al. 2015). Both land clearance and predation by feral cats are listed as key threatening processes in the national legislation the Environment, Protection and Biodiversity Conservation Act 1999 (EPBC Act). As such, it is important to put the impact of feral and pet cats to Australian wildlife, in context of other threatening processes. For example, for native birds in woodland habitats, the impact of cats exacerbates the major threat, which is the loss of habitat from land clearing (Olsen et al. 2005). Effective cat management must coincide with stronger land clearing laws and legislation, to incentivise native vegetation and habitat protection (see C).

There are an estimated 2.1 million feral cats in natural environments in Australia, increasing to almost 6 million in times of plenty in central Australia. Feral cats are pervasive, with no natural predators and occur across mainland Australia, with the exception of conservation exclosures (where they have been removed). Feral and domestic cats occur in urbanised cities through to Australia's most natural habitats, including islands and are present over 99.9% of the Australian landmass (Legge et al. 2017),

Australia is renowned worldwide for its unique and diverse flora and fauna. Yet we are facing an extinction crisis and are one of the worst performers for addressing threatened species' declines to prevent extinction. There is an extensive body of research and evidence of the impact of cats on native wildlife in Australia. In this submission, we focus on the impacts of cats on birds of Australia.

There is compelling evidence that many so-called common bird species are experiencing significant declines in abundance and distribution (Ehmke et al. 2015). Recent estimates of the numbers of birds killed by cats is staggering. They are estimated to take 377 million birds every year, with feral cats responsible for ¾ of that total (Woinarski, et al. 2017a). This equates to 1.1 million birds (mostly native) being killed, every single day, by cats in Australia. Cat distribution is pervasive as well. They are found right across Australia, from the most urbanised cities through to our most natural habitats, including our islands and are present over 99.9% of Australia (Legge et al. 2017)

The impact on bird species overall is not uniform, with about half (357) of Australia's birds documented as being preyed on by cats. This includes 71 of the 117 (61%) of federally listed threatened species (Woinarski et al. 2017b). Particular guilds are more susceptible than others with habitat also influencing the likelihood of predation. In general, ground and forage-nesting medium-sized birds (60-300g) are most at risk, with island endemics including seabirds also under greater direct



threat (Woinarski et al. 2017b). Where the intensity of cat predation upon breeding bird populations exceeds natural breeding rates for species, it creates population sinks in the landscape (Baker et al. 2005). Many more Australian bird species (particularly threatened species) are preyed upon by cats than previously recognised, however there is an urgent need to undertake more intensive studies of the impacts of cat predation on the population viability of at least those bird species most likely to be susceptible. Nted Further targeted research to identify which species are most at risk by cat predation would assist in prioritising areas for cat management. Continued funding for the improvement and implementation of cat management techniques and devices (e.g. baiting) to reduce cat numbers is also necessary (Fancourt et al. 2019).

BirdLife Australia works across much of mainland Australia and its islands and we consider all cats that are not contained, to be a threat to many of the bird species we work on including beach-nesting birds, island endemics and arid-dwelling species. Here we will highlight some of their impacts across urban and woodland habitats where BirdLife Australia has ongoing conservation work.

Urban Landscapes

Until recently, the impact of cat predation on Australian wildlife has focused on feral cats. However recent research has highlighted the very significant threat that pet cats pose to native birds. The predation rate of roaming pet cats per square kilometre in residential areas is 28–52 times larger than predation rates by feral cats in natural environments, and 1.3–2.3 times greater than predation rates per km² by feral cats living in urban areas (Legge et al. 2020).

The recent review by Legge et al. (2020) found that the impact of pet cats in urban areas is serious. For example, pet cats were blamed for the decline of a local population of superb lyrebirds *Menura novaehollandia* in Sherbrooke Forest, Victoria (Legge et al. 2020). Changes to local by-laws requiring residents to contain their pets were associated with a recovery in lyrebird numbers, though this requirement coincided with the implementation of control programs for foxes and feral cats, so it is not possible to separate out the relative contributions of the predators (Legge et al. 2020).

The perception that cats only kill non-native wildlife in urban areas is a myth, with Woinarski et al. (2017b) confirming that the majority of bird predation events (62 %) are on native species. A study in urban Canberra revealed cats killing 47 bird species, over half of which were native (Barratt 1997). A similar study in metropolitan Perth recorded pet cats taking 13 bird species (12 native species), including 4 declining urban species (Calver et al. 2007). Urban landscapes are used by and important for 634 bird species in Australia, from our most common birds through to 71 state and/or federally listed threatened species (C. Campbell pers comm). Despite pressures from cats, our urban spaces can be important refuges for birds, particularly those impacted by recent fire and drought events (Tulloch et al. 2020). Appropriate management of threats such as cats is required for these areas to remain a viable refuge for our native fauna.

Urban areas are characterised by complex socio-ecological systems, multi-scale and multi-stakeholder environments, and diverse land use. BirdLife Australia's Urban Bird Conservation Action Plan is a multi-stakeholder collaboration between academics, practitioners and government, that provides a framework for achieving conservation outcomes for 54 species of birds across Australia's urban centres (Pearson et al. 2020). The plan has identified cats as a high-level threat to three of the eight target groups of birds it is examining due to high vulnerability to predation (shrub and mid-storey dependant birds, grassland birds, and ground nesting and foraging species). Current regulatory shortcomings around cat



management make it impossible for BirdLife Australia and its conservation partners, to enact appropriate cat management techniques to achieve conservation outcomes for birds (see TOR C).

Management strategies that aim to keep free-roaming cats (be that feral or pet) at supposed manageable or stable levels in the landscape are not compatible with native species conservation. Desexing and/or cat night-time curfews are not sufficient. While night curfews are likely to decrease domestic cat predation of mammals, they will not protect diurnal bird and reptile species (Barratt 1997; Paton 1993). Cats also readily learn how to take specific prey, meaning a single cat can have a disproportionately devastating impact on the local populations of particular species.

Breeding birds, particularly colonial species, are extremely vulnerable to cat predation. Cats kill incubating adults, chicks and eggs, cause colony abandonment and adversely impact future breeding attempts. In suburban Mandurah, Western Australia, a single, free-roaming, desexed cat targeted a breeding colony of threatened Australian Fairy Tern (*Sternula nereis nereis*) over several days, killing almost 50 adults and chicks, and resulting in the complete abandonment of that breeding colony of 111 nests for the year (Greenwell et al. 2019). Greenwell et al. (2019) also note that cat predation events are swift, so local extinctions can occur before intervention strategies can be put in place, and the detection of these events highly dependent on monitoring at sites of conservation concern.

Non-urban landscapes

Cats pose a high threat of mortality to many guilds of birds in non-urban landscapes across Australia, with ground-nesting and ground-foraging species regarded most susceptible to feral cat predation (Howling et al. 2019; Howling and Fullagar, 2020). Often predation of these bird groups by cats is considered a secondary threat to their conservation, with resulting impacts on these groups often compounded by the presence of other significant drivers of decline such as; habitat loss and fragmentation, and unsuitable burning regimes (Fox *et al.* 2016; Olsen et al. 2005; Jackson et al. 2016: soe.environment.gov.au). This has been evident across the country, from arid-zone Night Parrot country (Threatened Species Scientific Committee 2016) to Western Australian southern coastal heath, where feral cats have been identified as a direct contributing factor inhibiting population persistence of the six listed bird species there (Department of Parks and Wildlife 2014).

Birds which nest and forage on the ground, such as Bush-stone Curlew, are particularly susceptible to cat predation. However, all woodland bird species (either adults, young or eggs) are vulnerable to cats (Woinarski et al. 2017b), which includes Critically Endangered species such as Regent Honeyeater and Swift Parrot. The population recovery of these threatened species, already impacted by landscape-scale habitat loss and fragmentation, is further inhibited by feral cat predation. In addition, severe bushfire events leave native wildlife, including birds, more exposed to feral predators such as cats, once the understorey is removed (burnt).

In woodlands as well, single cats have been demonstrated to have a disproportionate impact on breeding bird populations. In Western Australia's midwest, cats, mostly single individuals, have been documented as being responsible for the failure of 7-17% breeding attempts for endangered Carnaby's Black-cockatoo (*Zanda latirostris*) and Red-tailed Black-cockatoo (*Calyptorhynchus banksii samueli*) colonies in multiple years, at multiple sites (Saunders & Doley 2019). Examples from a small number of monitored populations suggest the impact



is likely widespread, impacting a greater number of species across landscapes than is presently understood.

c. the effectiveness of current legislative and regulatory approaches;

The dual nature of cats as valued companion animals, and one of the worst invasive species in Australia, creates challenges for their management. Feral cats come under a range of biosecurity and environmental laws at the national and state level, whereas pet cats are managed under variable companion animal laws by local governments.

Predation by feral cats are listed as a key threatening process under the EPBC Act and are one of the four key action areas identified in the Commonwealth's Threatened Species Strategy (DAWE 2015). Despite the Threat Abatement Plan for Feral Cats (2015) being designed at a federal level, not all states/territories have declared feral cats as a pest species. Declaring feral cats as a pest species under State biosecurity or natural resource management legislation is a key step in recognising the need for urgent action to address the impacts of feral cats. This measure should be adopted consistently across all States and Territories.

As outlined above, cats have been identified as a high-level threat in various BirdLife Conservation Action Plans (CAPs), including the Urban Bird Conservation Action Plan (Howling et al. 2019; Howling and Fullagar 2020; Pearson et al. 2020). While cats are readily recognised as a significant threat to many birds, the shortcomings of the current legislative framework mean that it is impossible to address them as a threat. Many of our project partners are in NSW, where companion animals are managed through the *Companion Animals Act 1998*.

The *Companion Animals Act 1998* requires pet cats to be registered and micro-chipped. Cats are not required to be desexed, but there is a reduced registration fee for desexed cats. Cats are prohibited in (a) food preparation/consumption areas and (b) wildlife protection areas (meaning any public place or any part of a public place set apart by the local authority for the protection of wildlife).

The legislation of NSW essentially allows cats to freely roam, which is an inherent weakness of the act, and councils have little power to enforce the provisions relating to cats (compared to regulations for dogs). This constrains our project partners in local government from the outset, and therefore we are unable to progress any on-ground conservation actions relating to pet cats. We need strong legislative frameworks that mandate responsible cat ownership practices and enable a reduction in the significant threat posed by free-roaming cats to native birds.

At the outset, clearly defining the types of cats in Australia will allow more tailored management plans to be created. The current use of 'feral' and 'domestic' does not provide enough nuance to effectively manage semi-owned or unowned cats, particularly in urban settings.

We recommend the adoption of categories as per Woinarski et al. 2019 "Cats in Australia – Companion and Killer":

- **Pet cats:** owned by people, and cared for in a responsible and consistent manner.
- **Nuisance cats:** free-roaming pet cats in residential areas which cause disturbance to residents (fighting, fouling) or cause adverse effects on native wildlife.
- **Stray cats:** feral cats living as fringe dwellers in towns and cities, profiting from the opportunities for shelter and food. These may be wayward pets, ex pets, semi-socialised or unsocialised feral cats. They may be fed by people, or not.



- **Feral cats:** cats that live in the wild and can survive without relying on people for food or contact.

These, or similar updated categories of cats must be incorporated into legislation (currently not the case in either Domestic Animals Act 1994 or Wildlife Act 1975 in Victoria). Tailored management actions and regulations should be prescribed accordingly under these categories. For example, progress with an intensive abatement approach for feral/nuisance/stray cats, and a behavioural change approach for pet cat owners in urban areas involving compulsory registration, microchipping and desexing (excluding registered breeders), and/or compulsory backyard enclosures (unless cat is kept inside at all times).

Regulations that require domestic cats to be kept contained on their owner's property will bring cat management in line with that for dogs. It will also lessen the opportunity for predation on wildlife. Whilst cat night-time curfews are seen as a conservation solution for limiting domestic cat movement, there is evidence that these are insufficient at protection wildlife other than native mammals (Barratt 1997; Paton 1993).

g. public awareness and education in relation to the feral and domestic cat problem;

While the impacts of feral cats on native wildlife has been extensively promoted and public opinion is generally accepting of the need to control/remove feral cats from natural landscapes, it is more challenging to convince cat owners of the need to keep their pets contained. Research shows that 71% of pet (domestic) cats can roam, confirming there is still significant work to be done on changing public perceptions and behaviour relating to free-roaming pet cats in Australia (Legge et al. 2020). This roaming leads to the death of huge numbers of birds (Legge et al. 2020) and contributes to the population of stray and feral cats (see TOR H). The only way to prevent recruitment from the domestic cat population into the feral population and protect wildlife is to contain and desex pet cats (indoors or in a cat run) 24/7 and trap and either rehome or humanely euthanise stray and feral cats.

We know that nature lovers can also be cat owners. In BirdLife Australia's Birds in Backyards surveys for the period of 2004-2020, 39% of participants who owned cats reported them as fully kept indoors. However 45% of people who monitored birds reported cats regularly accessed their backyards; either their own cats, neighbours cats, or other strays and ferals (BLA Birdata 2020).

BirdLife Australia's Birds in Backyards Program provides guidance on creating bird-friendly spaces, primarily through the actions of individuals in private gardens (<https://www.birdsinbackyards.net/>). However actions meant to attract birds such as planting locally native plants and installing bird baths, may lead to perverse outcomes by inadvertently increasing the bird's exposure and risk to roaming cats – particularly small shrub-dependent and ground dwelling species that are the focus of our urban bird conservation and protection efforts (Pearson et al. 2020). This leads to frustration in the community when efforts at environmental stewardship are thwarted by allowing cats to roam in neighbourhoods.

Legislative and regulatory changes will not, as of themselves, make significant inroads into addressing the impacts of cats on native birds. Instead, this needs to go hand in hand with education campaigns and other incentives that provide people with the knowledge and confidence to desex their cats and keep them indoors or in a suitable outdoor enclosure.

Rather than focus on the damage that cats do however, framing messaging to achieve behavioural change would suggest that positive education campaigns focussing on the benefits to both cats and wildlife of 24/7 containment and



desexing is likely to be more successful than those that blame cat owners and demonise cats (Elliott et al 2019). The Zoos Victoria and RSPCA led '*Safe Cat, Safe Wildlife*' (<https://www.safecat.org.au/>) initiative has demonstrated substantial success in using positive messaging to encourage cat owners to keep their pets contained for the safety of cats and native wildlife. The program has directly engaged 33 local councils in Victoria, 63 vet clinics and 26,545 cat families in responsible cat ownership, and shown an increase in people's confidence, belief in, and actions to keep cats fully contained (Zoos Vic pers. comm.). BirdLife Australia is supportive of this campaign and its recommendations on framing messaging and supporting people to take action.

Another consideration is to address the costs associated with keeping cats contained (and happy in that containment) and the perceived benefits that roaming cats may provide, such as rodent control. Cat enclosures can be expensive, and owners may be concerned about potential damage to furniture if cats are contained indoors. Government grants or subsidies that incentivise cat owners to build or purchase an enclosure are likely to increase the uptake of these set ups and further incentives around feral cat control in more rural landscapes may be needed, particularly where communities view cats as effective pest control.

In addition, highlighting modified urban and rural landscapes as valuable ecosystems worth protecting for biodiversity is needed. One of the misconceptions contributing to people allowing cats to roam is that these environments only contain common or non-native wildlife, and therefore any impact of cat predation is insignificant. We know that this is not the case, with 602 of Australia's bird species using urban landscapes (634 species including introduced and vagrant species), including 71 threatened birds (Martin pers. comm.).

h. the interaction between domestic cat ownership and the feral cat problem, and best practice approaches to the keeping of domestic cats in this regard.

The interaction between domestic cat ownership and non-pet cats is a challenging ongoing issue. Cats are prolific breeders. With 71.1% of pet cats roaming, and an unknown proportion of these are not desexed, there is likely to be a high level of transfer from the pet cat to stray/feral population ongoing. Although mixing with the feral population appears much less common, it is poorly understood (Spencer et al. 2015).

Recruitment prevention is considered essential for successful and sustained feral cat management (ADGE 2015). Best practice approaches to pet cat ownership should therefore focus on minimising, if not preventing entirely, interactions between pet and stray and feral cats and should be embedded consistently in legislature across jurisdictions. This approach would have positive benefits to native birds and other wildlife through direct reduction and control of a predator population.

One of the simplest ways to prevent recruitment into feral and stray cat populations is through the introduction and enforcement of mandatory desexing of pet cats, combined with microchipping and registration, to track ownership and enforce regulations around cat containment. State legislation on the implementation of these tools is inconsistent (see Table 1). In practice, this means that management practices for pet cats occur on a spectrum, from doing nothing, to mandating 24 hour cat containment. While there is growing interest and awareness of the impacts of cats – feral and pet, it remains a strongly held societal norm to allow pet cats to roam. There are many reasons to work to change this, not only to reduce the interaction and transfer to feral cats, and for the benefit of Australia's unique wildlife. An overarching federal strategy needs to be enacted.



Table 1: Summary of the key measures used in pet cat management in each jurisdiction of Australia

Jurisdiction	Desexing requirements	Microchipping requirements	Registration requirements	Provisions for 'nuisance' cats	Provisions for cat curfews/containment
Australian Capital Territory	Y	Y	N	Y	Y-17 cat containment areas
New South Wales	N	Y	Y	Y	Y-in some areas, provision for cat curfews.
Victoria	N	Y	Y	Y	Y-in some areas.
Northern Territory	No territory-based legislation relating to pet cats, but council areas have local laws and regulations				
Tasmania	N	N	N	N	N
Queensland	N	Y	N	N	N
South Australia	Y-for cats born after 1 July 2018	Y	N-not at state level, but local governments can set by-laws	Y	Y-in some local government areas.
Western Australia	Y	Y	Y	Y	Some-Local governments can make by-laws about places where cats are prohibited or confined.

Many cats are bred by accident, with animal shelters reporting that owners delay or forget to desex them. These unwanted kittens may be dumped or abandoned, where they contribute to the stray/feral cat problem, or dropped off at animal shelters, which creates a significant challenge to ensure kittens are microchipped, desexed, vaccinated and homed. In many cases these kittens are euthanised as there are not enough homes for the number of kittens in the shelters. Desexing cats early, before they reach sexual maturity (which can be from 4 months) helps reduce unwanted cat numbers.

In addition to mandatory desexing, domestic cats should be contained at all times, either indoors or outdoors in cat enclosures, on a harness or under direct supervision. Domestic cats unable to physically interact with feral and stray cats do not risk pregnancy, disease transmission, injury, and death. Full containment also minimises the risk of harm or death cats pose to native wildlife (RSPCA 2019). While several organisations promote keeping cats indoors at night (e.g., Victorian government:), night-time only cat curfews are insufficient. While they may reduce



cat predation on nocturnal native mammals, day-active birds and reptiles are still vulnerable (Barratt 1997).

Of increasing concern to BirdLife Australia is the suggestion that trap-neuter-return (TNR) be employed as an effective, non-lethal method for managing stray cat populations, particularly those in urban and peri-urban areas. TNR involves the humane trapping, desexing, and return to location of stray cats with the aim of creating a stable, healthy 'colony' of animals that live together and share a food source (RSPCA 2011). Management of urban stray cats varies in Australia depending on state legislation (Swarbrick and Rand 2018), however, returning unowned cats after desexing to where they were found is generally considered an offense in Australia under either domestic animal welfare legislation relating to abandonment of cats, or biosecurity and land management legislation identifying cats as pest species. Despite this, and even though TNR is not recommended as an appropriate strategy for the management of stray and or feral cats (RSPCA 2011), absence of regulatory enforcement means the practice is still widespread.

Methods that maintain a semi-managed population of feral or stray cats, either through cat "colonies" or TNR have negative impacts on domestic cat populations as well as wildlife (Castillio and Clarke 2003). It does not result in positive cat welfare outcomes, as it does nothing to minimise disease transmission, fighting and injury caused by other cats (Castillio and Clarke 2003). Cats that are fed and released threaten our native birds and other wildlife, regardless of desexing (Calver *et al.* 2007; Greenwell *et al.* 2019). Most importantly, research demonstrates that these methods are very costly and do not effectively reduce cat numbers in the environment (Natoli *et al.* 2006) and thus are not a long-term solution to the pet overpopulation issue (Denny and Dickman 2010). Instead efforts (and funds that would be invested in TNR) should be redirected toward the underlying problem of managing irresponsible pet owners through awareness and behaviour change campaigns about the impacts of cats on birds and other native wildlife (see TOR G), in conjunction with both non-lethal options such as humane trapping and rehoming or euthanasia (Read and Moseby 2019). For remote Australia where feral cats are completely unsocialised and therefore not candidates for rehoming, the most cost-effective and humane option is likely to be targeted and ongoing lethal control focusing on priority areas where conservation concerns are highest. However, significant investment is needed to ensure this is effective.

Recommendations

To reduce the threat/impact of cats on Australia's native birds, BirdLife Australia recommends the development of a national framework for the management of cats. This should include mechanisms for cooperation and implementation between all tiers of government (Commonwealth, States and Territories, Local Governing Authorities).

BirdLife Australia recommends that this national approach include:

1. Common legislative definition for cat classifications - division into feral and domestic is too simplified. Recognising differing groups will allow for tailored, effective strategies.
2. Declaring feral cats as a pest in all states and territories in addition to their current status as a key threatening process under the EPBC Act 1999.
3. Consider domestic (pet, nuisance, and stray) cat predation also be included as a key threatening process in EPBC Act 1999.
4. Mandatory pet cat registration, with fee structures that incentivise desexing. Registration fees can be used towards management of cats.



5. Mandatory desexing of pet cats before they reach sexual maturity.
6. Limiting the number of pet cats per household (2 per household, except for licenced breeders).
7. Prioritise transition to cat-free areas and mandatory cat containment areas in new suburbs and in areas with significant environmental values (e.g. seabird colonies, populations with ground nesting birds).
8. 24 hour containment/curfews, and resourcing for compliance/enforcement, fines for non-compliance.
9. Promoting and incentivising cat containment options. Registration fees (as in recommendation 3) can be used by local government to enforce management of cats.
10. Do not allow TNR programs.
11. Encouraging and promoting community-wide acceptance of responsible cat ownership practices.
12. Supporting and resourcing local governments to reduce populations of stray cats.
13. Investment into research identifying of sources and sinks of cat populations in the landscape, to prioritise actions that minimise interactions between non-domestic cats and domestic cats and other wildlife populations, including birds.

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