Owned Dog Population and Knowledge, Attitude and Practices (KAP) Survey Report for Machakos County, Kenya

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Executive Summary

Machakos County is recognized as one of the most rabies endemic counties in Kenya and has been appointed one of the pilot areas of the Kenyan National Rabies Elimination Program. The Africa Network for Animal Welfare (ANAW) has taken on the project and in order to estimate the dog population in Machakos County, Humane Society International (HSI) designed a dog population survey as well as a KAP survey (Knowledge, Attitude and Practice). A training day was delivered by HSI and hosted by ANAW and the County Director of Veterinary Services (CDVS). Surveys were conducted jointly between HSI and ANAW, to produce an estimate of the dog population. Baseline estimates of the owned dog population size, its demographics and vaccination status are important when planning an evidence based anti-rabies program in Machakos County.

Based on the household information available from the official 2009 census data, we estimate a total dog population of 259,394 dogs in Machakos County (205,031 for rural areas and 54,366 for urban areas), which translates to 31 owned dogs per 100 humans in rural and 12 dogs per 100 humans in urban areas or 1.4 owned dogs per household in rural and 0.5 dogs per household in urban areas. Mean rabies vaccination levels for the county were very low with 9.5% in rural and 22.5% in urban areas. Sterilization rates were equally low but did not vary significantly between rural and urban areas, with 14.5% of the dogs being sterilized in rural areas and 14.1% in urban areas. The vast majority of dogs were unconfined, meaning the dogs were unconfined at some point in a 24 hour period or for the entire day. Confinement ratios between rural and urban areas varied little and were generally low between 4.1% and 13.1% respectively.

The KAP survey showed that over 85% of dog owners did not see a veterinarian in the last 12 months, of which only 0.8% said that there was no veterinarian available in their area. The most common reason for owning a dog was utilitarian, for the purpose of protecting the property (99.2%) and only 1.6% said that they would also consider their dogs companions/pets (only one respondent said that the dog's sole purpose was being a pet). When asked what the best thing would be to manage street dogs 47.3 % of all respondents replied owners should confine and control their dogs, whereas 35.9% thought that poisoning was the method to control street dogs and 15.8% would like to sterilize and vaccinate street dogs, while 1% thought that they

should be left alone. Therefore, collectively the majority of respondents (63.1%) think that dogs should be humanely managed and responsible pet ownership should be encouraged.

Overall the knowledge of rabies was overwhelmingly high with only 2.3% not knowing about rabies and only 7.1% of the respondents not being able to describe the most common signs of rabid animals (e.g. salivation, biting of people and other animals, restless movement etc.). 97.5% consider rabies serious enough to seek treatment at a hospital, however 27% would still also rely on home remedies and it is questionable if treatment in hospitals would be seeked immediately or when symptoms start to show, which will most likely end fatal because of the nature of the disease.

While knowledge of rabies is overall high and many people own dogs, the majority of respondents did not think that they lived in a rabies endemic area. When asked if they thought rabies was common in their area where they live, 70.5% responded “No” and only 29.5% responded “Yes”, showing that educational efforts need to increase alertness to the topic. It might be a lack of understanding that rabies, although not necessarily present in their villages at all times, is a constant threat and rabies spreads easily if dogs are not vaccinated and controlled by their owners. This could be addressed and incorporated as an important concept as part of responsible dog ownership education in mass anti rabies programs in Machakos County.

This survey shows that dogs are important for people living in Machakos County, who depend on their dogs to provide protection for their premises and their crops/livestock. High levels of willingness to have dogs vaccinated (99% in rural and 98.7% in urban) and sterilized (67.4% in rural and 51.6% in urban) are excellent conditions to start a mass anti rabies program. However, the currently low number of vaccinated dogs indicates a lack of accessibility and most likely affordability at this point in time. Given that between 95.9% and 86.9% of the dog population, in rural and urban areas respectively, are free roaming, mass vaccination campaigns paired up with sterilization clinics could reduce the number of roaming dogs significantly, especially during breeding season, and hence decrease the potential of spreading rabies.

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Acknowledgment

The Africa Network for Animal Welfare (ANAW) and Humane Society International (HSI) would like to sincerely thank the Machakos County department of Agriculture, Livestock and Food Security, without whom this survey would not have been possible. In particular we are grateful to the County Director of Veterinary Services (CDVS) of Machakos County, Dr Waweru, for making this survey effort a success and providing us with staff, a vehicle and general logistical support. We would also like to extend our gratitude to all the Machkos County animal health technicians who participated in our training and especially those who helped us conduct the surveys in their communities.
Last but not least, we would like to thank all the survey participants who opened their homes to us and provided us with crucial insights into their experiences. Their accounts will help us create a program to eliminate rabies in Machakos County.

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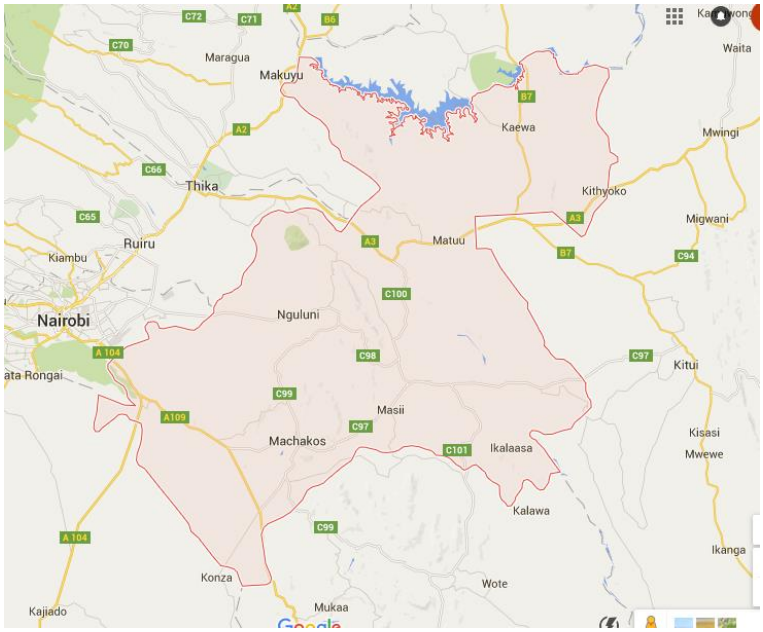
1. Background

Dog ecology and demographic studies in Kenya are scarce, however a study conducted by Kitala et al. in 2001[1] surveyed 150 households in Machakos County finding that about 63% of the households owned dogs. Fecundity was found to be high, with no female dogs being spayed and only 15% of the males being neutered at the time of the survey; additionally, the majority (69%) of dog owners did not confine their dogs, resulting in uncontrolled movement and breeding. Mortality rates were high and over 50% of the population was one year old or younger, indicating fast turnover of dogs. At the same time vaccination rates were found to be inadequate (only 29% of all dogs were vaccinated) and varied greatly across the study areas in Machakos County.

This report describes the County wide systematic survey of the owned dog population as well as a Knowledge, Attitude and Practices survey conducted in Machakos County, Kenya. Surveys were planned and designed by Humane Society International (HSI) and conducted by Humane Society International and the African Network for Animal Welfare (ANAW) in January and February 2017.

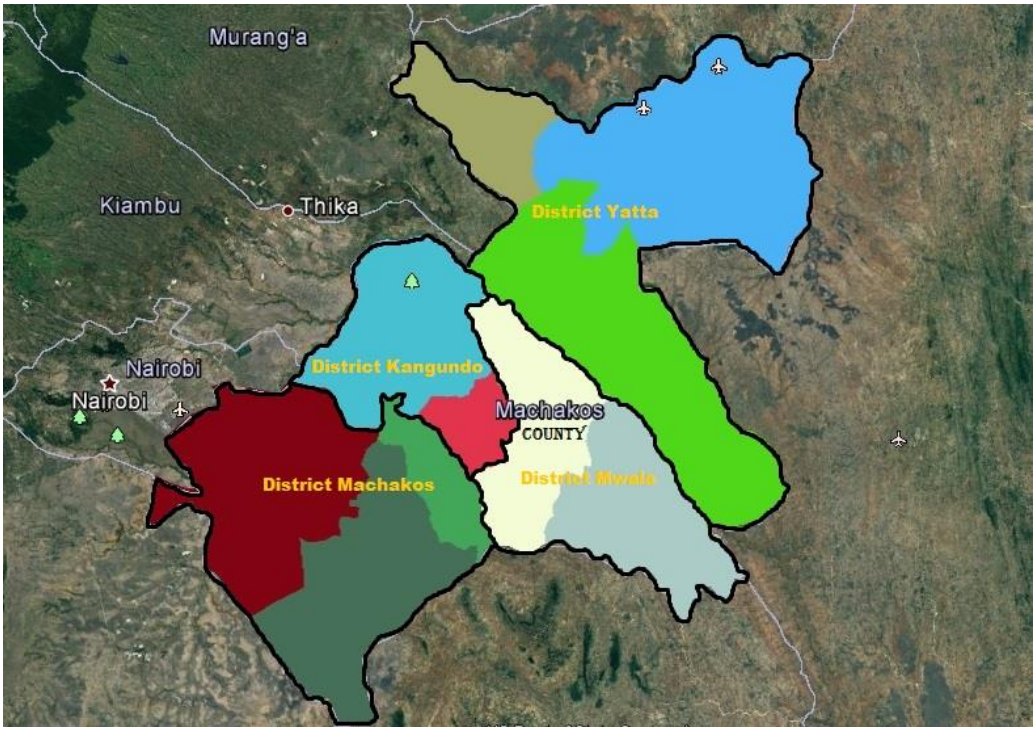
Machakos County is one of the 47 counties in Kenya, situated in Western Kenya and East/South East of Nairobi (Figure 1). With a human population of 1,098,584 (Census, 2009) it is divided into 4 districts (Machakos, Kangundo, Mwala and Yatta; Figure 2), which are divided into 8 sub-counties. Each district and sub county consists of urban and rural areas, however Mwala and Yatta primarily consist of rural settlement types.

Figure 1: Machakos County boundaries



[1] Kitala, P., McDermott, J., Kyule, M., Gathuma, J., Perry, B., & Wandeler, A. (2001). Dog ecology and demography information to support the planning of rabies control in Machakos District, Kenya. *Acta tropica*, *78*(3), 217-230.

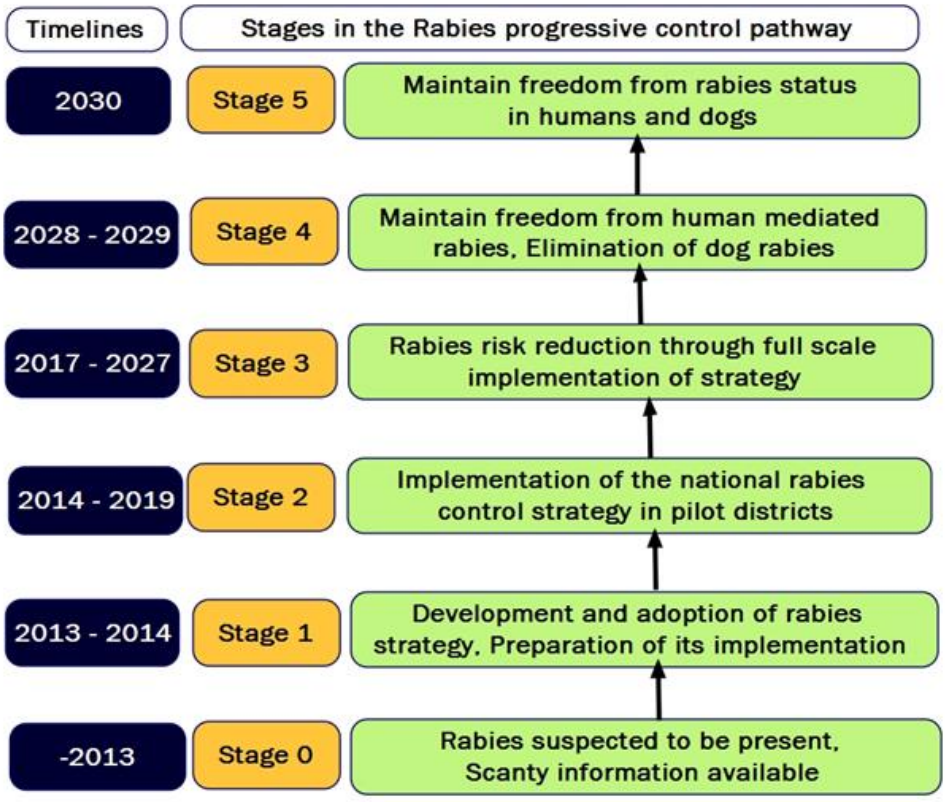
Figure 2: The four districts with sub-district boarders within the districts



In 2014 the Kenyan government launched its ambitious "Strategic Plan for the Elimination of Human Rabies in Kenya 2014 – 2030"[2], which outlines steps to eliminate dog-mediated rabies by 2030. It clearly states that rabies elimination is achievable through mass vaccination of the dog population and provides a five (5) stages strategy. 1. Developing & adopting a national rabies elimination strategy, 2. Starting implementation of elimination plan in pilot areas, 3. Implementation of the elimination strategy throughout the country, 4. Maintaining freedom from human mediated rabies and elimination of canine rabies and 5. Maintain freedom from rabies status in humans and dogs (Figure 3).

[2] http://zdukenya.org/wp-content/uploads/2012/09/National-Rabies-Elimination-Strategy.pdf

Figure 3: National Rabies Elimination stages 0-5

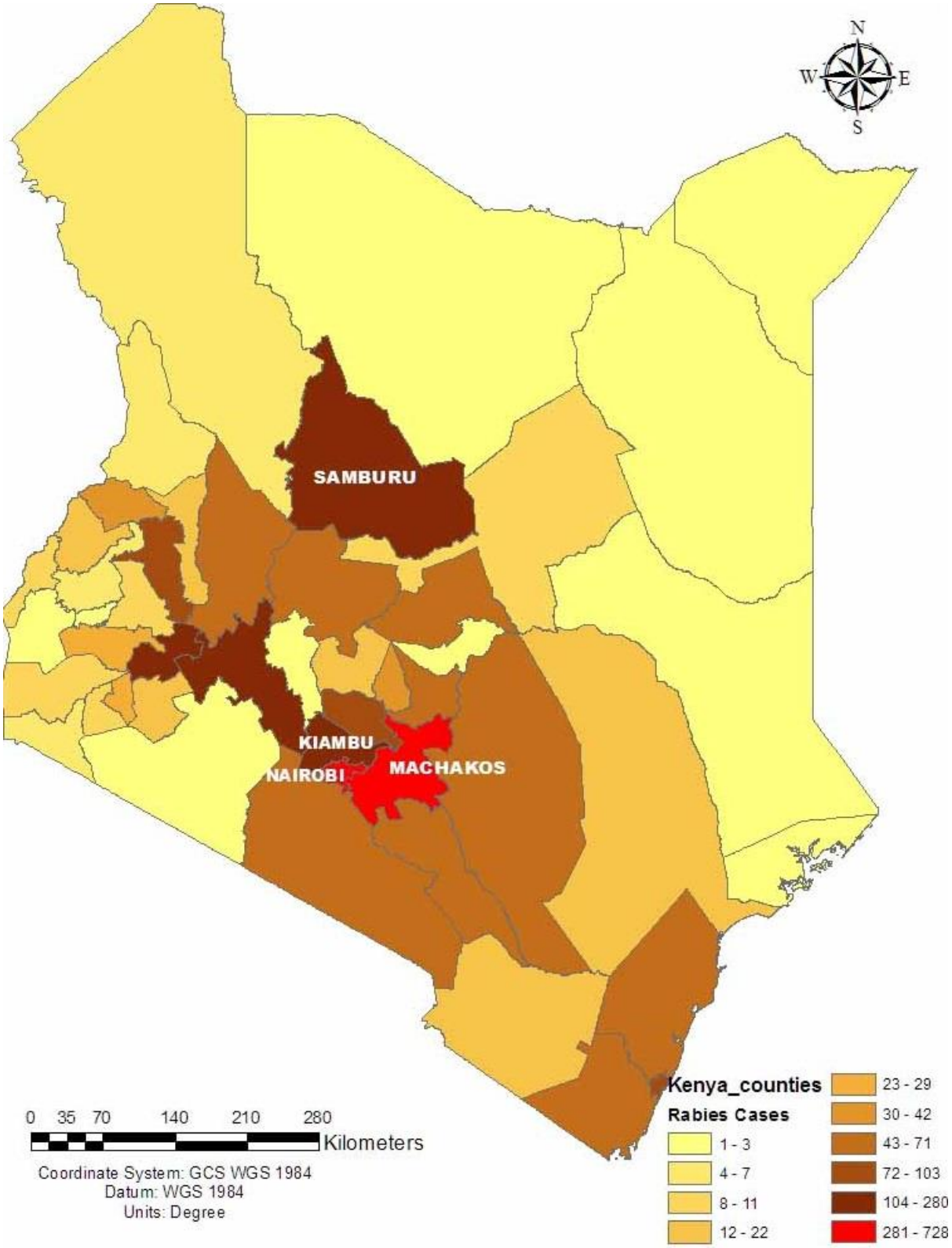


[3]

Pilot areas were chosen based on several factors. The first pilot area was the Lake Victoria Region (which includes Kisumu County and Siaya County) with its natural barriers Lake Victoria to the West and Nandi escarpment to the East. The other pilot areas are Machakos, Kiui and Makueni County, which do not have natural barriers but have reportedly high numbers of human rabies cases (Figure 4). The Zoonotic Disease Unit (ZDU) estimates that 2,000 people die annually from rabies in Kenya.

[3] Source: http://www.rabiesfreekenya.com/index.php/rabies-elimination-stages/

Figure 4: Map of reported Rabies cases in 1984, reported by ZDU



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[4] Source: http://www.rabiesfreekenya.com/index.php/rabies-elimination-strategy/#

2. Objectives

As the anti-rabies program is planned to commence in the new pilot area Machakos County, this survey was conducted to generate baseline data. Data collected in this survey will be used to support the development of an evidenced based mass vaccination and potentially mass vaccination/sterilization program in the pilot area Machakos County.

Objectives for this survey were:

- To generate a dog population estimate for Machakos County and to inform strategic and logistic planning of the humane dog population program
- To generate a baseline of the ratios of vaccinated and sterilized dogs and the willingness of dog owners to have their dogs vaccinated and sterilized
- Explore knowledge, attitudes and practices (KAP) in regards to rabies, bite wound treatment and street dog management

3. Methodology

The surveys were conducted using two smart phone applications, OSM Tracker and Epicollect5. OSM tracker was used to collect demographic data of the owned dog population as well as to record how many dogs were owned by survey participants. Epicollect5 was used to conduct the KAP (knowledge, attitude and practices) survey. Pre-selected survey points were prepared in GoogleMaps and served as starting points for the survey teams (Figure 5).

Figure 5: Survey points in district Machakos (green = rural and purple = urban)

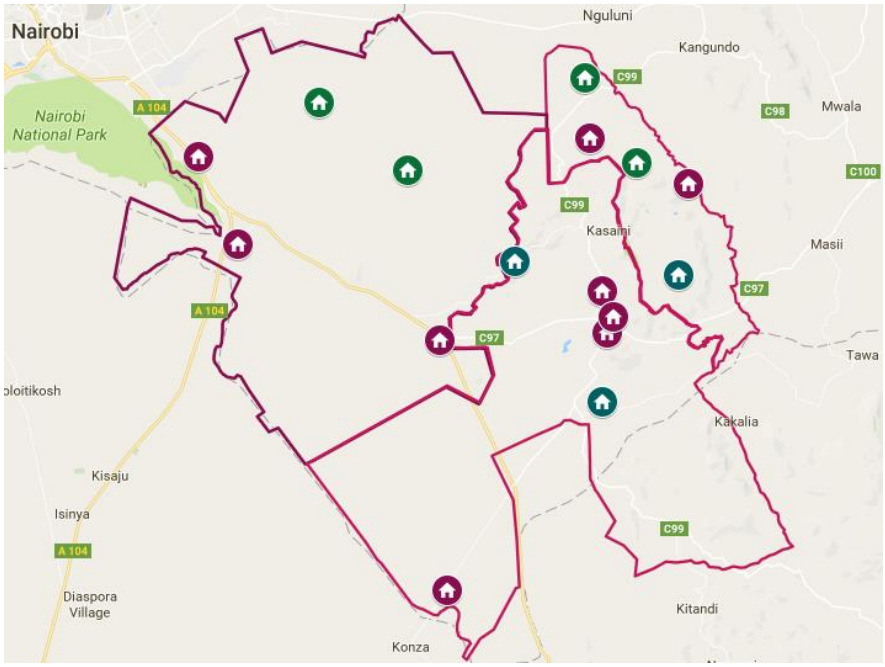


Photo 1: HSI staff training animal health technicians and veterinarians at the County Director of Veterinary Services (CDVS)

Training was provided by the HSI team on a daylong meeting held at the County's CDVS office. Surveys were conducted by a team consisting of HSI and ANAW staff as well as local animal health technicians speaking the local language in January and February 2017.

Photo 2: Day one of the field work; Setting up the smart phone apps and conducting household surveys

Results were then extrapolated to estimate the total dog population size as well as the density of dogs per 100 people. It was recorded whether a person owned a dog or not and specifics for each individual dog were recorded; whether the dogs were sterilized and vaccinated and if not, whether the dog owner would be willing to do so if resources were provided, as well as if the dogs were unconfined at any given point within a 24 hour day or if the dogs were confined at all times.

EpiCollect5 was used to conduct a KAP survey on a sub-set of the survey participants. KAP surveys can identify gaps in knowledge and barriers in attitude and practices that need to be addressed in a humane anti rabies program. Questions explored pet ownership practices, the utility of owning a dog, whether street dogs should be managed and how and if rabies was perceived as a threat. Rabies related questions were asked in regards to whether survey participants were able to identify signs of rabies and what they would do if they would get bitten by a dog (for full questionnaire, please see appendix I).

Household surveys were conducted with a systematic random sampling method, which samples a portion of the total available households in the area by randomly

selecting the first household in the sample population, which was set as the survey point in the selected urban/rural area and the rule that a surveyor must always start and count on the right side of the street. From there on an appropriate fixed interval to systematically select the following households was utilized for random selection of the following households. Systematic random sampling in comparison to simple random sampling is less susceptible to researcher error.
The interval in urban areas was every tenth household (counting 9 houses between the last survey and next household to be surveyed) and in rural areas every fifth household (counting 4 households between the last survey and the next household to be surveyed). KAP surveys were conducted in intervals counting the OSM tracker household surveys. Always starting with the first household followed by every tenth OSM tracker survey household in urban areas and every second OSM tracker survey household in rural. Therefore every first participating household and every 10^{th} in urban and every second in rural areas also completed a KAP survey.
Survey points were cluster sampled and randomly selected by sub-district and urban vs. rural. The most recent census data from 2009 was used to determine urban vs rural settlement areas. The sample size for every urban area was 50 households and 25 households for rural areas. There were a total of 52 survey points and 1653 households, which were interviewed in regards to whether they owned a dog or not of which 393 households also completed a KAP survey.

4. Results

4.1 Household survey

Based on the household information available from the official 2009 census data, we estimate a total dog population of 259,394 dogs in Machakos County (205,031 for rural areas and 54,366 for urban areas). This translates to **31 owned dogs per 100 humans in rural and 12 dogs per 100 humans in urban** areas or 1.4 owned dogs per household in rural and 0.5 dogs per household in urban areas. Overall there are more male dogs than female dogs, with as many as 2.1 male dogs per 1 female dog in rural Machakos to 1.3 male dogs to 1 female dog in Machakos urban and Kangundu urban. The only area with fewer male dogs than females is Yatta urban with only 0.8 male dogs for every 1 female dog (Table 2)

Mean rabies vaccination levels for the County were very low with 9.5% in rural and 22.5% in urban areas. Likewise, sterilization rates were equally low but did not vary significantly between rural and urban areas, with 14.5% of the dogs being sterilized in rural areas and 14.1% in urban areas. However, sterilization ratios between males and females differ significantly. While in most countries with substantial roaming dog populations we find higher percentages of females sterilized, if dogs are sterilized at all, it appears that in Machakos County there is a preference to sterilize male dogs (Table 1), which Kitala et al. (2001) also found in their study.

Table 1: Summary of the percentage of sterilized dogs by sex and Sub-county

District	% male sterilized	% female sterilized
Machakos		
Rural	12.1	0.4
Urban	5.9	0.0
Kangundo		
Rural	17.6	0.7
Urban	17.8	3.8
Mwala		
Rural	13.2	1.2
Urban*	0	0
Yatta		
Rural	10.5	1.6
Urban	4.5	0.0

* No dogs were found in the 52 households that were surveyed.

When asked if owners are willing to vaccinate and sterilize their dogs the overwhelming majority agreed to have their dogs vaccinated and sterilized (Table 2). While across the county 94%-100% of participants with unvaccinated dogs would be willing to vaccinate their dogs, willingness to sterilize their dogs was generally high but differed greatly between districts and rural vs urban areas (Table 2). The willingness to sterilize their dogs stands in contrast with the low number of currently sterilized dogs in the population but especially with the low percentage of sterilized females (Table1) and suggests that there might be a lack of available surgical skills preventing dog owners from sterilizing their female dogs. HSI has experienced similar relationships in other countries such as Bhutan. In any case it would be advisable to further investigate this bias and provide veterinary training to increase veterinary capacity in small animal surgery.

Table 2: Willingness of survey participants to sterilize and vaccinate their dogs

District		% Willing to Vaccinated	% Willing to Sterilized
Machakos Rural	Male	97.6	65.2
	Female	100	77.9
Kangundo Rural	Male	99.4	72.2
	Female	100.0	70.1
Mwala Rural	Male	100.0	63.7
	Female	95.7	67.0
Yatta Rural	Male	100.0	60.1
	Female	98.8	69.0
Machakos Urban	Male	94.0	51.2
	Female	100.0	63.0
Kangundo Urban	Male	100	50.6
	Female	100	52.4
Mwala Urban*	Male	0	0
	Female	0	0

Yatta Urban	Male	100	22.2
	Female	100	8.3

*Mwala Urban is based on one urban area, where 52 households were surveyed and no dogs were found. Due to the small sample size the results should not be considered representative of the situation in urban areas in Mwala.

When owners were asked if they confined their dogs, the vast majority did not. We defined dogs as unconfined if dogs were able to roam unsupervised at some point in a 24 hour period regardless of the time period or timespan they were able to roam. Confinement ratios between rural and urban areas varied little and were generally low between 4.1% and 13.1% respectively. Resulting in the vast majority of dogs being allowed to roam at least at some point during the day (Figure 6).

Figure 6: The proportion of unconfined dogs per district, separated into rural and urban areas

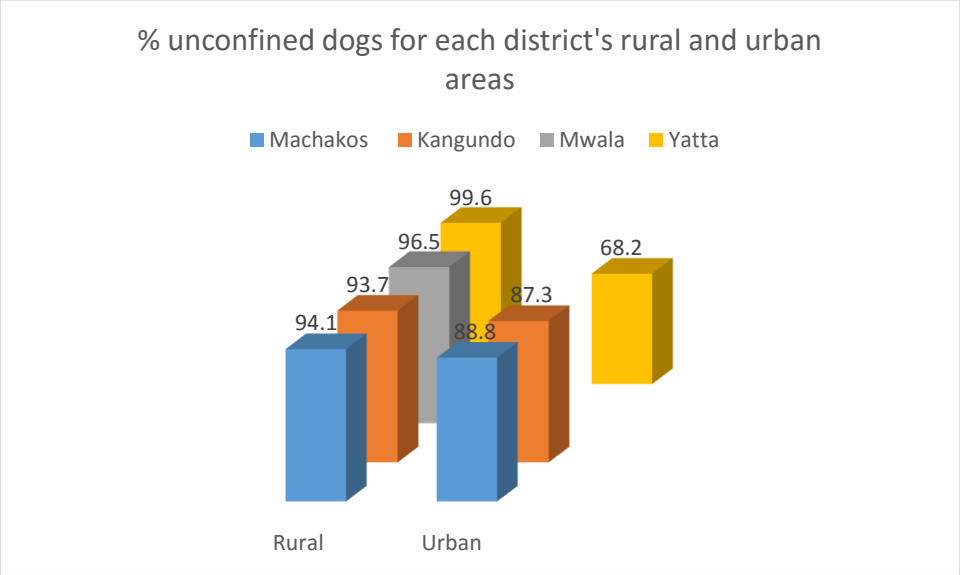


Table 3: Household survey results by district and rural/urban for Machakos County

District	% Dog Owning HH	Dogs per HH)	Human Population	Dogs per 100 Humans	% Unconfined dogs	% Vaccinated dogs	% Sterilized dogs	Male : Female
Machakos								
Rural	67.6	1.4	149,496	31.6	94.1	20.1	12.6	2.1:1
Urban	23.2	0.5	293,434	13.1	88.8	27.8	5.9	1.3:1
Kangundo								
Rural	67.0	1.3	131,461	31.1	93.7	6.3	18.3	1.4:1
Urban	30.7	0.7	87,642	16.5	87.3	19.7	21.6	1.3:1
Mwala								
Rural	72.8	1.3	157,676	28.3	96.5	7.0	14.3	1.6:1
Urban*	0	0	5,356	0	0	0	0	NA
Yatta								
Rural	74.1	1.5	220,057	32.9	99.6	5.9	12.1	1.8:1

Urban	7.3	0.1	53,462	2.9	68.2	9.1	4.5	0.8:1

* No dogs were found in the 52 households that were surveyed.

4.2 KAP Survey

The KAP survey was conducted in all districts of Machakos County and followed a systematic random sampling strategy along the same route the owned dog survey was conducted. The majority of participants (62.6%) were dog owners, reflecting the overall ratios of dog ownership in the County, and 37.4% were none dog owners. The survey showed that over 85% of dog owners did not see a veterinarian in the last 12 months, of which only 0.8% said that there was no veterinarian available in their area.

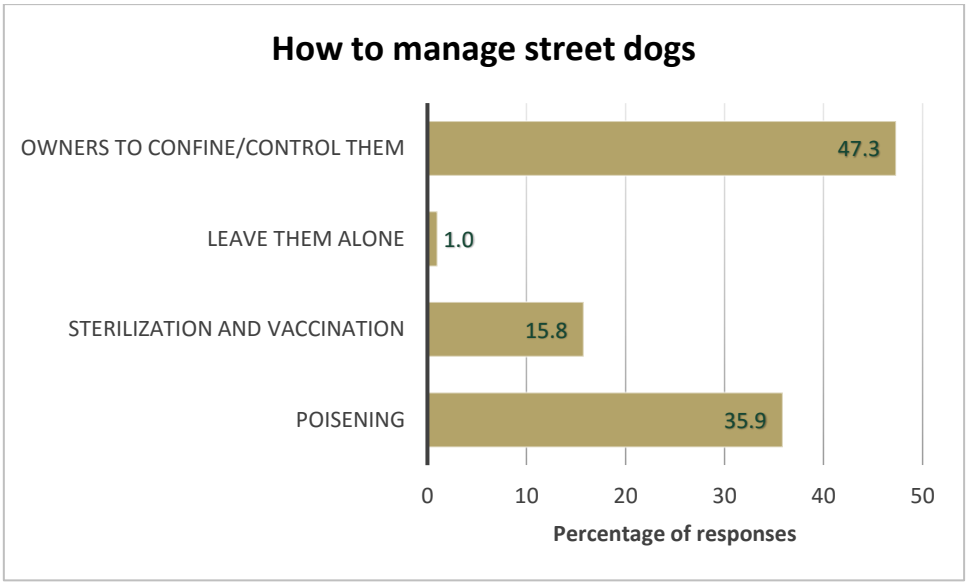
The most common reason for owning a dog was utilitarian, for the purpose of protecting the property (99.2%) and only 1.6% said that they would also consider their dog companions/pets. Only one respondent said that the dog's sole purpose was being a pet (Table 4).

Table 4: Answers to the question why people owned a dog/dogs

Question: Why do you own a dog? (multiple responses possible)	
Answers:	% of DOHH
Pet/companion	1.6
Guard crops and livestock	3.3
Herding	0.4
Guard the premises	99.2

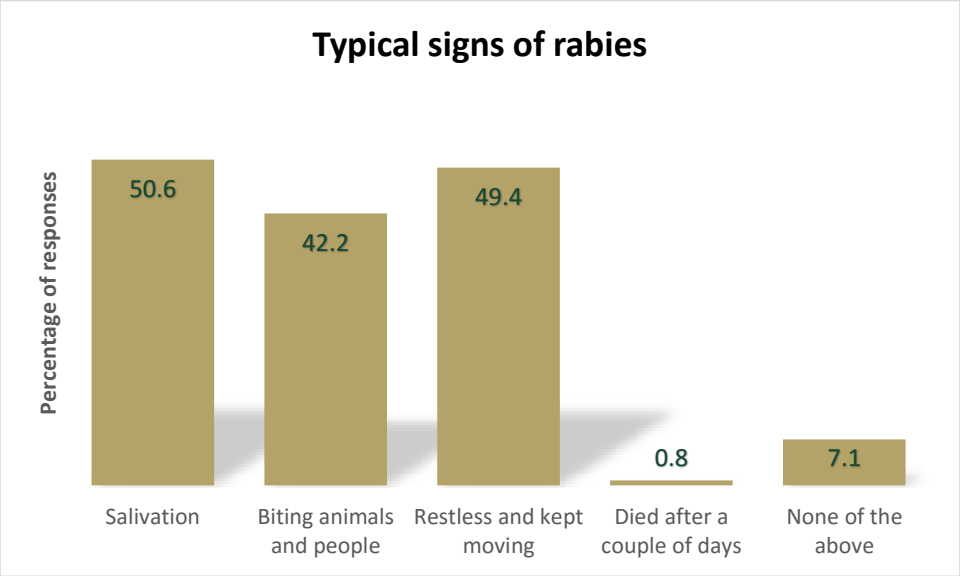
In regards to street dog management, many (47.3%) replied that "owners should confine and control their dogs", when asked what the best thing would be to manage street dogs (Figure 7). Whereas 35.9% thought that "poisoning" should be the method to control street dogs and 15.8% would like to sterilize and vaccinate street dogs and only 1% thought that they should be left alone. Therefore, collectively the majority of respondents (63.1%) think that dogs should be humanely managed and responsible pet ownership should be encouraged.

Figure 7: Attitudes towards management approaches of street dogs



Overall the knowledge of rabies was overwhelmingly high with only 2.3% not knowing about rabies and only 7.1% of the respondents not being able to describe the most common signs of rabid animals (e.g. salivation, biting of people and other animals, restless movement etc.)(Figure 8).

Figure 8: The percentage of respondents who prompted the most common signs (listed on the x-axis) when asked how they would know an animal was rabid. Note, multiple answers were possible.



The vast majority (88.8%) was aware that dogs are a vector transmitting rabies and only 10.9% said they weren't sure how rabies is transmitted to humans. When asked if they know of any rabid dogs in their neighbourhood in the last 12 months, 46.1% had heard of a dog in their neighbourhood but 53.9% were not aware of any rabid dogs.

When it comes to treatment of dog bite wounds, 97.5% of the respondents consider rabies serious enough to seek treatment at a hospital, however 27% would also rely on home remedies at the same time. Infrastructure often seemed to be a problem and although people were aware that attending a hospital after a bite incidence is important, it is questionable if 85% would actually seek treatment. People who witnessed neighbours or family members dying from rabies often shared that the rabies victim was admitted to the hospital when signs of illness had occurred and the situation seemed more pressing.

While knowledge of rabies is overall high and many people own dogs, the majority of respondents did not think that they lived in a rabies endemic area. When asked if they thought rabies was common in their area where they live, 70.5% responded “No” and only 29.5% responded “Yes”, showing that educational efforts need to increase alertness to the topic. It might be a lack of understanding that rabies, although not necessarily present in their villages at all times, is a constant threat and rabies spreads easily if dogs are not vaccinated and controlled by their owners. This could be addressed and incorporated as an important concept as part of responsible dog ownership education in mass anti rabies programs in Machakos County.

5. Conclusions and Recommendations

This survey shows that dogs are important for people living in Machakos County, who depend on their dogs to provide protection for their premises and their crops/livestock.

Dog bite rates are high in Machakos County, with about 400 recorded dog bites per year resulting in an annual expenditure of 73 Million Kenyan Schilling (KES) for the County (personal conversation with Dr. Waweru, January 2017). However, the number of unreported dog bites can be assumed even higher. In regards to dog bites, respondents considered post exposure treatment expensive, not readily available, and involving complicated procedures in most rural and some urban parts of the County. It is recommended that the procedures and availability of post exposure treatment be improved in order to reduce the impact of rabies on the human population.

Anecdotally, drought prone areas such as Mwala and Yatta experience an emigration of dogs during dry season into urban areas because dogs are looking for water and food. This not only creates problems with the locally existing dog population but also poses a risk of increasing dog bite incidences with humans. It might be useful to consider supplying drinking water during the dry season (and supporting humanitarian efforts) to prevent dogs from migrating into the urban areas when water is scarce.

Unconfined and roaming owned dogs contribute to the street dog population by breeding uncontrolled. It can be assumed that puppies born to owned females have, additionally, a better chance of survival due to provided food and water from the

owners. But as previously mentioned breeding season related migration of dogs increases the risk and actual spread of rabies across village boundaries. Reaching significant sterilization levels in a dog population will help to mitigate these problems.

Albeit understanding that confining owned dogs, hence responsible dog ownership, should be part of the solution to fight rabies (47.3%) and the problem of roaming dogs, the household survey also shows that the vast majority does not confine their own dogs at some or at all times. Therefore people have not yet realized that they need to be part of the solution by changing their behaviour. An anti-rabies program should integrate human behaviour change as one of the central elements and must ensure to include communities in the process of becoming rabies free and encourage and facilitate responsible dog ownership practices.

A prerequisite for a successful program is the willingness of dog owners to be a part of the program. Our results show that in Machakos we have excellent conditions with high levels of willingness to have dogs vaccinated (99% in rural and 98.7% in urban) and sterilized (67.4% in rural and 51.6% in urban). A community based program to eradicate rabies, therefore, appears to be appropriate for Machakos County.

HSI has observed that the number of dogs in and around human communities is relatively constant for the specific community. Therefore, removing dogs from Machakos County (or any community) results in a “vacuum” effect that leads to immigration, increased acquisition of dogs and/or increased breeding success. An increased influx of dogs or an increased number of young dogs will likely exacerbate the problem of rabies and dog bites. We recommend that a humane dog management program be implemented across the entire County. Such a program would entail the immediate end of culling and an increased availability of dog vaccination and sterilization resources in the County. This will lead to a more stable dog population that will reduce dog bite incidence and the likelihood of a rabies outbreak.

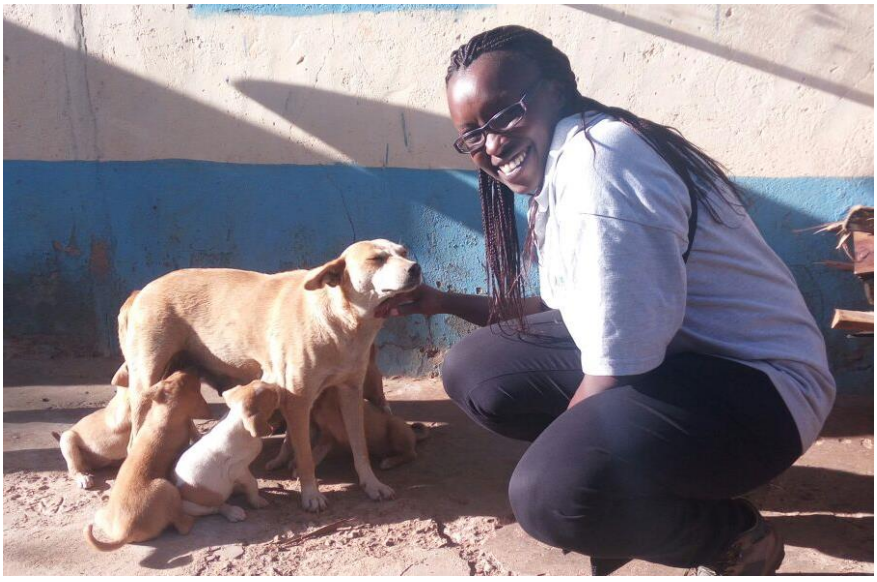


Photo 3: Dr Maryanne, ANAW, petting an owned unconfined dog and her puppies.

6. Appendices

I. Summary table of the KAP survey responses

Do you own a Dog?				
	Total	% of total		
Dog Owning Household (DOHH)	246	62.6		
None Dog Owning Household (NDOHH)	147	37.4		
Question 1: Have you been to a veterinarian with your dog/s in the last 12 months?				
Answers:	Total	% of total respondents	% of DOHH	
Once	25	6.4	10.2	
More than once	11	2.8	4.5	
No	208	52.9	84.6	
There is no veterinarian	2	0.5	0.8	
Question 2: Why do you own a dog? (multiple responses possible)				
Answers:	Total	% of respondents	% of DOHH	
Pet/companion	4	1.0	1.6	
Guard crops and livestock	8	2.0	3.3	
Herding	1	0.3	0.4	
Guard the premises	244	62.1	99.2	
Question 3: What is the best thing to do with street dogs?				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
Poisening	141	35.9	14.6	9.9
Sterilization and vaccination	62	15.8	6.4	4.4
Leave them alone	4	1.0	0.4	0.3
Owners to confine/control them	186	47.3	19.2	13.1
Question 4: Do you know the disease rabies?				

Answers:	Total	% of respondents	% of DOHH	%NDOHH
Yes	384	97.7	39.7	27.0
No	9	2.3	0.9	0.6
Question 5: What are the typical signs? (multiple responses possible)				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
Salivation	199	50.6	20.6	14.0
Biting animals and people	166	42.2	17.2	11.7
Restless and kept moving	194	49.4	20.1	13.7
Died after a couple of days	3	0.8	0.3	0.2
None of the above	28	7.1	2.9	2.0
Question 6: Do you think you live in an area where rabies is common?				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
Yes	116	29.5	12.0	8.2
No	277	70.5	28.7	19.5
Question 7: How do you think rabies is transmitted to humans? (multiple responses possible)				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
I am not sure	43	10.9	4.4	3.0
Humans	1	0.3	0.1	0.1
Cat	9	2.3	0.9	0.6
Dog	349	88.8	36.1	24.6
Witchkraft	0	0.0	0.0	0.0
Other animals	47	12.0	4.9	3.3
Question 8: Have you heard of someone who died after a dog bite in the last 12 months?				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
Yes	16	4.1	1.7	1.1
No	377	95.9	39.0	26.5

Question 8a: Did you know the dog?				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
No	2	0.5	0.2	0.1
Unknown dog	7	1.8	0.7	0.5
From my village	7	1.8	0.7	0.5
Question 9: Have you heard of a rabid dog in your community in the last 12 months?				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
Yes	181	46.1	18.7	12.7
No	212	53.9	21.9	14.9
Question 10: How would you treat a bite wound? (multiple responses possible)				
Answers:	Total	% of respondents	% of DOHH	%NDOHH
Don't know	5	1.3	0.5	0.4
Home remedy	106	27.0	11.0	7.5
Hospital	383	97.5	39.6	26.9