

# Calling Time on Culling

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Towards Effective and Humane  
Dog Population Management  
in Pakistan

October 2020

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# Calling Time on Culling: Towards Effective and Humane Dog Population Management in Pakistan

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## Executive Summary

Effective management of free roaming dog populations is a global challenge with significant implications for public health as well as animal welfare. Numerous studies demonstrate that dog population management that is centred on a strategy of vaccination, sterilisation and public engagement is the most effective and humane intervention available. Despite this, culling practices remain common in several countries, including Pakistan. This report examines local efforts towards vaccination and sterilisation programmes in a number of regions of Pakistan; it explores the challenges that exist in the implementation of humane and effective dog population management; and concludes by highlighting a number of key themes that have emerged:

- 1. The shift towards humane dog population management needs champions**
- 2. Pilot projects are important to build capacity and provide proof-of-concept**
- 3. Success will require community-wide engagement**
- 4. Governmental buy-in is essential**
- 5. Legislative changes are crucial to de-legitimize culling**

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## **Acknowledgements**

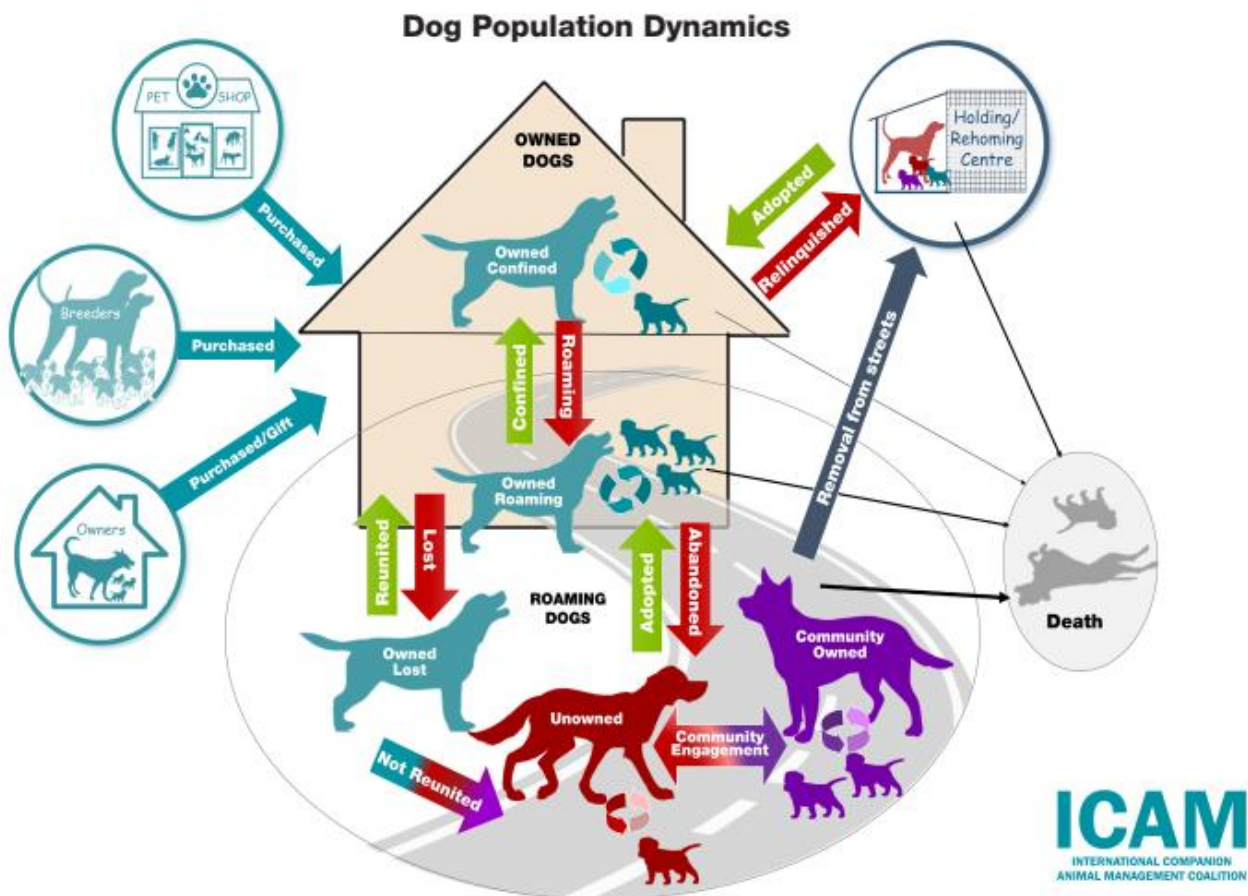
We are extremely grateful to Romana Bhatti of Todd's Welfare Society; Shumaila Iqbal of Let's Save Welfare Organization; Dr Zahra Yaqoob Khan of Saving Life on Paws and the Committee for Management of Stray Dogs in ICT (IWMB); and Sparlay Rawail of Saving Life on Paws. In addition to providing valuable input into this report, these dedicated animal welfare champions are working tirelessly to improve the lives of countless animals in Pakistan, as well as to help shape future policy and foster behavioural changes to animals at the cultural level.

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## Dog Population Management: A Global Challenge

The global population of domestic dogs is estimated at approximately 700 million, with around 75% of these classified as free roaming (Smith et al 2019). Free roaming can refer to both unowned free roaming dogs and owned dogs that are allowed to roam and whose movements are not confined or supervised by their owner (where the owner could be an individual or a community group). This lack of restriction on movement of owned free roaming dogs, along with lack of uptake of sterilisation, allows them to mate and reproduce freely, further exacerbating the number of free roaming dogs in a population. Dogs that are restricted in their movements include both owned dogs whose movements are confined by their owner and unowned dogs that have been rescued and sheltered. However, owned restricted dogs can also contribute to the free roaming dog population problem if they become lost or they are abandoned by their owners. As the diagram below illustrates, dog population dynamics are directly related to human behaviour and responsible dog ownership.

Figure 1: Dog Population Dynamics



Source: ICAM, 2019



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Areas where free roaming dogs exist in high densities can create challenges for human health, the environment and wildlife, as well as for the welfare of the dogs themselves (Smith et al, 2019). Free roaming dogs often experience poor health and welfare conditions due to inadequate access to food and water and many carry a high disease burden with no access to veterinary care. They are also more likely to be involved in road traffic accidents and to receive abusive treatment from locals.

It is not just animal health that suffers. Dogs are co-indicated in the transmission of over 300 zoonoses to humans, with the most common threat to human health being rabies. Rabies is responsible for an estimated 60,000 human deaths per year, with an economic cost of \$8.6 billion (WHO, 2016). Dog bites are responsible for over 95% of human cases (WHO, 2016) with poor, rural communities and children being disproportionately affected. Yet, unlike most zoonoses, rabies is a fully preventable disease. Vaccinating at least 70% of the free roaming dog population is widely acknowledged as an effective means of breaking the cycle of rabies transmission (End Rabies Now, 2018). Moreover, the treatment of human rabies is much more expensive, and often inaccessible, compared to the cost of vaccination programmes to control dog rabies. In Bangladesh, for example, dog vaccination costs, on average, \$3 per dog while human rabies treatment costs, on average, \$32 to \$92 per person (WHO, 2014).

Controlling dog-mediated rabies requires a coherent and long-term vaccination and dog population management strategy, yet many countries sadly continue to adopt reactionary policies of dog culling. Mass dog culling has been shown to have no long-term impact on the control of rabies. On the contrary, it is detrimental to the effectiveness of rabies vaccination efforts as it allows unvaccinated dogs to inhabit that area:

“...culling does not address the source of new or replacement animals, and has only a temporary effect on population size. Furthermore, rapid dog replacement rates have been documented in some areas following culling, leading to a younger population of generally rabies-susceptible dogs. Indiscriminate culling of dogs in communities where rabies vaccination programs are operating is **likely to remove vaccinated dogs from communities, resulting in lower vaccination coverage** and a counter-productive increase in rabies transmission as populations recover.” (Taylor et al, 2019, emphasis added.)

In addition to being ineffective, dog culling practices are also inhumane. Shooting or poisoning are not humane means of euthanasia, with many dogs suffering immensely before they die. Furthermore, culling practices tend to be very public. It is not uncommon for recently killed dogs to be left on the streets for collection in full view of members of the community. There is a growing body of research suggesting a link between animal abuse and human abuse and such institutionally-sanctioned violence towards non-human animals could de-sensitise people to violence in general (see, for example, Linzey, 2009).

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Sheltering is a common method of dog population management in high-income countries. However, even in the United Kingdom thousands of stray dogs are euthanised each year (Stavisky et al, 2010). In low-income countries, dogs admitted to shelters would quickly outpace the community's capacity to rehome them, resulting in a dramatic fall in animal welfare standards. For practical reasons, large-scale sheltering is not a suitable solution for low-income countries and sterilisation and vaccination remains the most effective means of dog population management.

In 1990, the World Health Organization (WHO) published guidelines on dog population management that discouraged the practice of culling and recommended instead a policy approach of vaccination, sterilisation and public education. Studies continue to confirm that vaccination and sterilisation programmes, combined with community outreach and education, are the most effective methods of controlling free roaming dog populations and maintaining a healthier population that presents fewer risks to public health.

Numerous case studies have also demonstrated significant reductions in dog-mediated human rabies with the implementation of effective vaccination programmes. For example, Brazil has achieved a 90% reduction in cases of dog-mediated rabies due to mass dog vaccination campaigns, improved surveillance and education and community engagement (WHO, 2016). In Swaziland, thanks to annual dog vaccination campaigns as well as spay/neuter clinics and improved reporting protocols, there have been no recorded human deaths from rabies since 2012 (End Rabies Now, 2020). Since 2011, Bangladesh has adopted a rabies elimination strategy based on large-scale vaccination of stray dogs rather than culling. Within the first three years of adopting this strategy, human deaths by rabies fell by approximately 50% (WHO, 2014). From a small pilot project in a remote municipality, the programme has expanded to 65 district municipalities and six entire districts (WHO, 2017), illustrating the effectiveness of a national strategy for mass dog vaccination:

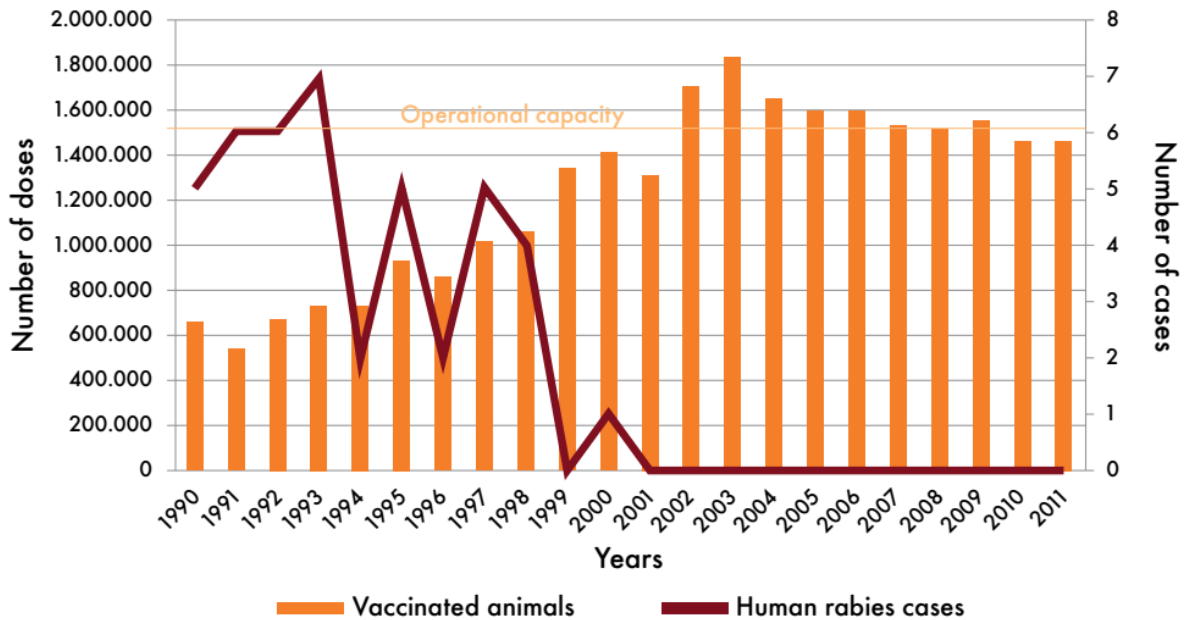
“Bangladesh has demonstrated that with an effective strategy, well-devised action plans, and trained human resources supported by a sufficient budget, significant progress can be made towards decreasing the global burden of rabies.” (WHO, 2017)

In September 2019, Mexico became the first country to pass the World Health Organization's recently developed validation process for achieving the elimination of dog-transmitted human rabies (WHO, 2019). In the 1970s and 1980s, rabies presented a serious public health problem with an average of 60 human cases and 250,000 cases of dog rabies reported annually. As a result of the implementation of a free, mass dog rabies vaccination programme, the number of human cases dropped to zero by 2010 (World Animal Protection, 2019). In order to achieve rabies elimination, Mexico implemented a national strategy for the control and elimination of rabies based on mass vaccination of stray dogs, continuous and effective surveillance and public awareness-raising campaigns.

Rabies was a particularly severe problem in Puebla, the fourth largest state in Mexico. In 1990, Puebla launched a mass dog vaccination campaign, underpinned by public education and surveillance programmes. By the mid-1990s, reductions of rabies cases in humans and dogs were already becoming apparent. After six years of work, it became clear that the operational capacity of the vaccination programme had reached its limit and the focus shifted to dog population control. In 2000, a free surgical neutering programme was implemented in order to stabilise canine population numbers. Together, these strategies succeeded in bringing rabies under control in Puebla (see Figure 2).

**Figure 2: Relationship between dog rabies vaccination and human rabies cases, Puebla, Mexico**

Dog rabies vaccine doses versus human rabies cases. Puebla, 1990-2011.



Source: World Animal Protection, 2019

Yet, despite evidence for the effectiveness of vaccination and sterilisation, many countries continue to practice culling as a method of population control.



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## Dog Population Management in Pakistan

Animal welfare legislation in Pakistan is outdated and generally insufficient to protect animals. While the Prevention of Cruelty to Animals Act (1890) provides a basis for acknowledging that animals feel pain and suffering, it no longer reflects current scientific and cultural understandings of animal welfare and does not mandate for enforcement. Beyond delegations to provincial wildlife departments, it is not clear which authorities are responsible for animal welfare in Pakistan (World Animal Protection, 2020). Consequently, the management of stray animals falls to regional municipalities, many of which are underfunded.

Dog-mediated rabies is endemic in Pakistan with an estimated 2,000-5,000 human deaths annually (Pakistan Health Research Council, 2020). Inhumane practices of dog culling, whether by shooting or poisoning, remains the dominant policy response to stray dog control. However, small, local initiatives for vaccination and sterilisation do exist. Rabies Free Pakistan is a non-profit organisation in Karachi dedicated to conducting mass dog vaccinations against rabies and sterilisation of free roaming dogs to reduce their population density and the risks presented to human health. Founded in 2018 by The Indus Hospital, a leading charitable hospital in Pakistan, the Rabies Free Pakistan initiative has vaccinated more than 20,000 dogs and sterilised over 3,500 dogs in Karachi since its inception.

During the lockdown to control the spread of Covid-19, the local government of the province of Sindh directed all Municipal Commissioners, Chief Municipal Officers, Chief Officers and Town Officers to carry out extensive fumigation, collection of garbage and *the culling of stray dogs* in order to control the spread of infectious diseases (Government of Sindh, 2020a). Rabies Free Pakistan and Karachi-based animal welfare organisation Ayesha Chundrigar Foundation (ACF) lobbied against this decision and were given permission to resume mass dog vaccination activities under special exemption during the lockdown (Government of Sindh, 2020b). Furthermore, all Municipal Commissioners and Chief Officers were directed to assist Rabies Free Pakistan and ACF in “the Safe Dog Trapping and Vaccination of Dogs in their respective areas in place of culling of non-harmful dogs.” (Ibid).

Sadly, in what appears to be a reversal of policy, on 15<sup>th</sup> July 2020 Rabies Free Pakistan reported witnessing the massacre of vaccinated and sterilised dogs in Block 5, Clifton, Karachi. These dogs were collared to indicate that they had been vaccinated and sterilised, but were culled regardless. Rabies Free Pakistan took to social media to express their outrage and disbelief:

“This is ridiculous: an utterly inhumane act and a waste of our time, efforts and resources if the dogs are ultimately killed!” (Rabies Free Pakistan, 2020)

In sympathy with the frustration expressed by Rabies Free Pakistan, several animal welfare campaigners, organisations and non-profit groups within Pakistan, as well as internationally, joined

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together to create a social media protest on 16<sup>th</sup> July 2020, 5pm PKT, coalescing around the hashtag #StopKillingDogsPak. These campaigners and activists not only emphasized the inhumanity of culling practices, but also the ineffectiveness of culling as a long-term solution to rabies control and dog population management.

Despite overwhelmingly positive support, some comments were posted by members of the public that reflected persistent misunderstandings about the role of dog culling and public health. These comments emphasized the perceived aggression of stray dogs, the bite threat to children and the need for culling to control rabies. This highlights the importance of education and community engagement in the effective implementation of a vaccination and sterilisation programme. Sadly, however, local campaigners on the ground in Pakistan have noted that resistance does not come solely from the uninformed. They have reported resistance to humane methods of dog population management from educated upper and middle classes who generally dislike mixed-breed, free roaming dogs and favour culling to remove the dog population from their neighbourhood, if only temporarily.

Despite these challenges, Rabies Free Pakistan are continuing with their programme of vaccination and sterilisation. In a promising move, District South Deputy Commissioner Irshad Sodhar has endorsed the project and offered his complete support, along with that of relevant departments, in the condemnation of dog culling and the need for humane solutions to dog population management and rabies control.

In Lahore, animal welfare organisation Todd's Welfare Society (TWS) has also initiated a vaccination and sterilisation programme. TWS is a non-governmental organisation set up in 2016 to provide rescue and shelter for injured, sick, abandoned and neglected animals. Prior to the outbreak of Covid-19, TWS had been in talks with a Housing Association in Lahore to implement a Trap-Neuter-Vaccinate-Return (TNVR) programme in order to end culling and solve the community's severe dog overpopulation problem through ethical and effective means. The administration of the Housing Association was initially supportive of the project. However, with the outbreak of Covid-19, TWS were forced to put the project temporarily on hold. Unfortunately, the residents of the Housing Association became impatient and demanded a quick solution to the stray dog problem and, as a result, the dogs were shot.

This case highlights one of the major barriers to TNVR programmes – in order to be effective a sustained effort is necessary, but policies and the public often favour quick solutions. However, as explored above, culling is a short-term response to dog overpopulation and rapid dog replacement following a cull has been well documented. This is particularly problematic in rabies endemic areas, where culling can encourage a younger population of generally rabies-susceptible dogs to occupy that territory.

TWS are now focusing their efforts on a TNVR programme in the vicinity around their rescue shelter, in a rural area of Lahore. The programme has been generally well received by members of the local

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community. TWS has found that, in contrast to the perception in wealthy urban areas that stray dogs are pests, rural communities are generally more amenable to co-existing with free roaming dogs. Ensuring the free roaming dog population is controlled and rabies-free is therefore crucial to maintain a peaceful co-existence.



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Elsewhere in Pakistan, legislative shifts to halt the culling of free roaming dogs are taking shape. In a landmark ruling, the Islamabad High Court has recently recognised the rights of nonhuman animals. On 21<sup>st</sup> May 2020, Chief Justice Athar Minallah affirmed “without any hesitation” the rights of nonhuman animals and ordered the relocation of all animals from the Islamabad Zoo (including a 35-year-old Asian elephant named Kaavan, whose plight has gained international attention) to appropriate animal sanctuaries. In addition, the Court Order also contained a provision for best practice policy towards the management of stray dogs:

“The Board [Islamabad Wildlife Management Board] is the competent authority to prescribe a policy and mechanism regarding stray dogs. It is expected that the Board while formulating the policy will have regard to the best practices observed internationally and the injunctions of Islam which teaches treating animals in humane manner.” (Islamabad High Court, 2020)

As a result, the Committee for Management of Stray Dogs in ICT (Islamabad Capital Territory) was formed by the Islamabad Wildlife Management Board to draft a policy on stray dog management. In a ground-breaking move, on 17<sup>th</sup> June 2020, the Board issued a moratorium on the shooting of stray dogs in ICT. This represents a huge opportunity for the successful implementation of a TNVR programme that is underpinned by a legal framework prohibiting the culling of dogs.

Despite the moratorium on the shooting of stray dogs, there have continued to be instances of stray dogs being shot in ICT. Stray and mixed-breed dogs are generally viewed unfavourably by members of the public. While pure breed dogs such as Labrador Retrievers and German Shepherd Dogs are valued in society, strays are commonly perceived as undesirable or dangerous. However, animal rescue organisations in Pakistan are trying to change this perception. For example, Islamabad-based animal welfare organisation Saving Life on Paws has championed post-adoption stories on social media to help change attitudes towards stray and mixed-breed dogs and demonstrate that adopting a stray dog can be equally as rewarding as having an expensive breed if the dog is given the opportunity. The Pawprint Pakistan, a student-run animal adoption and rescue organisation, also in Islamabad, are working to raise awareness about breed bias and to champion the adoption of stray and mixed-breed dogs.

Shifting perceptions will take time but, combined with the legislative shifts taking place in Islamabad, there is real potential for positive change. Islamabad now has the opportunity to pioneer a humane and effective dog population management strategy – one that, hopefully, can be replicated elsewhere in Pakistan.



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## **Summary: Key Themes**

Culling is neither an effective nor humane method of dog population management yet it remains the dominant practice in Pakistan. However, as examined in this report, local and regional efforts towards sterilisation and vaccination programmes do exist and are making progress. Analysis of these efforts and the challenges they face highlight a number of key themes:

### **1. The shift towards humane dog population management needs champions**

The impetus for regional small-scale efforts towards sterilisation and vaccination often comes from non-governmental organisations and/or animal welfare champions in Pakistan. These champions are central in bringing the issue to light and contributing to the development of best practice strategies of dog population management. Animal welfare champions are also working hard to underscore the public health benefits of humane dog population management practices and rabies control, which has a much broader appeal to the public and health authorities than a single programme focused on animal welfare.

### **2. Pilot projects are important to build capacity and provide proof-of-concept**

Pilot projects, such as the regional small-scale efforts being undertaken and/or advocated by animal welfare organisations, are important for building capacity and providing proof-of-concept. Dog population management and rabies control is a long-term goal and evidence of small-scale success helps to sustain investment and support (Fahrion et al 2017). Demonstrating the impact of pilot projects being undertaken in Pakistan will therefore be important to encourage ongoing investment and expansion to other areas.

### **3. Success will require community-wide engagement**

The case studies examined in this report illustrate a number of factors that contribute to public resistance to sterilisation and vaccination programmes to manage free roaming dog populations, ranging from the public perception of stray dogs being aggressive or undesirable, to the public's impatience and desire for a quick response to stray dog overpopulation problems. Community engagement initiatives will therefore be vital to convince members of the public of the benefits of sterilisation and vaccination, particularly when these benefits (i.e., a healthier and smaller dog population) may not become evident for several years.

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#### 4. Governmental buy-in is essential

At a fundamental level, governmental buy-in is essential to ensure that any efforts undertaken by non-governmental organisations are not negated by government sanctioned culls. Furthermore, governmental buy-in is also essential to ensure a coordinated, long-term strategy backed up by robust human and animal disease surveillance.

#### 5. Legislative changes are crucial to de-legitimize culling

Legislation plays a crucial role in a government’s management of dog population-related problems and laws should be designed to ensure that dog population management is carried out humanely and that culling is not permitted. Without legal enforcement, large-scale sustainable dog population management programmes will continue to face challenges:

“The fact that legislation frequently still permits culling in the event of rabies outbreaks may well contribute to the lack of application of more effective means of DPM [dog population management] and rabies control.” (Taylor et al, 2017).

The moratorium on the shooting of stray dogs in Islamabad Capital Territory is therefore an important legal step. This legislative shift means that Islamabad now has the opportunity to pioneer a humane and effective dog population management strategy – one that, hopefully, can be replicated elsewhere in Pakistan.





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