



# Street Dogs and Public Health in India

## The Urgent Need for a Paradigm Change



## Executive summary

- The place of street dogs in public spaces in India has been increasingly challenged. This is often attributed to increased population numbers and bite incidents or concerns about rabies.
- Data suggests that most indicators around dog-related health concerns, such as bites or rabies cases, are decreasing.
- There is a mismatch between the nature of public concerns and the dog management strategies employed to deal with them.
- The current approach to street dog-related public anxieties needs to change.
- A new paradigm requires going beyond street dog management to focus on an integrated approach that combines:
  - The strengthening of universal human rabies post-exposure prophylaxis
  - Preventing and mitigating human-street dog conflict through safe cohabitation and smart caregiving strategies



In August 2025, the Supreme Court of Delhi-NCR ordered the removal of community/street dogs from India's capital. This order has been stayed, but ensuing legislative and policy decisions across several cities in the country highlight the urgency of addressing public concerns relating to street dogs effectively. The recent controversy shows that neither two centuries of control via killing nor 25 years of Animal Birth Control – Anti-Rabies Vaccination programmes have been successful in easing anxieties about these animals amongst the public.

## **Is there a 'growing' street dog problem?**

Over the last two decades, coinciding with the halting of community dog culling in 2001 and with improvements in human post-exposure prophylaxis (PEP) for dog bites, **human rabies cases in India have dropped sharply**:

- Estimated rabies cases have declined by around 75% from [20,565 in 2003](#) to [5276 in 2022-23](#)
- Reported rabies cases have declined from [274 in 2005](#) to [34 in 2022](#).

Street dog population numbers are hard to assess. A common assumption is that dog populations increase exponentially. The reality, however, is that most pups (nearly 80%) born on the street [die before they reach sexual maturity](#). The Indian Livestock Census, which offers longitudinal community-sourced data, shows that overall **street dog population numbers in India have dropped**:

- In 2019, the community dog population was around 15.3 million, [a 10.67% decrease](#) from the 2012 census figure of 17.1 million.

**Dog bite numbers** (pet and street dogs combined), as recorded by the Integrated Disease Surveillance Programme (IDSP), **have also declined**:

- From 75,66,467 bites in [2018](#) to 37,15,713 in [2024](#) across India
- Delhi saw a drop from 1,07,642 bites in [2018](#) to 25,210 in [2024](#)
- Nationwide epidemiological surveys show a decline in annual dog bite incidence from 15.9 per 1000 persons in [2003](#) to 5.6 per 1000 persons in [2022-2023](#)

These declines in bite incidence suggest that either people are getting bitten less frequently and/or dog populations have decreased.

Going by the decline in human rabies cases and dog population numbers, it is likely that serious injuries due to mauling have also declined, even if they receive more public attention.



## Why is there growing controversy around street dogs?

Despite these declines in dog population numbers as well as the incidence of human rabies cases and dog bites, controversies around street dogs have become more pronounced. The reasons for this are complex:

1. Changes in communications technologies and how the media (including social media) operates have resulted in the **amplification of extreme, usually negative incidents, producing an inaccurate picture of the character of everyday interactions.**
2. Changing social norms about street dogs and modern life mean that **minor issues and inconveniences, such as barking or visible presence, are increasingly considered unacceptable** by some people.
3. In some locations, street dog population densities have risen because of (a) **migration due to the availability of excess food resources, as well as (b) intentional relocation from other areas.** This makes **otherwise minor issues, such as nighttime barking or congregation, more likely to attract serious opposition.** In fact, our research shows that **barking, chasing, and nuisance are the top public complaints about street dogs** across India.
4. Changes in community dog caregiving practices have resulted in **greater conflict between people about dogs as well as between dogs and people at both the national and local levels.** Between 2022 – 2024, there were around 80 orders in the Supreme Court and High Court about street dog-related problems, of which 27.5% pertained to street dog caregiving, typically feeding. This follows a steady increase in the number of cases of street dog-related problems: from 1 case between 1992-1994 to 21 cases between 2012-2014. At the local level, conflict leads to relocation or extra-legal killing of dogs, followed by the in-migration of new dogs.





## **Street dog management is not a silver bullet solution**

Street dog management can involve elimination (via killing or confinement) or animal birth control and/or vaccination.

### **Elimination:**

- India practised elimination for over two centuries, but without any meaningful progress in public health concerns such as dog bites or rabies. This is because **elimination leads to repopulation by other dogs or animals and repeated cycles of conflict**.
- In Britain and North America, foxes, raccoons, gulls, coyotes, skunks, coywolves, and even bears have come to occupy the same human-dominated ecosystems once inhabited by free-living dogs. In the US, the rabies virus has adapted to other animal reservoir hosts. These regions now advocate for **cohabitation with these animals and sustained implementation of human and animal rabies vaccination**.
- **Elimination of street dogs may not even eliminate dog-related bites and injuries.** England and Wales have seen an 88% rise in hospital attendances due to bites and injuries from 2007 to 2021-22, and registered deaths increased from 0 in 1981 to 16 in 2023 (up to September).

### **Rabies prevention:**

- Post 2001, public health and animal welfare approaches to street dogs in India have focused on rabies post-exposure prophylaxis (**PEP**) for humans and animal birth control-anti-rabies vaccination (**ABC-ARV**) and mass dog vaccination (**MDV**) programmes.
- For rabies prevention, India is on the right track, especially with the **universalisation of human PEP** (as recommended by the World Health Organisation).
- Nonetheless, serious **inadequacies** in PEP accessibility, availability, quality, and awareness remain. Even healthcare workers are not fully informed about the

importance of wound washing, the site of administration, and the type of PEP needed for different wound categories and bite circumstances.

#### Other concerns:

However, the rise in controversies around street dogs is **not necessarily linked to rabies prevention**, even if they are often presented as such; otherwise, the decline in rabies and bite cases would have meant a decline in controversy.

Rather, **dog-related controversies stem from complaints that cannot be addressed through street dog management, such as congregation, chasing, and feeding**. Effectively addressing these conflicts requires a sea change in approach from the current emphasis on managing street dogs, whether through elimination, confinement or ABC/ARV. **Addressing the root causes of current controversies requires working with people, both caregivers and the wider public, for safe cohabitation.**

## Smart caregiving and safe cohabitation

Street dogs have **evolved naturally** in human-dominated landscapes with the skills to cohabit safely with people, including those who dislike or are afraid of them. Human-street dog interactions are predominantly uneventful; our [research](#) across India indicates that **only around 2% of interactions are antagonistic**.

#### Smart caregiving:

- People have always provided food to community dogs on a casual basis, but the recent rise of the **provision of regular, complete meals to multiple dogs has had unintended consequences**:
  - It attracts negative attention to street dogs and leads to congregation.
  - It can produce a shift in street dog behaviour, especially when they become attached to caregivers. This typically includes pet-like behaviours that are problematic in street dogs, such as guarding of feeding sites and caregivers, jumping on or mobbing unknown people, and chasing vehicles.
  - It also diminishes community dogs' street skills to find food and other resources independently and to live alongside the different people they encounter.



- There is a need for smart caregiving that allows street dogs to retain their natural skills. For example:
  - Regular feeding is better restricted to only sick, injured, starving or orphaned animals.
  - Healthy dogs need feeding only occasionally and/or in small quantities to socialise them for neutering and vaccination.
  - Preventing congregation and choosing low-visibility locations are vital.
  - Smart caregiving also requires immediate mitigation to de-escalate conflict and, more crucially, **preventive action before conflict arises**.

Safe cohabitation:

- Awareness programmes for adults and children about street dog behaviour and safety around dogs are essential yet mostly missing.
- Research shows that people who work or live on the streets are highly knowledgeable about safety around street dogs.
- The shift to more insulated, modern lifestyles and reduced everyday interaction with street dogs has gone alongside the gradual loss of knowledge about safe cohabitation.
- Restoring this knowledge before it is completely lost is a matter of urgency.

## Towards an integrated paradigm

In summary, India needs a paradigm shift from the emphasis on street dog management towards an approach that encompasses solutions tailored to the different problems that impact public health or result in controversy.

For rabies prevention, India needs improvements in PEP provision and mass dog vaccination.

For other types of conflict, including chasing and bites, key interventions include:

- a) Smart caregiving
- b) Environmental management to prevent congregation, access to private spaces, and to tackle sources of conflict like chasing
- c) Education for safety around street dogs
- d) Conflict de-escalation, mitigation, and prevention tailored to neighbourhoods.

In the absence of such an integrated approach that is based on a sound understanding of the socio-ecological dynamics of modern cities, towns and villages, all that we will see is endless iterations of public health problems.



## Further reading

Lodha, L., Ananda, A.M., Mani, R.S., 2023. Rabies control in high-burden countries: role of universal pre-exposure immunization. *The Lancet Regional Health - Southeast Asia* 19. <https://doi.org/10.1016/j.lansea.2023.100258>

Srinivasan, K., Rubio-Ramon, G., Ramp, D., Chapple, R., 2024. Free-living dogs and public health in India: What are the connections between public debates and everyday people-dog interactions?. The University of Edinburgh. <https://doi.org/10.7488/c6569c32-fb07-4754-8dcc-30d2a88f60da>

Srinivasan, K., Kurz, T., Kuttuva, P., Pearson, C., 2019. Reorienting rabies research and practice: Lessons from India. *Palgrave Communications* 5, 1–11. <https://doi.org/10.1057/s41599-019-0358-y>

WHO, 2018. WHO expert consultation on rabies: third report, WHO technical report series;1012. World Health Organization, Geneva. <https://www.who.int/publications/i/item/WHO-TRS-1012>

## Cite as

Srinivasan, K., Rubio-Ramon, G. 2025, Street dogs and public health in India: The Urgent need for a paradigm change, Policy Brief, ROH-Indies research project, <https://rohindies.org/policy-brief-roh-indies-2025/>

## About the ROH-Indies project

ROH Indies combines human geography, history, behavioural ecology, and social psychology to study people-street dog interactions, dog ecology, and rabies prevention in urban and rural India, with the aim of developing concepts, strategies, and practices for healthy societies. The project is funded by the Wellcome Trust.

For more information on our outputs, team, and research:

 [rohindies.org](https://rohindies.org)



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