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Animal Rights Foundation
Fondacija za prava životinja

KOSOVO NATIONAL STREET DOG POPULATION SURVEY



November 2025

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ACRONYMS:

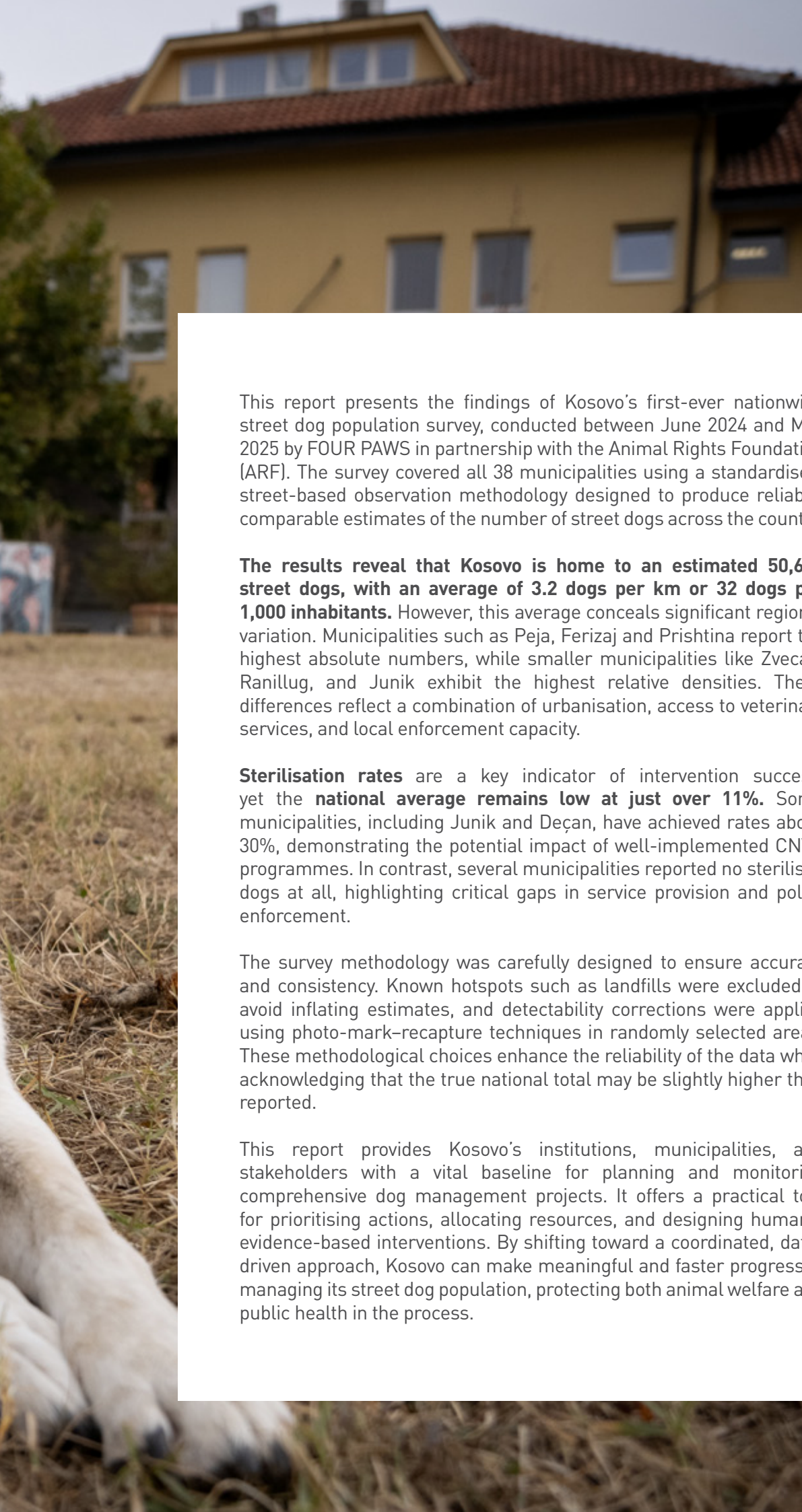
ARF - ANIMAL RIGHTS FOUNDATION IN KOSOVO
CNVR - CATCH, NEUTER, VACCINATE, RETURN
DPM - DOG POPULATION MANAGEMENT
FVA - FOOD AND VETERINARY AGENCY OF KOSOVO
ICAM - INTERNATIONAL COMPANION ANIMAL MANAGEMENT COALITION
MAFRD - MINISTRY OF AGRICULTURE, FORESTRY AND RURAL DEVELOPMENT IN KOSOVO
MLGA - MINISTRY OF LOCAL GOVERNANCE ADMINISTRATION IN KOSOVO
WOAH - WORLD ORGANIZATION FOR ANIMAL HEALTH

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1. EXECUTIVE SUMMARY



This report presents the findings of Kosovo's first-ever nationwide street dog population survey, conducted between June 2024 and May 2025 by FOUR PAWS in partnership with the Animal Rights Foundation (ARF). The survey covered all 38 municipalities using a standardised, street-based observation methodology designed to produce reliable, comparable estimates of the number of street dogs across the country.

The results reveal that Kosovo is home to an estimated 50,654 street dogs, with an average of 3.2 dogs per km or 32 dogs per 1,000 inhabitants. However, this average conceals significant regional variation. Municipalities such as Peja, Ferizaj and Prishtina report the highest absolute numbers, while smaller municipalities like Zvečan, Ranillug, and Junik exhibit the highest relative densities. These differences reflect a combination of urbanisation, access to veterinary services, and local enforcement capacity.

Sterilisation rates are a key indicator of intervention success, yet the **national average remains low at just over 11%**. Some municipalities, including Junik and Deçan, have achieved rates above 30%, demonstrating the potential impact of well-implemented CNVR programmes. In contrast, several municipalities reported no sterilised dogs at all, highlighting critical gaps in service provision and policy enforcement.

The survey methodology was carefully designed to ensure accuracy and consistency. Known hotspots such as landfills were excluded to avoid inflating estimates, and detectability corrections were applied using photo-mark-recapture techniques in randomly selected areas. These methodological choices enhance the reliability of the data while acknowledging that the true national total may be slightly higher than reported.

This report provides Kosovo's institutions, municipalities, and stakeholders with a vital baseline for planning and monitoring comprehensive dog management projects. It offers a practical tool for prioritising actions, allocating resources, and designing humane, evidence-based interventions. By shifting toward a coordinated, data-driven approach, Kosovo can make meaningful and faster progress in managing its street dog population, protecting both animal welfare and public health in the process.

2. INTRODUCTION

BACKGROUND

The issue of street dogs in Kosovo has grown steadily more visible in recent years. Media coverage, public complaints, and institutional reports suggest an increasing number of street dogs, especially in urban and semi-urban municipalities. This trend has prompted debate on both ethical and public safety grounds, yet **empirical data on the actual scale of the street population has been lacking** - until now.

This lack of comprehensive data has hindered:

- Effective and needs-based resource allocation by municipalities and central government

- Development of stakeholder action groups

- Development of strategic multiyear interventions with management phases and evaluation systems appropriate to dog management

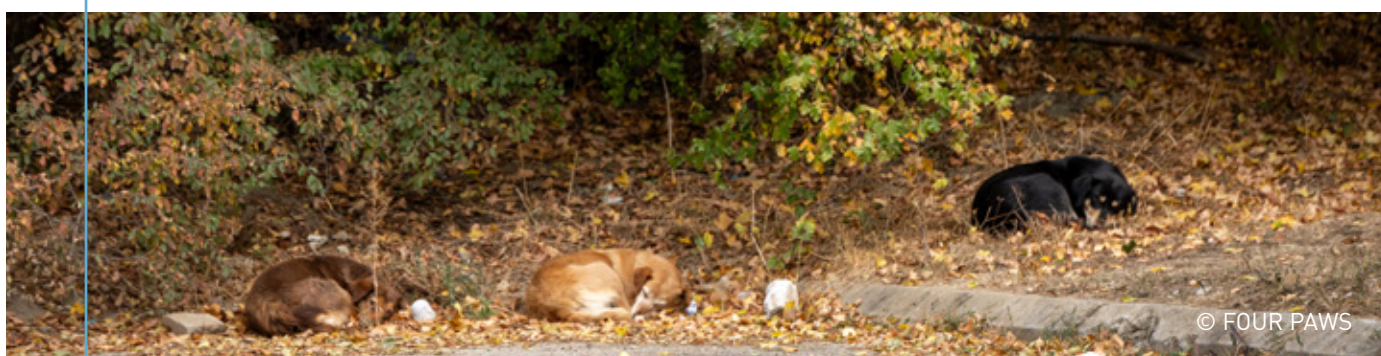
- Effective planning of public health measures

- Oversight of sheltering initiatives/ programs

- Legal accountability in relation to animal welfare

In addition to street dogs roaming the streets, many owned dogs and dogs born to dogs with guardians are roaming the streets. Many people, especially in rural areas, do not have easy access to affordable or nearby veterinary services, making it harder for owners to spay or neuter their dogs. Combined with socio-economic difficulties, this has resulted in many dogs being neglected, left to roam freely, or abandoned altogether. This includes expensive dog breeds, such as Malinois, Huskies and Pitbulls among others. Understanding the magnitude of these street dog sources is essential for any sustainable and humane solution.

In the years following the end of the war in 1999, Kosovo relied heavily on culling (the mass killing of street dogs), as the main population control method. This practice continued until 2017, with institutions contracting hunting companies to reduce street numbers. Although a few municipalities, such as Prishtina, began introducing CNVR measures around 2013, these efforts were isolated and not sustained at scale, both rendering CNVR limited in its effectiveness.



In 2017, Kosovo banned the killing of dogs as a method of population control and officially introduced CNVR through **Administrative Instruction¹ (MAFRD) No. 04/2017²**, which regulated how CNVR should be conducted in Temporary Care Centres. The shift to CNVR was a positive step towards more humane and sustainable dog population management. However, early implementation faced several challenges. One of the biggest gaps was the lack of consistent data on the street dog population, veterinary capacity and community engagement. Without clear data, CNVR efforts could not be strategically planned, and available funds were not always directed where they could have the greatest impact. And lacking veterinary capacity both in number of veterinary clinics and the skills to perform mass sterilisations on a high welfare standard have proven to be barriers to impactful street dog management.

More municipalities than ever are now implementing CNVR projects, but **data collection remains a crucial missing piece**. Without reliable, up-to-date data, it is difficult to plan properly, measure impact, and adapt measures as needed, which risks wasting valuable public resources and slowing progress. This report is intended as a practical contribution to fill this gap. By providing reliable baseline data, it aims to support institutions at all levels to plan and implement coordinated, humane, and sustainable actions that respect animal welfare while effectively addressing public health and safety concerns.

Moving forward, stronger **coordination between the central and local government levels** is needed as well as the inclusion and collaboration of local NGOs and veterinarians. Central authorities must help municipalities by providing legislative guidance, capacity-building support, and the funding necessary to put humane and effective measures in place. Municipalities, in turn, need to invest in enforcement, cross-municipal cooperation, capacity building, and proactive work with communities in collaboration with NGOs and the veterinary community. This will prevent abandonment, improve animal welfare standards, and sustain the effective implementation of dog population management.

¹ An Administrative Instruction is a sub-legal act that implements or clarifies provisions of a law in the Republic of Kosovo

² Administrative Instruction (MAFRD) No. 04/2017

LEGAL FRAMEWORK



Kosovo's legal framework is largely in line with EU regulations and international guidance, but enforcement remains minimal.

Positive steps to create sustainable dog management systems have been made since 2017. In 2021, drawing on recommendations and engagement from the Animal Rights Foundation (ARF), Kosovo's institutions amended the **Administrative Instruction for Registration of Companion Animals**³, making abandonment officially forbidden and identification through microchipping and registration mandatory for all companion animal caretakers.

Building on this progress, ARF worked on a National Strategy for DPM and submitted a draft proposal in 2021, which the Government agreed to develop and officially adopt. An official working group was formed, including representatives from MAFRD, MLGA, FVA, the Veterinary Institute, the Veterinary Chamber, ARF, and the Association of Kosovo Municipalities. The strategy was approved by the Government in October 2022 and is based on humane and sustainable measures aligned with the **ICAM DPM Guidelines**⁴ and the **WOAH Chapter 7.7 standards**⁵.

In 2023, Kosovo introduced the **Administrative Instruction (MAFRD) No. 02/2023**⁶ which replaced the earlier CNVR regulation. The new regulation defines minimum conditions for shelters for companion animals and recognises CNVR as an optional tool for managing street dog populations. Importantly, early drafts included euthanasia for healthy dogs after a certain period, but the MAFRD removed the provision in the final version after strong input from local and international animal welfare groups, including FOUR PAWS International. In this regard, in February 2023, FOUR PAWS and ARF conducted a two day workshop highlighting the global evidence that comprehensive dog population management approaches have yielded the most sustainable, community-driven outcomes. Further progress came in 2024 with the introduction of the **Administrative Instruction (MAFRD) No. 27/2024**⁷, setting conditions for companion animal breeding and sale, banning the sale of dogs and cats in pet shops and mandatory breeding licenses for breeders. Enforcement of the regulation is limited at the time of the report and further inspection capacity building is advised at this stage.

Despite legal advances, current management approaches have remained reactive. A data hub to bring these measures and policies together and create a cohesive dog management approach would therefore increase the impact each could make. Without tackling the root causes, meaningful progress will remain limited.

³[Administrative Instruction \(MAFRD\) No. 02/2021](#)

⁴[ICAM DPM Guidelines](#)

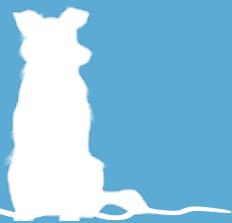
⁵[WOAH Chapter 7.7 standards](#)

⁶[Administrative Instruction \(MAFRD\) No. 02/2023](#)

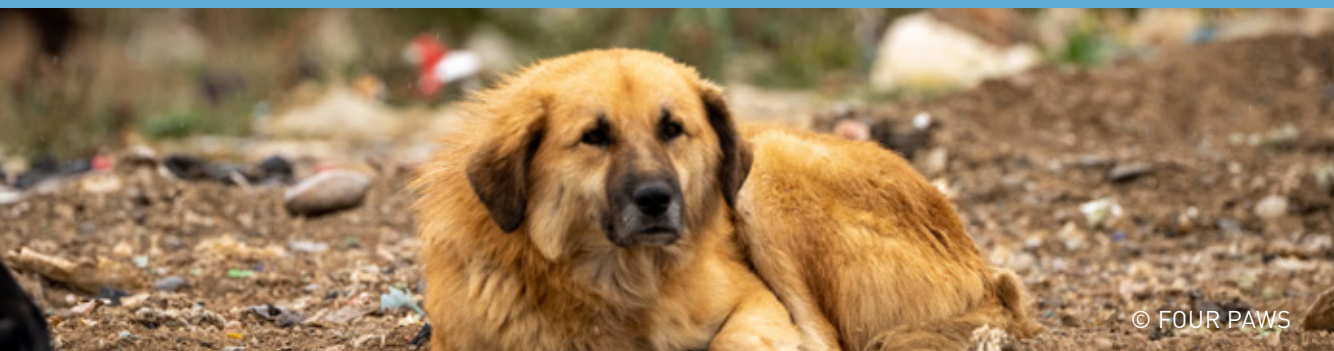
⁷[Administrative Instruction \(MAFRD\) No. 27/2024](#)

PURPOSE

The primary purpose of this national street dog survey is to provide Kosovo's institutions, municipalities, and other stakeholders with a **clear, objective baseline** of the estimated number of street dogs in each municipality, potential welfare issues and the composition of the dog population. Until now, most discussions and plans around street dog management have relied on assumptions or incomplete information, making it difficult to measure the impact of different interventions or plan resources effectively.



This report offers **comparable estimates** produced through a unified and transparent methodology that can be repeated in the future. It serves as a practical reference point to help municipalities measure trends over time, learn from each other's progress, and make informed decisions on how to allocate funding and plan CNVR and other relevant activities.



By presenting field-based data and explaining the estimation methods clearly, the report supports a **shift toward evidence-based decision-making**, helping local and national authorities move away from short-term or reactive measures. It highlights the importance of data collection and monitoring as an integral part of dog population management, ensuring that public resources are spent as effectively and humanely as possible.

This survey and report are intended to be used not only by central and local government bodies but also by civil society and veterinary professionals who share an interest in improving dog population management in Kosovo. The findings are meant to encourage better coordination, consistency, and follow-up in future actions.

Finally, it is important to note that this report provides a **baseline estimate**, not a fixed number. The street dog population is **dynamic**, constantly changing due to factors like abandonment, births, deaths, and movement. Regular monitoring and updated surveys will be needed to keep this information current and to help institutions adapt their interventions over time.

3. DATA COLLECTION METHODOLOGY



SURVEY DESIGN AND SAMPLING STRATEGY

To estimate the population of street dogs across municipalities in Kosovo, a standardised direct observation method was employed, adapted from e.g. [Hiby & Hiby \(2017\)](#)⁸. The survey design focused on generating comparable density estimates (dogs/km) across diverse geographic and demographic contexts. In each municipality, a minimum of four survey routes were selected to representatively sample urban, semi-urban, and rural areas. Known hotspots, areas with unusually high dog concentrations, were intentionally excluded to avoid overestimation and bias in the route selection.

Survey routes totalled per municipality from 20 to 150 km and were mainly on residential and secondary roads, where street dogs are most likely to be encountered. The surveys were conducted in June 2024 (Podujeva), October 2024 (Lipjan, Obiliq, Fushe Kosova, Graçanica) and between April and May 2025 (the remaining municipalities in Kosovo).

To enhance the accuracy and consistency of dog surveys over time, the survey was conducted using a mobile application [Talea](#)⁹. Mobile applications play a crucial role because they enable standardised data collection by allowing users to record individual dogs along with their GPS locations and other relevant details. Talea functions both online and offline, ensuring uninterrupted data entry in the field. All collected data is securely stored in a cloud-based database and is accessible via both mobile and web platforms, supporting seamless monitoring and analysis.

SURVEY TIMING, PROTOCOL AND CONDITIONS

All surveys were conducted during early morning hours, typically around sunrise, to coincide with peak dog activity and minimal human interference. Surveys were only conducted under optimal weather conditions (clear or overcast skies with no rain, fog, or strong winds) to maximise visibility and minimise variability in detection probability.

Each municipality was surveyed over two consecutive mornings (street surveys). In selected municipalities, a photo-mark-recapture approach was implemented over three consecutive mornings. During each survey all dogs were captured photographically and the photo ID recorded in Talea together with the details of the dog. In the analysis dogs photographed were re-identified in subsequent surveys to support population estimation through capture-recapture analysis.

⁸ Hiby, E., & Hiby, L. (2017). Direct observation of dog density and composition during street counts as a resource efficient method of measuring variation in roaming dog populations over time and between locations. *Animals*, 7(8), 57.

⁹ [Mobile application Talea](#)

For each dog, the following data were collected:



1 → Sex of the adult dogs

2 → Sterilisation status (based on ear-tag presence)

3 → Puppies

4 → Lactating females

5 → Visible health indicators (e.g. signs of illness, injury, presence or absence of skin issues and 5-scale body condition)

6 → Sign of ownership (e.g. collar)

7 → GPS location

8 → Photographic documentation (for mark-resight analysis)



DOG DENSITY PER KM STREET AND POPULATION ESTIMATION

Street network data were extracted from **OpenStreetMap**¹⁰ and filtered to include only residential and secondary roads (street types that are most frequently used by dogs due to human houses and activity on them), aligning with the road types surveyed during fieldwork. This filtering step was essential to ensure that extrapolations were based solely on road classes where dog presence was observed, thereby avoiding inflation of estimates due to the inclusion of unsuitable road types such as highways or connecting roads. To adjust for imperfect detection, detection probabilities were generated using the **Application SuperDuplicates tool (Tiwari et al., 2018)**¹¹, which applies Good-Turing frequency theory to account for unseen individuals based on the frequency of unique and duplicate sightings.

For each municipality, the average density of street dogs was calculated by dividing the total number of dogs observed by the cumulative length of the surveyed routes:

$$\text{Dogs per km} = \text{Total Dog Sightings} / \text{Total Survey Route Length (km)}$$

The calculated density was then multiplied by the total length of residential and secondary roads in the municipality to estimate the visible dog population. This figure was subsequently adjusted using a detectability:

$$\text{Estimated Dog Population} = \text{Dogs per km} \times \text{Total Street Length (km)} / \text{Detectability}$$

The detectability reflects the probability of detecting a dog during the survey and reflects factors such as terrain, visibility, and dog behaviour. Detectability was either measured in the municipality or assigned based on location type. Based on the photo mark-recapture results in rural and semi-urban areas a detectability of 0.35 was used for all municipalities, apart from the ones where photo-mark-recapture studies were conducted, in which individual detectability results were used.

To ensure data quality and consistency, all field teams underwent standardised training and testing prior to deployment. Collected data were subject to cross-validation procedures to verify accuracy and completeness.



Note on Sterilisation Status Assessment

Sterilisation status was determined visually during surveys, based on the presence or absence of an ear-tag, which is commonly used in Kosovo to mark sterilised dogs.

¹⁰ [OpenStreetMap](#)

¹¹ Tiwari, H. K., Vanak, A. T., O'Dea, M., Gogoi-Tiwari, J., & Robertson, I. D. (2018). A comparative study of enumeration techniques for free-roaming dogs in rural Baramati, District Pune, India. *Frontiers in Veterinary Science*, 5, 104.

4. RESULTS



Street dogs are closely associated with the street environment, which serves as a primary habitat for movement, rest, and access to food resources. Both owned and unowned dogs utilise human resources, whether intentionally provided or inadvertently accessible, due to the proximity of human activity along streets. Consequently, observational surveys conducted along public roads offer a practical and ecologically valid means of assessing the street dog population.

While systematically counting dogs along a representative sample of streets (route-based surveys) is cost-effective and operationally feasible for planning and strategic development of dog population management interventions, it is not designed to yield census-level precision. Instead, it provides a reliable approximation suitable for programmatic decision-making, particularly when complemented by detection probability adjustments derived from mark-resight techniques, in this case photo-mark-recapture.

The sterilisation percentage for each municipality was determined by calculating the proportion of sterilised adult dogs among those with known sterilisation status (either not sterilised or sterilised). Specifically, the total number of sterilised dogs observed during the surveys was divided by the total number of adult dogs for which sterilisation status could be reliably identified. Dogs classified as puppies (under 4 months old), as well as those for which sterilisation status could not be determined, were excluded from this calculation. This ensures that the sterilisation rate provides an observable rate and a minimum sterilisation rate in the population. While sterilisation rates are directly observed and are therefore unbiased, it is unclear how sterilisation rates in municipalities without official tenders were achieved.

The national estimate of the total number of street dogs was derived by aggregating the individual population estimates from all 38 municipalities. Similarly, the national sterilisation percentage was calculated by summing the total number of sterilised dogs observed across all municipalities and dividing it by the total number of adult dogs with known sterilisation status. As with the municipal-level calculations, puppies and dogs with indeterminate sterilisation status were excluded.

The same applies to calculations for regional estimates.

In addition, comparisons across municipalities with varying human population sizes, the number of street dogs per 1,000 inhabitants was calculated to provide a relative density in terms of people sharing a space with the dog population. This was achieved by dividing the total estimated number of street dogs by the national human population and multiplying the result by 1,000.

NATIONAL STREET DOG POPULATION ESTIMATES



Total estimated number of street dogs in Kosovo:

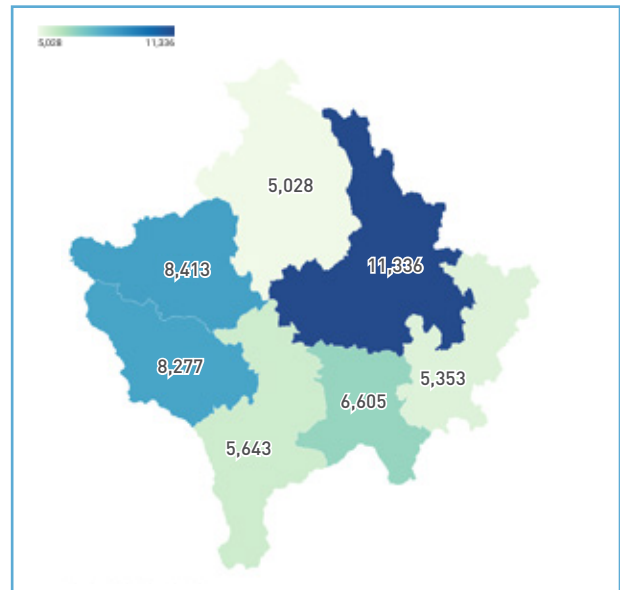
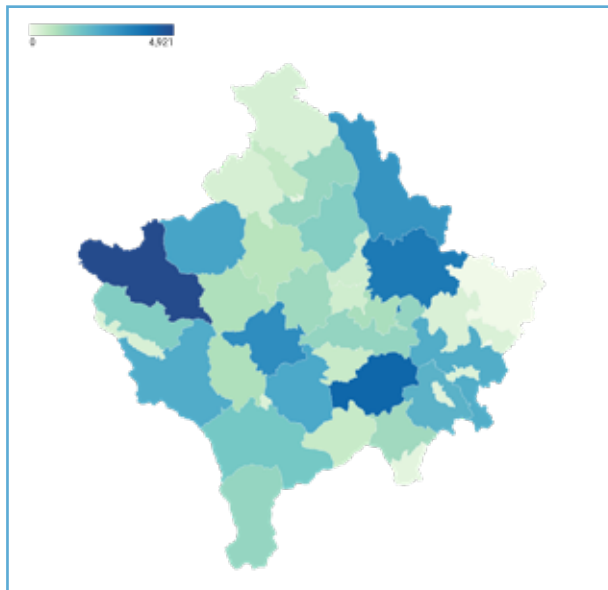
50,654

Nation-wide sterilisation percentage:

11.12%

Number of street dogs per 1,000 inhabitants:

32

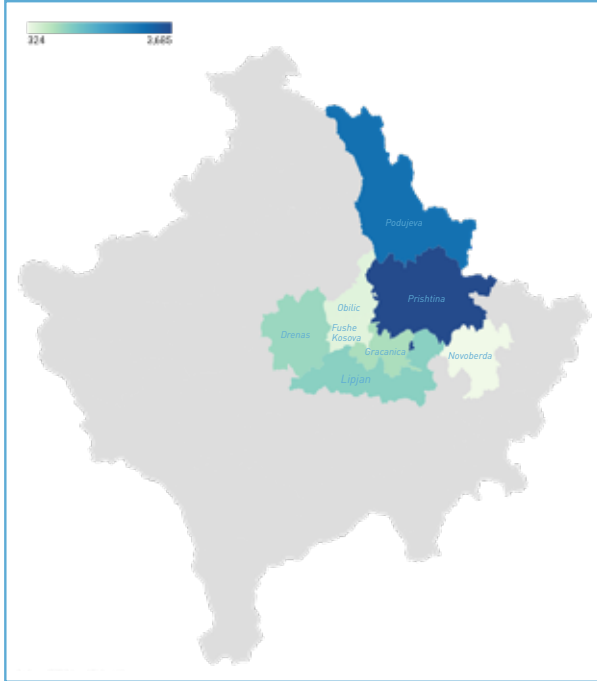


Across Kosovo, it is estimated that there are 50,654 street dogs, with an average of approximately 32 street dogs per 1,000 inhabitants. Despite ongoing efforts, the current nationwide sterilisation rate remains relatively low at just over 11%, highlighting the urgent need for coordinated, long-term population control measures.

During the surveys, more than 2,500 km of roads were covered, representing nearly 18% of Kosovo's residential and secondary roads. In total, 3,103 dogs were observed and registered, including 972 males, 533 females, 208 puppies, and 1,390 dogs whose sex could not be identified. This data underlines the importance of collaboration between municipalities, national authorities, and local animal welfare organisations to address public health, safety, and animal welfare concerns in a sustainable and humane way.



REGION OF PRISHTINA



The Region of Prishtina, which includes the municipalities of Prishtina, Podujeva, Fushe Kosova, Obilic, Lipjan, Drenas, Gracanica, and Novoberda, has a total estimated street dog population of **11,336**, representing about **22%** of the national total. Prishtina municipality has the highest estimated number at around **3,685**, followed by Podujeva (**2,995**) and Lipjan (**1,279**), while Fushe Kosova (**468**) and Obilic (**477**) have lower numbers.

Sterilisation rates vary widely: Prishtina shows the highest rate (**21.65%**) compared to the national average (**11.12%**), while Podujeva, Novoberda, and Gracanica remain below **5%**.

The estimated number of street dogs per **1,000** inhabitants also differs across the region. Novoberda (**72**) and Gracanica (**53**) stand out with densities well above the national average (**32**), while Prishtina (**16**) is below average.

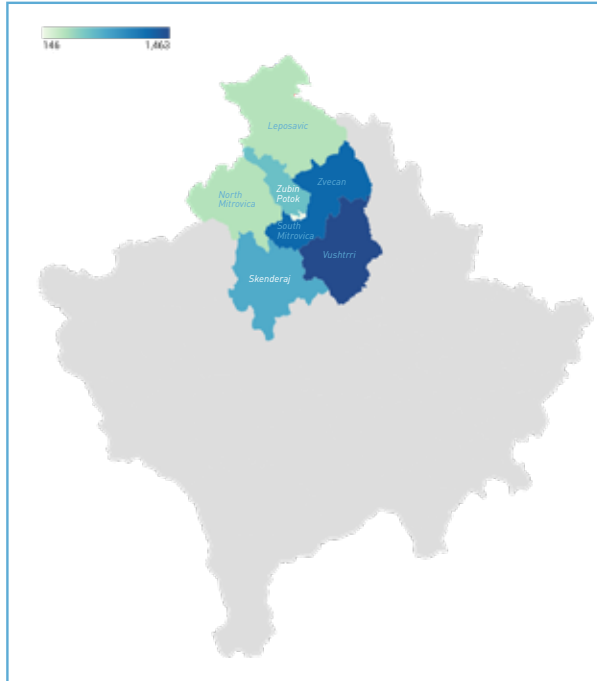


Total estimated number of dogs in all the municipalities in the Region of Prishtina:

11,336

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
Prishtina	3,685	21.65%	16
Podujeva	2,995	3.65%	42
Fushe Kosova	468	11.97%	7
Obilic	477	9.09%	21
Lipjan	1,279	7.42%	23
Drenas	1,129	5.41%	23
Gracanica	980	4.63%	53
Novoberda	324	3.85%	72

REGION OF MITROVICA



The Region of Mitrovica, which includes the municipalities of South Mitrovica, North Mitrovica, Vushtrri, Skenderaj, Zvecan, Zubin Potok, and Leposavic, has a total estimated street dog population of **5,028**, accounting for about **10%** of the national total. Vushtrri has the highest estimated number with around **1,463**, followed by South Mitrovica (**1,252**) and Skenderaj (**782**), while North Mitrovica (**146**) and Leposavic (**370**) have the lowest.

Sterilisation rates vary, with Skenderaj showing the highest rate (**20%**) compared to the national average (**11.12%**), while Vushtrri (**4.76%**) and Zvecan (**6.06%**) remain below average.

Zvecan (**224**) and Zubin Potok (**111**) have densities significantly higher than the national average of **32**, with Zvecan over **7 times higher** and Zubin Potok about **3.5 times higher**, while South Mitrovica (**19**) and Skenderaj (**19**) are closer to average.

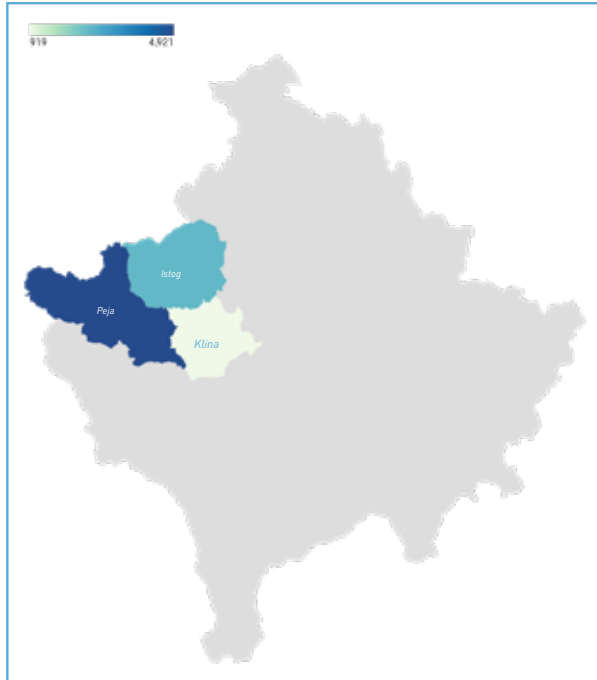


Total estimated number of dogs in all the municipalities in the Region of Mitrovica:

5,028

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
South Mitrovica	1,252	12.2%	19
Vushtrri	1,463	4.76%	24
Skenderaj	782	20%	19
North Mitrovica	146	8.7%	18
Zvecan	641	6.06%	224
Zubin Potok	374	11.76%	111
Leposavic	370	0%	39

REGION OF PEJA



Region of Peja, which includes the municipalities of Peja, Istog, and Klina, has a total estimated street dog population of **8,413**, representing about **17%** of the national total. Peja has the highest estimated number with around **4,921**, followed by Istog (**2,573**) and Klina (**919**).

Sterilisation rates show clear differences: Peja has a relatively higher rate (**25.45%**) compared to the national average (**11.12%**), while Istog (**10%**) and Klina (**14.29%**) are around or slightly above average.

In terms of street dogs per **1,000** inhabitants, Istog (**78**) and Peja (**59**) are well above the national average of **32**, while Klina (**30**) is roughly in line.

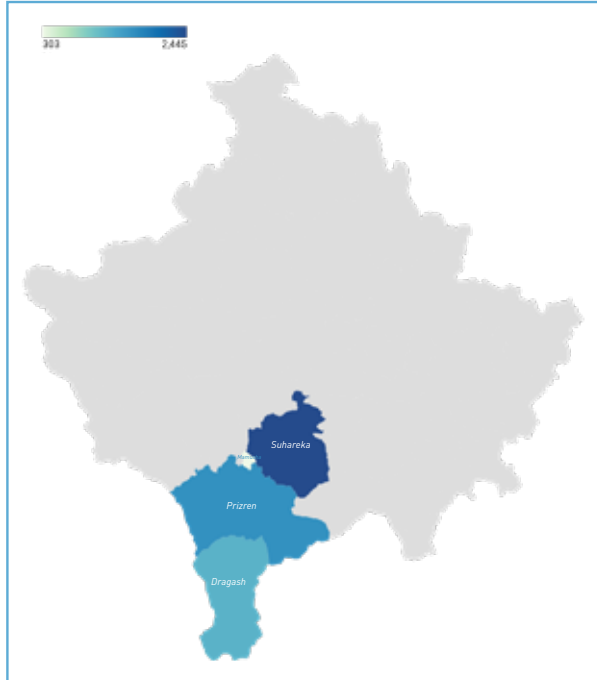


Total estimated number of dogs in all the municipalities in the Region of Peja:

8,413

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
Peja	4,921	25.45%	59
Istog	2,573	10%	78
Klina	919	14.29%	30

REGION OF PRIZREN



Region of Prizren, which includes the municipalities of Prizren, Suhareka, Dragash, and Mamusha, has a total estimated street dog population of **5,643**, making up about **11%** of the national total. Suhareka has the highest number in the region with around **2,445**, followed by Prizren (**1,639**) and Dragash (**1,257**), while Mamusha has the lowest with **303**.

Sterilisation rates differ widely: Suhareka has a higher rate (**38.78%**) compared to the national average (**11.12%**), while Mamusha (**4.55%**) and Prizren (**9.09%**) are lower.

Relative densities show that Mamusha (**54**) and Suhareka (**53**) are both well above the national average (**32**), while Prizren (**11**) is notably lower.

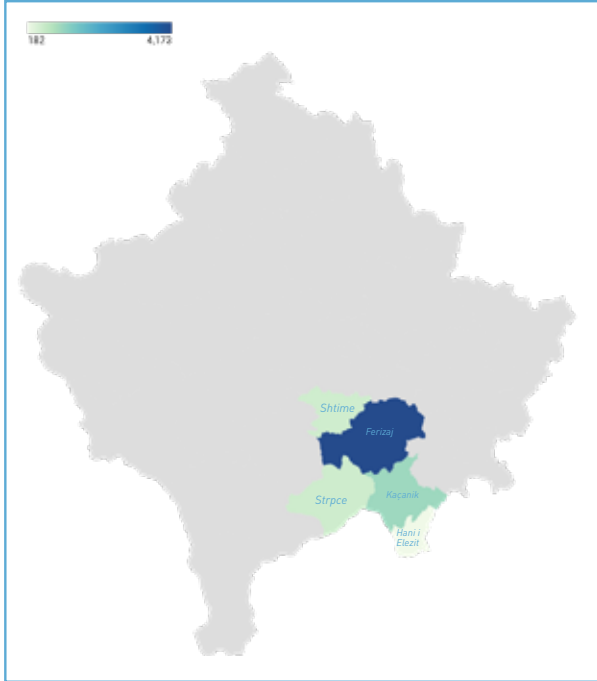


Total estimated number of dogs in all the municipalities in the Region of Prizren:

5,643

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
Prizren	1,639	9.1%	11
Suhareka	2,445	38.8%	53
Dragash	1,257	11.1%	44
Mamusha	303	4.6%	54

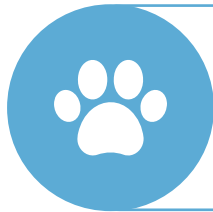
REGION OF FERIZAJ



Region of Ferizaj, which includes the municipalities of Ferizaj, Shtime, Kaçanik, Hani i Elezit, and Strpce, has a total estimated street dog population of **6,605**, representing about **13%** of the national total. Ferizaj has the highest estimated number with around **4,173**, followed by Kaçanik (**1,111**) and Shtime (**563**).

Sterilisation rates range from Strpce (**23.81%**), higher than the national average (**11.12%**), to Kaçanik (**9.65%**) and Hani i Elezit (**8.33%**), which are below average.

Number of dogs per **1,000** inhabitants also varies: Strpce (**53**) is well above the national average (**32**), while Hani i Elezit (**21**) and Shtime (**23**) are lower.

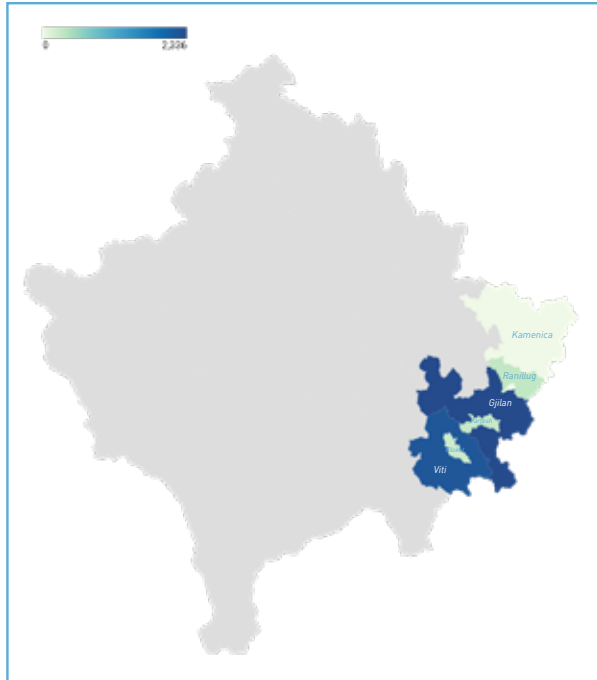


Total estimated number of dogs in all the municipalities in the Region of Ferizaj:

6,605

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
Ferizaj	4,173	13.7%	38
Shtime	563	16%	23
Kaçanik	1,111	9.6%	40
Hani i Elezit	182	8.3%	21
Strpce	576	23.6%	53

REGION OF GJILAN



Region of Gjilan, which includes the municipalities of Gjilan, Viti, Kamenica, Klllokot, Ranillug, and Partesh, has a total estimated street dog population of **5,353**, representing about **11%** of the national total. Gjilan has the highest estimate with around **2,336**, followed by Viti (**2,189**); Kamenica reported no street dogs during this survey.

Sterilisation rates also vary: Gjilan (**17.86%**) is above the national average (**11.12%**), while Klllokot (**0%**) and Kamenica (**0%**) reported no sterilized dogs.

Ranillug (**125**) and Partesh (**87**) have dogs per **1,000** inhabitants far above the national average (**32**), while Gjilan (**28**) is slightly below.

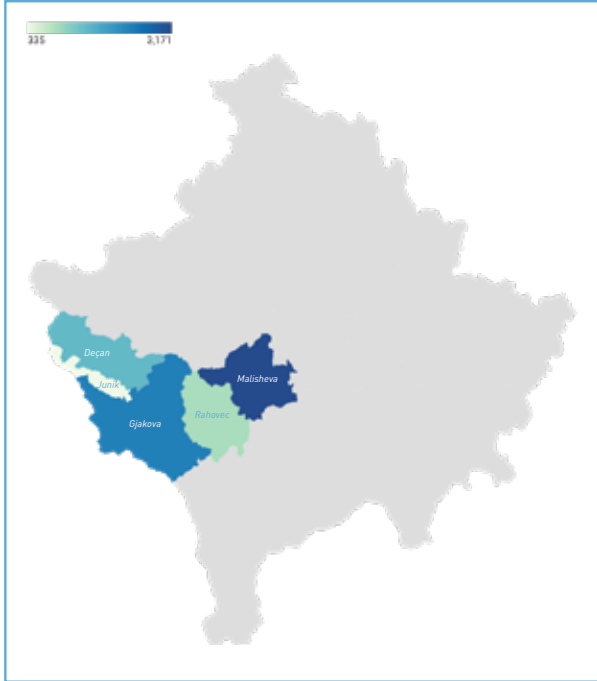


Total estimated number of dogs in all the municipalities in the Region of Gjilan:

5,353

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
Gjilan	2,336	17.9%	28
Viti	2,189	7.7%	62
Kamenica	0	0%	0
Klllokot	233	0%	77
Ranillug	311	11.8%	125
Partesh	283	5.9%	87

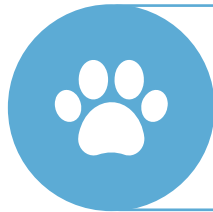
REGION OF GJAKOVA



Region of Gjakova, which includes the municipalities of Gjakova, Rahovec, Malisheva, Deçan, and Junik, has a total estimated street dog population of **8,277**, making up about 16% of the national total. Malisheva has the highest estimated number with around **3,171**, followed by Gjakova (**2,363**) and Deçan (**1,493**).

Sterilisation rates vary: Junik (**36.36%**) and Deçan (**35.48%**) are well above the national average (**11.12%**), while Rahovec reported a rate of **0%**.

In terms of street dogs per **1,000** inhabitants, Junik (**85**) and Malisheva (**72**) stand out with densities more than double the national average (**32**), while Rahovec (**22**) and Gjakova (**30**) are closer to or slightly below average.



Total estimated number of dogs in all the municipalities in the Region of Gjakova:

8,277

Municipality	Total estimated number of dogs	Sterilisation rates	Number of dogs per 1,000 inhabitants
Gjakova	2,363	22.7%	30
Rahovec	914	0%	22
Malisheva	3,171	17.9%	72
Deçan	1,493	35.5%	54
Junik	335	35.4%	85

A photograph of a brown and black dog sitting in a trash-strewn area. The dog is looking to the left. The background is filled with various pieces of trash and debris on the ground. The dog's fur is a mix of brown and black, and it has a black nose and ears.

HEALTH AND GUARDIANSHIP

Body condition scoring revealed that in some municipalities poor health of street dogs is more common than in others. However, the type of welfare concern can vary greatly. The highest percentage of newly injured dogs (e.g. broken limbs) was recorded in Shtime (6%) among others below 5%.

In terms of observable skin issues (e.g. mange) a few municipalities had over 5% of the population showing signs of skin problems. The highest recorded rates were in Lipjan (5%), Novoberda (6%), Zubin Potok (9%), Prizren (14%) and Mamusha (22%). In Mamusha general poor health was observed in 11% of the population and in Junik 10% and Kaçanik 7%, among others with below 5%. Another indicator for general poor welfare, reflecting on a variety of issues, like lack of food resources, is body condition. Low body conditions of 1 and 2 are below a normal weight of a dog. In Dragash 38% were observed to not have a normal body weight, followed by Suhareka with 28%, Rahovec (24%), Prizren (19%), Mamusha (11%) and Vushtrri (5%).

Targeted interventions in these municipalities would alleviate some if not all the issues and contribute to a healthier environment for both dogs and people.

Guardianship was evaluated using collars or any other added fabric that was added to a dog to signpost that the dog has a guardian or owner. In general, these were not very common, however in Zvecan 28% of the street dogs wore a collar, in Rahovec 12% and Shtime 6%.

5. DISCUSSION



The Kosovo National Street Dog Population Survey across all 38 municipalities marks a pivotal moment in the country's efforts to address the complex and often contentious issue of street dogs. For the first time, institutions, municipalities, and civil society have access to a comprehensive, standardised dataset that not only quantifies the scale of the street dog population but also reveals critical patterns in distribution, sterilisation coverage, and regional disparities. These findings offer both a diagnostic snapshot and a strategic foundation for future planning.

An estimated 50,654 street dogs are currently living across Kosovo, with an average of 3.2 dogs per km or 32 dogs per 1,000 inhabitants. However, these national average masks significant variation. Municipalities with large urban spaces such as Peja, Ferizaj and Prishtina report the highest absolute numbers, reflecting the visibility and concentration of dogs in densely populated areas. Yet, when adjusted for human population size, smaller and more rural municipalities like Zvečan (2.57 dogs per km), Ranillug (5.43 dogs per km), and Junik (2.1 dogs per km) emerge as high-density areas, with densities exceeding 100 dogs per 1,000 inhabitants, more than three times the national average. These findings underscore the importance of using both absolute and relative metrics to understand the true scope of the issue.

In earlier surveys in the city of Prishtina conducted by ARF, the total street length relied on older official figures, but this survey used updated OpenStreetMap data, nearly doubling the street length. In addition, Prishtina was partially surveyed using a photo-mark-recapture method, resulting in a more precise detectability coefficient of 0.58, compared to 0.4 in previous estimates.

The estimates presented provide a reliable overview of the current situation. As with any population survey, figures should be refined over time, particularly through techniques such as the photo-mark-recapture method, which allows for higher precision data. Sterilisation rates present another area of concern. The national average of 11.12% is far below the threshold needed to stabilise or reduce the street population. While some municipalities, such as Junik (36.36%) and Deçan (35.48%), demonstrate promising progress, many others, including Klokot, and Rahovec, report sterilisation rates of 0%. This disparity highlights the uneven or lack of CNVR implementation and the urgent need for expanded veterinary capacity, funding, and community outreach.

The survey's methodological rigor adds credibility to its findings. By excluding known hotspots such as landfills and applying detectability corrections based on photo-mark-recapture studies in Kosovo, the survey avoids common pitfalls of over- and under-estimation (respectively) and ensures that the results reflect everyday conditions. However, it is important to acknowledge that the exclusion of hotspots may lead to a slight underestimation of the true national total.

Moreover, the dynamic nature of street dog populations (shaped by abandonment, births, deaths, and migration, etc.) means that this report should be viewed as a baseline rather than a definitive count. Regular follow-up surveys will be essential to track trends and evaluate the impact of interventions over time.

The findings also point to systemic challenges that go beyond numbers. Many municipalities, particularly in rural areas, lack access to affordable veterinary services or veterinary services at all, making it difficult for dog owners to comply with mandatory registration and responsibly care for their dogs. Socioeconomic hardship limited public awareness, and the weak enforcement of animal welfare laws further exacerbate the problem. Despite legal advances (including the 2017 ban on culling and the adoption of CNVR regulations) implementation remains inconsistent. The data reveal that without stronger coordination between central and local authorities, and without investment in infrastructure and public education, progress will remain fragmented and slow at best.

Finally, the survey highlights the need for a paradigm shift in how Kosovo approaches dog population management. Rather than reactive, short-term measures, the country must adopt a proactive, data-driven strategy that prioritises prevention, community engagement, and humane treatment. The establishment of a national data hub, as envisioned in the National Strategy for Dog Population Management, would be a critical step in this direction. By integrating data collection, monitoring, and evaluation into all levels of planning, Kosovo can move toward a more sustainable and compassionate model, one that protects both public health and animal welfare.



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6. ANNEX: MUNICIPALITY OVERVIEW

Municipality	Total estimated number of dogs	Dogs per km	#of dogs per 1,000 inhabitants	Sterilisation percentage	Human Population (Kosovo 2024 Census)	Total Street length (filtered)
PRISHTINA	3,685	2.1	16	21.65	227,466	1018.02
PODUJEVA	2,995	1.03	42	3.65	70,975	1021.03
FUSHE KOSOVA	468	0.77	7	11.97	63,949	230.20
OBILIC	477	0.86	21	9.09	22,815	232.99
LIPJAN	1,279	0.88	23	7.42	55,044	526.23
DRENAS	1,129	0.68	23	5.41	48,079	580.21
GRACANICA	980	1.78	53	4.63	18,486	165.40
NOVOBERDA	324	0.54	72	3.85	4,493	221.76
SOUTH MITROVICA	1,252	0.77	19	12.20	64,742	566.57
VUSHTRRI	1,463	0.67	24	4.76	61,528	762.44
SKENDERAJ	782	0.46	19	20.00	40,664	591.25
NORTH MITROVICA	146	1.78	18	8.70	7,920	28.67
ZVECAN	641	2.57	224	6.06	2,867	87.27
ZUBIN POTOK	374	1.31	111	11.76	3,385	99.84
LEPOSAVIC	370	0.75	39	0.00	9,485	173.15
PEJA	4,921	2.08	59	25.45	82,745	826.39
ISTOG	2,573	1.14	78	10.00	33,008	498.40
KLINA	919	0.87	30	14.29	30,503	369.28
PRIZREN	1,639	0.67	11	9.09	147,246	851.65
SUHAREKA	2,445	1.5	53	38.78	45,749	572.01
DRAGASH	1,257	1.72	44	11.11	28,896	255.79
MAMUSHA	303	2.77	54	4.55	5,607	38.27
FERIZAJ	4,173	1.96	38	13.67	109,255	744.99
SHTIME	563	0.89	23	16.00	24,308	222.64
KAÇANIK	1,111	1.44	40	9.65	27,716	299.82
HANI I ELEZIT	182	0.83	21	8.33	8,533	76.83
STRPCE	576	0.58	53	23.81	10,771	129.73
GJILAN	2,336	2.29	28	17.86	82,980	586.78
VITI	2,189	1.4	62	7.69	35,566	437.66
KAMENICA	0	5.43	0	0.00	22,868	491.55
KLLOKOT	233	2.3	77	0.00	3,041	35.52
RANILLUG	311	5.43	125	11.76	2,481	45.51
PARTESH	283	2.3	87	5.88	3,240	31.84
GJAKOVA	2,363	1.08	30	22.73	78,699	763.48
RAHOVEC	914	0.92	22	0.00	41,799	348.42
MALISHEVA	3,171	2.63	72	17.86	43,888	421.28
DEÇAN	1,493	1.39	54	35.48	27,775	375.57
JUNIK	335	2.44	85	36.36	3,943	48.12

Municipality	BCS1	BCS2	BCS3	BCS4	BCS5	Unk-nown BCS	Skin prob-lem	Skin heal-ty	Unk-nown skin condi-tion	New injury	Healed injury	Poor heal-ty	Heal-ty	Unk-nown health	Colar	No Colar	Unk-nown colar
PRISHTINA	0%	3%	92%	1%	0%	3%	0%	94%	5%	1%	0%	0%	91%	8%	0%	99%	1%
PODUJEVA	0%	0%	85%	0%	0%	3%	2%	83%	4%	3%	0%	2%	91%	4%	0%	10%	1%
FUSHE KOSOVA	0%	1%	67%	1%	0%	17%	1%	65%	20%	1%	0%	2%	88%	10%	1%	96%	3%
OBILIC	0%	4%	68%	3%	0%	17%	3%	71%	18%	3%	0%	3%	75%	19%	3%	89%	8%
LIPJAN	0%	3%	72%	1%	0%	20%	5%	70%	23%	1%	0%	4%	75%	20%	2%	83%	14%
DRENAS	0%	1%	92%	0%	0%	8%	0%	92%	8%	0%	0%	0%	92%	8%	0%	97%	3%
GRACANICA	0%	1%	47%	0%	0%	46%	1%	48%	46%	2%	0%	1%	50%	46%	3%	69%	28%
NOVOBERDA	0%	3%	81%	0%	0%	0%	6%	74%	3%	0%	0%	3%	97%	0%	3%	97%	0%
SOUTH MITROVICA	0%	0%	84%	7%	0%	0%	2%	89%	0%	0%	0%	0%	100%	0%	0%	100%	0%
VUSHTRRI	0%	5%	91%	0%	0%	0%	0%	93%	2%	0%	0%	5%	93%	2%	0%	98%	2%
SKENDERAJ	0%	3%	90%	7%	0%	0%	3%	97%	0%	7%	0%	3%	90%	0%	0%	100%	2%
NORTH MITROVICA	0%	0%	74%	0%	0%	26%	4%	70%	26%	0%	0%	0%	78%	22%	4%	74%	22%
ZVECAN	0%	0%	59%	0%	0%	36%	3%	62%	31%	0%	0%	0%	74%	26%	28%	46%	26%
ZUBIN POTOK	0%	0%	68%	0%	0%	23%	9%	59%	23%	0%	0%	0%	77%	23%	0%	77%	23%
LEPOSAVIC	0%	4%	67%	0%	0%	29%	0%	42%	58%	0%	0%	0%	54%	46%	0%	63%	38%
PEJA	0%	2%	81%	7%	1%	6%	0%	95%	3%	0%	0%	0%	98%	2%	2%	98%	0%
ISTOG	0%	0%	94%	6%	0%	0%	2%	98%	0%	0%	0%	2%	98%	0%	2%	98%	0%
KLINA	0%	0%	94%	3%	0%	0%	0%	97%	0%	0%	0%	0%	100%	0%	3%	97%	0%
PRIZREN	0%	19%	16%	27%	35%	0%	14%	70%	14%	0%	3%	5%	92%	0%	3%	97%	0%
SUHAREKA	0%	28%	72%	0%	0%	0%	2%	98%	0%	0%	0%	5%	95%	0%	3%	97%	0%
DRAGASH	7%	31%	45%	10%	0%	0%	0%	83%	10%	0%	0%	0%	90%	10%	0%	97%	3%
MAMUSHA	7%	4%	81%	4%	0%	0%	22%	74%	0%	4%	0%	11%	81%	4%	0%	10%	3%
FERIZAJ	0%	1%	76%	3%	0%	16%	1%	77%	18%	3%	0%	3%	76%	18%	0%	91%	9%
SHTIME	0%	2%	67%	0%	0%	24%	2%	70%	20%	6%	0%	0%	74%	20%	6%	72%	22%
KAÇANIK	0%	2%	75%	0%	0%	12%	2%	72%	15%	0%	0%	7%	71%	22%	0%	88%	12%
HANI I ELEZIT	0%	0%	92%	0%	0%	4%	4%	88%	4%	0%	0%	4%	92%	4%	4%	92%	4%
STRPCE	1%	1%	88%	3%	0%	0%	0%	94%	0%	0%	0%	0%	100%	0%	4%	96%	0%
GJILAN	0%	0%	91%	4%	0%	0%	2%	93%	0%	2%	0%	1%	97%	0%	2%	98%	0%
VITI	0%	1%	66%	25%	0%	0%	0%	91%	0%	2%	0%	0%	98%	0%	2%	98%	0%
KAMENICA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
KLLOKOT	0%	0%	87%	3%	0%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
RANILLUG	0%	0%	93%	3%	0%	0%	3%	93%	0%	0%	0%	3%	97%	0%	0%	100%	0%
PARTESH	0%	5%	93%	3%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	3%	98%	0%
GJAKOVA	0%	4%	83%	2%	0%	6%	0%	90%	6%	0%	0%	0%	94%	6%	2%	94%	4%
RAHOVEC	0%	24%	26%	9%	0%	0%	0%	53%	6%	3%	0%	3%	91%	3%	12%	88%	0%
MALISHEVA	1%	2%	71%	0%	0%	13%	7%	57%	23%	0%	0%	1%	72%	26%	1%	82%	17%
DEÇAN	0%	2%	74%	0%	0%	21%	12%	67%	19%	0%	2%	5%	70%	23%	0%	81%	19%
JUNIK	0%	2%	88%	0%	0%	10%	7%	83%	10%	2%	2%	10%	76%	10%	0%	93%	7%

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This report is a joint contribution of FOUR PAWS & Animal Rights Foundation in Kosovo, with the sincere intention of supporting institutions in Kosovo in addressing the issue of street dogs in Kosovo. Data collection is foreseen in the National Strategy for Dog Population Management as a crucial foundation for planning and monitoring, and this survey represents a contribution toward that goal. Through this joint effort, FOUR PAWS and Animal Rights Foundation aim to provide institutions with a practical tool to help prioritise actions, allocate resources more effectively, and design humane, evidence-based interventions. The purpose of this report is not to criticise, but to contribute constructively toward a more coordinated and sustainable approach.

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FOUR PAWS is the global animal welfare organisation for animals under direct human influence, which reveals suffering, rescues animals in need and protects them. Our vision is a world where humans treat animals with respect, empathy and understanding.

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Animal Rights Foundation is a Kosovo-based organisation dedicated to advancing animal welfare through legal protection, capacity-building, data collection and awareness-raising. Our vision is a just society where all animals live free from suffering and are respected as sentient beings.

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