

Argenton, F.¹; Garcia, R. C. M. ¹; Rossa, K. A.¹; Barrero, S. M ²; Ferreira, F. ³ Kopach, M; Marconcin, S. A.; Hammerschmidt, J.

¹Federal University of Paraná, Curitiba, Brazil; ² University Fundation of Colombia Agraria, Bogota, Colombia; ³ University of the State of São Paulo, São Paulo, Brazil

INTRODUCTION

The stray dog population represents an issue for public health and animal wellness. Although this is a frequent situation in many urban centers, there are few researches about unowned dog estimation. The roaming dogs estimation leads to a proper intervention and population management.¹

OBJECTIVES

To estimate the unowned dog population in Pinhais, city in southern of Brazil.
To create a profile of the stray dog population.
To compare the map of stray dogs with human density and income level maps.

METHODS

- We chose the **World Animal Protection (WAP)** guideline² as methodology and the app **StraysID®**, developed by the platform Animal.id.info.
- The total area of the city (61km²) was split into 60 contiguous blocks within 1km² each and 15 blocks were selected by random sampling (Figure 1). All the blocks were well spread across the city and had equal chance of being selected.

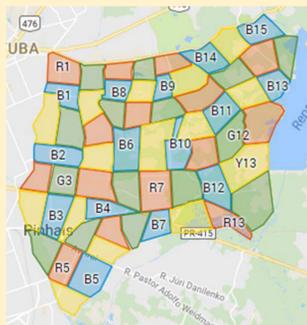


Figure 1: Sampled area of Pinhais

- The counting happened in 3 consecutive days on December 2017, between 7am and 9am, time which the movement of people and dogs on the streets is higher.
- Sixteen volunteers were divided into pairs and conducted by cars through the blocks at 20km/h maximum speed.
- They registered the coordinates, sex, age and pictures of each dog seen on public road and unattended by its owner.
- In addition, a questionnaire survey was applied with the passersby at the time of the counting to classify each animal as « **owned** », « **unowned** » and « **community dog** ».

RESULTS

About 115 km of street were covered and approximately 3 dogs/km were registered, totalising 357 dogs.

The map created by the app using the coordinates (Figure 2) shows that some spots of the city presents a larger density of dogs than others. Those points coincides with low income and high human concentration areas, where can be find a large amount of resources as food and shelter.

The roaming dogs estimate, between 7am to 9am, by WAP methodology, was 1428 (from 388 to 2468) with 95% of confidence; 57% (n=820) were unowned, including community dogs, in an interval from 232 to 1408 dogs.

This large interval of confidence could be explained due the variation of roaming dogs between blocks, showing a very heterogeneous population. The population profile of the stray dogs shows a majority of male and normal body condition dogs (Figures 3 and 4), it was also reported by other studies.^{3 4}

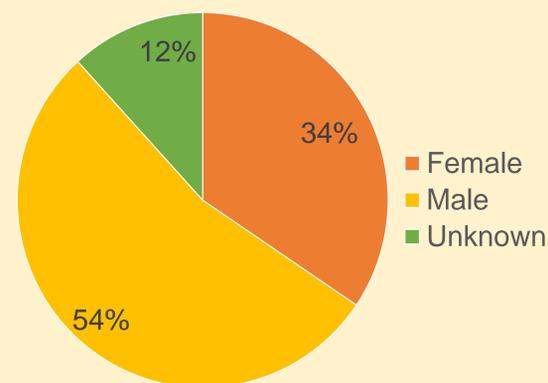


Figure 3: Stray dogs gender

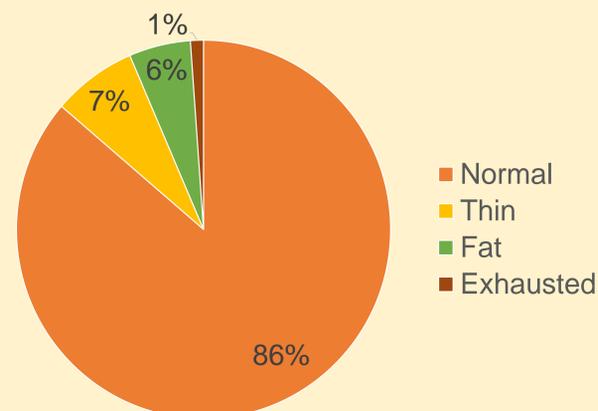


Figure 4: Stray dogs body condition



Figure 2: Map of stray dogs counted

CONCLUSION

In conclusion, 57% of the free roaming dogs are unowned and its population is correlated with human density and income rate. Hence, it is important to develop public polices to the dog population management direct to reduce the unowed dogs.

REFERENCES

- OIE. Terrestrial Animal Health Code, Chapter 7.7 Stray Dog Population Control, Article 7.7.8 An overview of appropriate methods for estimating the size of dog populations. 2011
- WSPA. Surveying roaming dog populations: guidelines on methodology. 2007
- TENZIN, T. et al. Free-Roaming Dog Population Estimation and Status of the Dog Population Management and Rabies Control Program in Dhaka City, Bangladesh. PLOS Neglected Tropical Diseases, v. 9, n. 5, p. e0003784, 15 maio 2015.
- TOTTON, S. C. et al. Stray dog population demographics in Jodhpur, India following a population control/rabies vaccination program. Preventive Veterinary Medicine, v. 97, n. 1, p. 51–57, out. 2010.

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