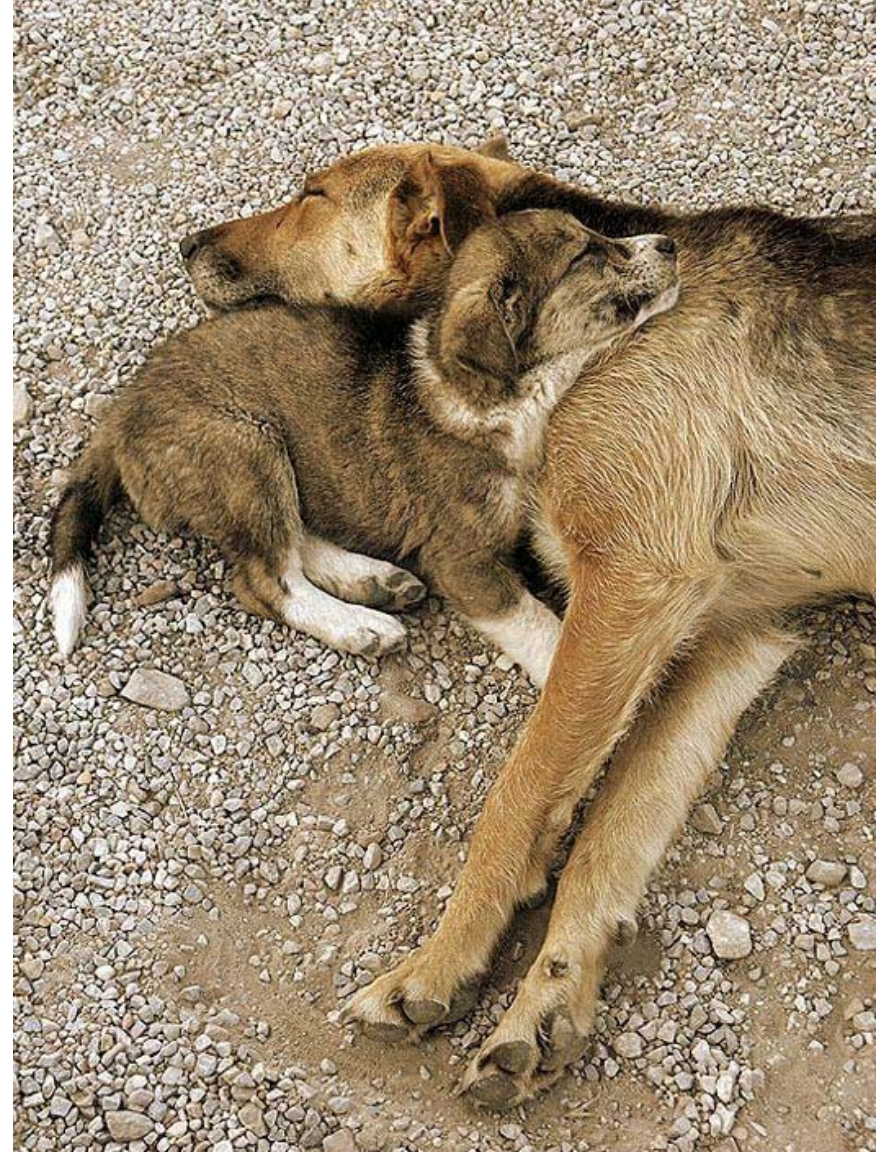




# The solution to the Istanbul stray dog problem

March 2006



## TABLE OF CONTENTS

|   |    |
|---|----|
| 1. INTRODUCTION   | 3  |
| - Why spend money on dogs?                                      | 3  |
| 2. STRAY DOGS STATISTICS  | 4  |
| 3. RABIES   | 5  |
| 4. SOLUTIONS: “Neuter and Return”                               | 5  |
| 5. POLICIES THAT FAIL:  | 6  |
| - Killing   | 6  |
| - Incarceration   | 8  |
| 6. SHKD ‘s WORK SO FAR  | 9  |
| 7. SCHOOL EDUCATION PROJECT                                     | 11 |
| 8. F.P.C.C.’S METHODS   | 12 |
| 9. PROJECTIONS NEUTER AND RELEASE IN A TYPICAL MUNICIPALITY     | 13 |
| 10. MUNICIPAL COMPLAINTS FATIGUE                                | 16 |
| 11. THE ONLY ANSWER: PRIVATE ENTERPRISE – PUBLIC SECTOR PROJECT | 16 |
| 12. DOG POPULATION MANAGEMENT BOARD                             | 17 |
| 13. LOCAL NEUTERING CLINICS                                     | 18 |
| 14. PUBLIC RELATIONS / VOLONTEERS                               | 18 |
| 15. PROJECT COSTS   | 19 |
| 16. COMMERCIAL SPONSORSHIP                                      | 21 |
| 17. FUTURE USE OF CLINICS AND DOG CONTROL                       | 21 |
| 18. LICENSING OF DOG BREEDERS                                   | 22 |
| 19. PITFALLS  | 22 |
| 20. LOBBYING  | 22 |
| 21. CONCLUSION  | 23 |

## INTRODUCTION

Street dogs cause road accidents and nuisance, wake residents at night, disturb rubbish, frighten children and cause complaints to municipalities. The sight of hungry, sick dogs foraging desperately for food, or of their dead bodies squashed on Romania's roads, is distressing to visitors and residents alike and tarnishes Turkey's image as an applicant to the European Union. Most of these miserable strays are potentially loyal, affectionate companions, pets and guard dogs. The problem is worse in Turkey because of the proliferation of rubbish and the mutual fear between dogs and human residents, which makes the dogs difficult to approach and tame.

The purpose of SHKD (Sahipsiz Hayvanlari Koruma Dernegi which is Turkish for Society for the Protection of Stray Animals) is to solve Istanbul's stray dog problem effectively and humanely.

This paper deals only with the European side of Istanbul where SHKD has been active. The same problems and solutions apply to the Asian side and indeed to all towns and cities in Turkey.

*“Each habitat has a specific carrying capacity for each species. This specific carrying capacity depends on the availability....of resources (shelter, food, water). The density of a population of higher vertebrates (including dogs) is almost always near the carrying capacity of the environment. Any reduction in population density through mortality is rapidly compensated by better reproduction and survival. In other words when dogs are removed, the survivors' life expectancy increases because they have better access to the resources, and there is less competition for resources”.* – **World Health Organization Guidelines for Dog Population Management, Geneva 1990, page 9.**



## STRAY DOG STATISTICS

By “stray dog” we mean not only feral dogs, which stay at a safe distance from human beings, but free-roaming dogs or inadequately supervised dogs, which are occasionally or regularly fed by human beings, who may or may not consider themselves the dog’s owner. In other words all dogs except those few which are both fully dependent and always prevented from copulating.

Dr A.C. Vos, who carried out field studies in Istanbul between 1994 and 1998 on behalf of the W.H.O. Rabies Institute in Tubingen, found that in Kavacik, on the Asian side of Istanbul, 30.5% of street dogs were more or less ownerless, with the balance of 69.5% having at least a loose ‘owner’. In the village of Banarli (Tekirdag) 77% of owned dogs were observed free on the streets at night. So it is reasonable to assume that the vast majority of owned dogs in Istanbul is not controlled or supervised enough to prevent breeding.

SHKD’s experience suggests that only about 30% of dogs in Istanbul is to some extent ‘owned’ and that 70% is feral, either from birth or more often from acquired fear of human beings.

We have been unable to find figures for the number of street dogs in Istanbul. Numbers in city areas have temporarily been reduced by recent strychnine poisoning campaigns. SHKD has neutered and released over 700 dogs in the year 2000 in Besiktas belediye. Of these approx. one third has disappeared - poisoned or dumped outside Besiktas municipal boundaries. These removed dogs will gradually be replaced by fertile immigrants from surrounding areas; Besiktas belediye and SHKD will now have to spend more money and effort catching, neutering, vaccinating and releasing these new immigrants



The ownerless dog population depends solely on the carrying capacity of the area which in turn in a temperate climate with plentiful water depends solely on the food available. The food on which feral dogs survive is mainly edible rubbish. Semi-stray dogs survive on both edible rubbish and on handouts from 'owners' or animal lovers incl. tourists. The rubbish and handouts are in direct proportion to the human population. Stray dogs cannot survive independently of human beings.

Besiktas has a human population of 202783 according to the 1997 census. Assuming that the carrying capacity of Besiktas is 1000 dogs (the 700 we have released plus 300 poisoned or not yet caught) this extrapolates to a ratio of one stray dog for every 203 human residents.

However Besiktas is a relatively wealthy area with less edible rubbish on the streets than in poorer areas.

Semi-stray dogs, those 'owned' by residents but always or sometimes allowed to stray at will, must also be taken into the equation (and of course be neutered and vaccinated). There are relatively few of these in Besiktas but more in poorer areas.

SHKD recently took over the management of Bakirkoy municipality's shelter and clinic in which there are almost 700 dogs. Three ladies we support look after 550 more dogs in Atakoy..



There are probably another 650 stray and free roaming dogs in Bakirkoy. We can therefore assume that the carrying capacity of Bakirkoy, with a human population of 214417, is about 1950 dogs (a ratio of 1: 110).

In Gokturk village (excl. Kemer Country estate) there is a human population of ca. 3100 people. SHKD has neutered, vaccinated and released 583 dogs in Gokturk and surrounding areas. This is a ratio of 1 dog per 5.3 human beings ! However many of these dogs have been dumped from Istanbul city areas and have infiltrated from Kemerburgaz rubbish dump. Others have been dumped on the new rubbish tip. SHKD is ensuring their 'artificial' survival by feeding them in forest areas around Gokturk. Virtually every stray dog in the Gokturk area is known to us.

These are the figures for areas covered intensively by SHKD assuming that we have caught 80% of the potential dog population (100% in Gokturk):

| <i>Locality</i> | <i>No. of dogs</i> | <i>Human Population</i> | <i>Ratio dogs:people</i> |
|-----------------|--------------------|-------------------------|--------------------------|
| Bakirkoy        | 1950               | 214417                  |                          |
| Besiktas        | 1000               | 202783                  |                          |
| Gokturk         | 583                | 3100                    |                          |
| Akpinar Koy     | 59                 | 1834                    |                          |
| Pirincci        | 186                | 3699                    |                          |
| Bahcekoy        | 228                | 4072                    |                          |
| Zekeriyakoy     | 133                | 7200                    |                          |
| Karaburun       | 51                 | 888                     |                          |
| Tayakadin       | 43                 | 1097                    |                          |
| Yassioren       | 80                 | 609                     |                          |
| <b>Total</b>    | <b>4313</b>        | <b>439090</b>           | <b>1 : 101.81</b>        |

According to the 1997 census the human population of the European Istanbul conurbation was 5,778,115 (excl. Catalca, Silivri and Bahcesehir which are separated by several kms of open land). We assume the census understated the human population but that it understated it equally in the areas listed above. If the human population is 7 million on the European side of the city one would expect a population of **68.755 stray dogs**.

**Ratio of stray dogs per 1000 human beings in areas covered by SHKD: 9.82**

**So if the human population is 5.778 million there are 56734 stray dogs on the European side of Istanbul.**

There may be a higher density of dogs in poor areas such as Gaziosmanpasa. It is however certainly safe to assume that the carrying capacity of the European side of Istanbul is no more than 100,000 stray dogs (14.28 dogs per 1000 human beings).

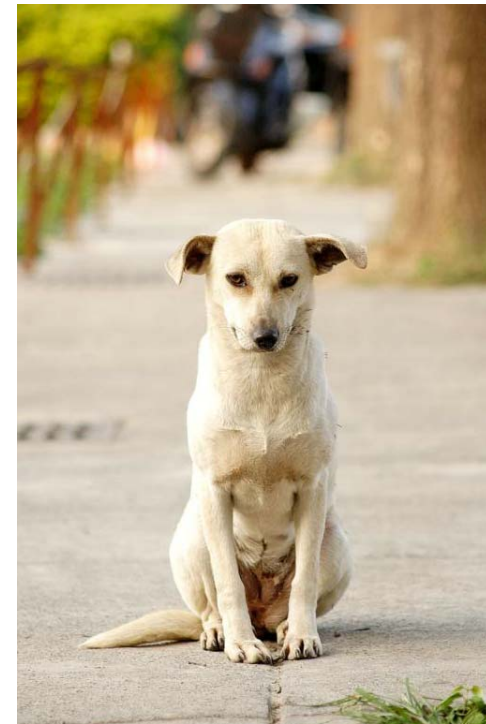
The W.H.O. estimated in 1996 that there were 150,000 owned dogs in the city (Asian and European sides), only 31.9 % of which were vaccinated against rabies. There were 6.8 males to every one female dog owned, presumably because uncastrated males are preferred as guard dogs. Dr Vos estimated a ratio of 1 dog per 17.7 households. If each household had 5 people, this equates to **11.3 dogs per 1000 human inhabitants**.

This may mean that there are more male than female semi-stray dogs which will make a Neuter and Release project quicker and easier to accomplish. Dr Vos in 1995 estimated a ratio of 112 male to 100 female dogs during his field study in Istanbul. However in a similar study in Kusadasi he found as many females as males.

In Jaipur, India, Help in Suffering estimated an average rate of 1.14 males per female dog between December 1995 and November 1999.

It is also likely that there are more free-roaming dogs per 1000 human inhabitants in villages than in the city; villagers may deliberately feed dogs more often than city dwellers as they are more accustomed to living with them as part of rural life.

Also farm dogs in villages are usually free to reproduce at will. So the following figures will be over- rather than under-estimates.



***ESTIMATED NUMBERS OF FERTILE AND UNVACCINATED DOGS BY MUNICIPALITY***

*(excl. the temporary effect of poisoning).*

| <b><i>Municipality</i></b> | <b><i>Human Population</i></b> | <b><i>Probable <u>fertile</u> stray dogs.</i></b> | <b><i>Area sq.km.</i></b> |
|----------------------------|--------------------------------|---|---------------------------|
| 1. Avcilar                 | 214621                         | 2108  |                           |
| 2. Bagcilar                | 487896                         | 4791  |                           |
| 3. Bahcelievler            | 442877                         | 4349  |                           |
| 4. Bakirkoy                | 222336                         | 650   |                           |
| 5. Bayrampasa              | 240427                         | 2361  | 8                         |
| 6. Besiktas                | 202783                         | 50 (+700 Neutered & Released)                     |                           |
| 7. Beyoglu                 | 231826                         | 2276  | 9                         |
| 8. Esenler                 | 344428                         | 3382  |                           |
| 9. Eyup                    | 254028                         | 2495  | 242                       |
| 10. Fatih                  | 432590                         | 4248  | 10                        |
| 11. G.Osmanpasa            | 649648                         | 6380  | 163                       |
| 12. Gungoren               | 273915                         | 2690  |                           |
| 13. Kagithane              | 317328                         | 3116  | 16                        |
| 14. K.Cekmece              | 460388                         | 4521  | 152                       |
| 15. Sariyer                | 229600                         | 2255  | 146                       |
| 16. Sisli                  | 257049                         | 2253 (+271 neutered & released)                   |                           |
| 17. Z. Burnu               | 228786                         | 2247  | 11                        |
| 18. B.Cekmece              | 287589                         | 2824  | 213                       |
| <b>Total</b>               | <b>5778115</b>                 | <b>52996</b>                                      | <b>1000 sq.km.</b>        |

***(35.25 dogs per km<sup>2</sup>)***

*These figures take no account of dogs neutered without SHKD's knowledge by other responsible animal lovers or organisations on the European side of Istanbul.*

## RABIES

*‘Since dog elimination in general is very cost-intensive and lacks any positive impact on the occurrence of rabies, it is not recommended.’ -Report of W.H.O. Consultation on Dog Ecology Studies related to Rabies control, Geneva, 22-25 February 1988 (page 11).*

India has over half the world’s human deaths from rabies; each year approx. 20,000 Indians die of the disease. In Jaipur, Rajasthan, a city of 2.5 million people, there should statistically be about 50 human deaths from rabies each year. Fortunately for the residents of Jaipur the local government stopped poisoning its street dogs seven years ago and agreed to co-operate with a ‘neuter and release’ project implemented by ‘Help in Suffering’, a local charity operating with meagre resources in a city far poorer than the most impoverished part of Istanbul. Since 1994 Help in Suffering has neutered, vaccinated and released over 15000 dogs.

**Official statistics# in Jaipur show that there has not been a single human death from rabies since 1996, an average of 50 human lives saved per year thanks to ‘Neuter and Release’.**



**Furthermore the number of (usually non-rabid) dog bites fell from 1151 in 1996 to only 219 in 1997 and 220 in 1998 - an unexpected benefit of Help in Suffering’s work in Jaipur.**

**# Source: Asst. Director, Dep’t of Medical Health, Jaipur, India.**

SHKD has examined, neutered and vaccinated over 7000 dogs in Istanbul in the last two years; we have not had a single case of rabies.

We have had 30 cases of encephalitis\*, a swelling of the brain caused by fever. The symptoms are identical to those of rabies but encephalitis is not contagious. Dogs bitten by these apparently rabid dogs have been quarantined for several months and have not developed rabies. Dogs with encephalitis bite at everything near them and foam at the mouth like rabid dogs, unable to drink or eat.

It is probable that such cases of encephalitis **as well as genuine cases of rabies** are often used, intentionally or unintentionally, as a pretext for mass extermination of healthy stray, semi-stray and family dogs.

This policy is self-defeating. By exterminating healthy dogs, already vaccinated against rabies, the poisoners are simply making room for unvaccinated dogs, which might possibly become rabid.

**Rabies is a serious and growing threat to the people of Istanbul and to tourism. The elimination of rabies rather than animal welfare considerations is the most compelling and urgent justification for the implementation of SHKD's Neuter and Release policy. It has been proven scientifically that if 70% of a carrying species is vaccinated against rabies the spread of the disease is halted.**



**Our Neuter and Release policy, in conjunction with an oral vaccination campaign, is the only effective way to prevent more human deaths from rabies in Istanbul. After discussions with both the Ministry of Agriculture and the Ministry of the Environment in Ankara we believe that such a campaign will enjoy their support if the funds and the political will can be found.**

**All neutering clinics should have multipurpose quarantine facilities in case there is a suspected case of rabies or another infectious or dangerous disease.**

*\* Encephalitis is not to be confused with 'false rabies' (yalanci kuduz in Turkish, infectious bulbar paralysis) which has clearly distinguishable symptoms.*

## SOLUTIONS

There are only 3 ways to solve stray dog problems. (1) To kill or remove every single fertile bitch. (2) To remove the food source, i.e. remove all rubbish from the streets so that the dogs starve to death. Or (3)

### **‘Neuter and Release’.**

***‘In the long term, control of reproduction is by far the most effective strategy of dog population management’ - W.H.O. Geneva Guidelines for Dog Population Management, page 72.***

Extermination campaigns, for example the recent indiscriminate strychnine poisoning of dogs at night irrespective of whether they are neutered and vaccinated or indeed pets with owners, have never succeeded in Istanbul.

‘Neuter and Release’, the policy advocated by the World Health Organisation and the World Society for the Protection of Animals, solves the problem permanently, although dogs have to be tolerated on the streets for 3-5 years for it to succeed. Providing it is implemented to the edge of the urban area it is however a permanent and humane solution which politicians can be proud of.

Istanbul needs to invest money and effort now to solve the problem for ever.

Stray dog populations anywhere depend solely on the amount of food available. Nature adjusts the population to the carrying capacity of the territory. If just one fertile female escapes being poisoned she can breed up to 67,000 offspring in 6 years.\* That is why poisoning will never succeed unless every single female is exterminated.

If however the carrying capacity of an area is filled with sterile animals the population will gradually die out, providing no fertile dogs can infiltrate from surrounding areas and providing freshly abandoned dogs are collected by dog wardens, police and residents (as in developed countries).

\* source: Doris Day Animal League, U.S.A.



## **POLICIES DOOMED TO FAIL: POISONING AND INCARCERATION**

*'Removal and killing of dogs should never be considered as the most effective way of dealing with a problem of surplus dogs in the community: it has no effect whatsoever on the root cause of the problem' - Guidelines for Dog Population Management, W.H.O., Geneva, 1990, (page 74).*

*'In none of the study areas did the elimination of dogs by any method have any significant long-term effect on dog population size' - Report of W.H.O. Consultation on Dog Ecology Studies related to Rabies control, Geneva, 22-25 February 1988 (page 11).*

### **(a) Poisoning.**

This is usually done surreptitiously between midnight and 2 a.m. by municipal workers or by private contractors to municipalities who then return to collect dead bodies. We have been told that it is the policy of the Ministry of Agriculture in Ankara. Meatballs are laced with a high dose of strychnine and are thrown out of vans in areas where stray dogs (are believed to) live. No notice is given to local residents of poisoning so dog owners are unable to protect their pets from it. However poisoners usually desist when confronted by members of the public.



The poisoning is indiscriminate and appallingly cruel. Death is slow and agonising. Many pets and neutered dogs have eaten poisoned meatballs. SHKD knows of many deaths of pets in places such as Kemerburgaz, where almost all the stray dogs have in any case been neutered and vaccinated by us. There is even the possibility that an unsupervised infant could eat a poisoned meatball.

Outbreaks of rabies are the pretext for these extermination campaigns, although as far as we know there has never been any proof that the rabies panics are based on anything more than rumour and fear.

Officials and municipal vets are reluctant to admit knowing anything about these extermination campaigns and we have not found any official or politician willing to defend strychnine poisoning to us.

In the short term poisoning does somewhat reduce the stray dog population. However it is impossible to carry poisoning out intensively and persistently enough to reduce the stray dog population other than temporarily. It can never eradicate feral dogs. If poisoning worked the stray dog population of Istanbul would have been eliminated centuries ago.

If each fertile bitch has 8 live puppies twice a year 71% of all fertile females must be poisoned twice a year before the population starts to diminish slowly. If as many as 80% of all fertile females could be poisoned every 6 months the stray dog population in a typical municipality would be reduced from 4000 dogs to 1084 dogs after 7 years (again assuming each bitch has 8 live puppies twice a year).

***This compares to a stray dog population of only 52 after 7 years if Neuter and Release is implemented.***

Whereas 'neuter and release' can be carried out 24 hours per day every day of the week openly and with the co-operation of animal lovers, poisoning has to be carried out secretly and occasionally because of the likelihood of protests and disruption.

If animal lovers and owners of semi-strays know poisoning is likely they will do their best to protect the dogs they look after.

Poisoning would have to be carried out persistently in every area of every municipality for six years probably once a week, without disruption from 'animal protectors', to kill 80% of the dogs every breeding season, and it would still take 7 years of consistent poisoning to reduce the dog population to 27.1% of the carrying capacity !



The problem for the poisoners is that the dogs can breed so fast - according to the Doris Day Animal League one female dog and her offspring can produce 67000 puppies in 6 years ! - that all they achieve is a temporary reduction in the dog population. Every surviving bitch breeds. And no dogs are vaccinated against rabies. With 'neuter and release' most of the bitches on the streets don't breed and die natural deaths, although for 4 years the dog population is higher than with 80% poisoning.

**(b) 'Catch and Incarcerate'**

This was tried in 1912 by the Ottoman government. 5000 dogs were caught and shipped to the small island of Oxia where, without food or water, they starved to death. It is said that their anguished cries could be heard by the residents of Istanbul at night.

This is amazingly also the policy adopted recently by the authorities in Istanbul but not put into practice except in Bakirkoy (the management of whose shelter and clinic S.H.K.D has recently taken over in order to alleviate the suffering of the incarcerated animals). By removing and imprisoning animals in camps, municipalities are simply creating empty feeding territories which nature will soon fill with new fertile dogs, as the Sultan discovered in 1912.



So 'Catch and Incarcerate' makes the problem worse, not better (*see below*).

In Turkey there is little or no hope of rehoming these imprisoned dogs. SHKD has been able to place in Turkish homes less than 1% of its dogs and many of those have been 'adopted' as guard dogs for factories or prisons, not as domestic pets.

The dog population in Bakirkoy will gradually recover to the carrying capacity of the municipality of about 1950 dogs in addition to the 700 dogs SHKD is looking after in the shelter and the 550 dogs the three kind ladies are caring for .

Why does Catch and Incarcerate make the problem worse ?

Because nature ensures that every dog taken off the streets is replaced by a new dog. Live puppies which would have found so little food that they would have died of illness or starvation if territories were still occupied by their incarcerated owners, can now occupy those feeding territories, survive and breed. So unless every single female in a municipality and all areas within 7 km. of that municipality is caught, which is highly unlikely, the stray dog problem will continue and the municipality will end up with thousands of dogs incarcerated at huge expense in its shelter plus the original number of dogs on the streets !

Badly run 'shelters'

Shelters run or controlled by municipal vets and managed by profit making contractors are likely to become little more than death camps as illustrated by the sad case of Bakirkoy, built of course at the expense of local tax payers. According to the contractors' figures the death rates, likely to be under-estimated rather than over-estimated, were as follows:

| Period                               | Contractor | Deaths | Average deaths/month |        |       |
|--------------------------------------|------------|--------|----------------------|--------|-------|
|                                      |            |        | Puppies              | Adults | Total |
| 20.5.98 - 31.12.98                   |            | 470    |                      |        | 74.3  |
| 1.1.99 - 23.9.99                     |            | 565    |                      |        | 64.6  |
| 24.9.99- 7.3.00                      |            | 308*   |                      |        | 56.0  |
| *extrapolated as figures are missing |            |        |                      |        |       |
| 8.3.00 - 5.11.00                     |            | 315    |                      |        | 39.4  |
| 6.11.00 - 30.11.00                   | S.H.K.D.   | 34     | 12                   | 46     | 55.2  |
| 1.12.00 - 15.12.00                   | S.H.K.D.   | 11     | 4                    | 15     | 30.0  |
| 16.12.00-31.12.00                    | S.H.K.D.   | 10     | 3                    | 13     | 26.0  |
| 1.1.01 - 31.1.01                     | S.H.K.D.   | 5      | 1#                   | 6      | 6.0   |

# plus 3 adult dogs from outside the shelter.

Despite the mayor allegedly appointing an animal lover as supervisor, the dogs died from illnesses due to malnutrition and, before SHKD's arrival, lack of veterinary care.

It can be seen from the above diminishing death rate, despite the winter weather, that under S.H.K.D.'s management far fewer dogs are dying. This is because the dogs are properly fed, they are now vaccinated against canine diseases and they now receive adequate veterinary care whatever the expense.

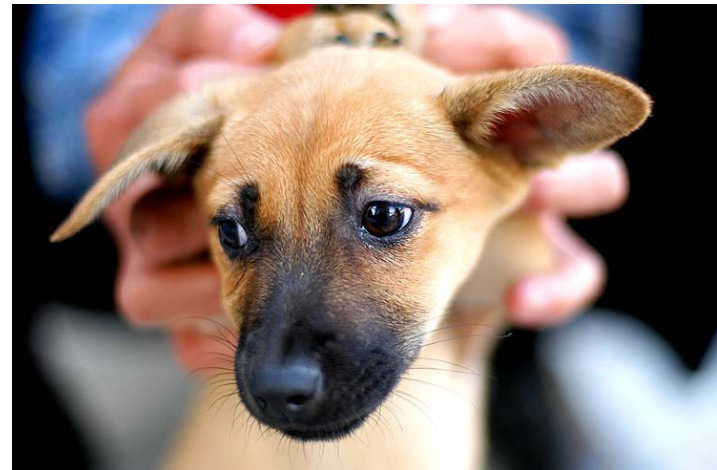
### **SHKD WORK SO FAR**

SHKD has built a shelter and neutering clinic in Gokturk outside Istanbul. SHKD has neutered and vaccinated over 7000 stray, semi-stray and owned dogs during the last two years. We make no charge for this service (although donations are very welcome).

Although some of our neutered dogs in Kemberburgaz and Bahcekoy have been poisoned, and there are some dogs not yet caught in the above areas, there will no longer be a stray dog problem in these peripheral areas of Istanbul when the current generation of dogs dies natural deaths (unless new dogs continue to be dumped there). .

SHKD has neutered and enclosed over 1500 dogs previously dumped by misguided and irresponsible residents and municipalities on the rehabilitated Kemberburgaz rubbish dump. However feeding and caring for these dogs does nothing to reduce the dog population in Istanbul. These 1500 dogs have already been replaced by 1500 new dogs in the city.

SHKD implements 'Neuter and Release' in Besiktas and Sisli in cooperation with these municipalities. However Besiktas and Sisli are only 'lighthouse projects' to show the way.



For as long as surrounding municipalities fail to follow suit the problem in Besiktas and Sisli will not be solved ; when the dogs we have neutered and vaccinated there die, they will be replaced by fertile dogs infiltrating from surrounding areas to fill the void.

All released dogs are fitted with a non-removable collar or ear clip and an unique number is tattooed into one ear under anaesthetic, normally when the dog is neutered. Some dogs put on weight after neutering and the fixed collar becomes too tight, so we are now looking for a suitable elastic material for permanent collars. Fixed collars cannot be used on growing puppies either of course. So despite the danger of infection we must reluctantly conclude that small ear clips are for the time being the most practical method of identifying stray dogs from a distance.

A record is kept of every dog, including the place and date of release.



## PROJECTIONS FOR NEUTER & RELEASE

### NEUTER AND RELEASE PLAN FOR A MUNICIPALITY WITH 4000 STRAY DOGS (human population 407000).

#### *Assumptions:*

1. That the average life of a *street dog* (i.e. all unsupervised dogs free to breed) which survives to breeding age is between 3.5 and 4 years. So 12.5% dies every 6 months.
2. That the male:female population at birth and the death rate are 50:50 (although the 'owned' dog population may be slightly more biased towards males in reality).
3. That a well trained vet team can neuter 9 females and 1 or 2 males per day.
4. That recuperation facilities are available for 50 dogs per clinic.
5. That all females have 2 litters per annum with 8 live births per litter. Although this is high for feral dogs, up to 70% of the dogs may be 'owned' or abandoned owned dogs.
6. That 50% of live puppies dies before they can breed.
7. That only the same number of surviving puppies will live until breeding age as older dogs which die during the same period for as long as the carrying capacity of the area is full; and that the others die of hunger, weakness etc.

8. That clinics practise early age neutering from age 3 months upwards if necessary on litters of surviving puppies, rather than releasing puppies un-neutered.

9. That the female dogs which die naturally (250 per half year for the first 5 years of the project) do not breed in the half year of their deaths, or if they do, that none of their puppies survives.

10. That each clinic employs two dog catching/release teams at night and one team during the day 6 days per week. SHKD caught and neutered 289 dogs in the first 3 months of 2000 in Besiktas with one dog catching team. A target of 90 dogs per team per month is therefore feasible.

11. That dog owners who allow their dogs to stray, or who abandon them, will bring them to the clinic for free neutering and vaccination.

12. That priority is given to neutering females before males. The neutering of males has limited short term impact on the population.

14. That 70% of females are caught and neutered in the first 6 months. That 80% of the remaining fertile females are caught and neutered in the next 18 months. And that 90% of remaining fertile females are done in the fifth and sixth 6 month seasons when our teams will have more time to concentrate on catching difficult dogs.

### ***Results:***

- Within 1 year over 90% of the stray dog population is vaccinated against rabies.
- Within 5 years the stray dog population is reduced to 27.8% of present levels.
- Within 6 years the stray dog population is virtually eliminated (as in W. Europe).

If more females than 645 can be caught in the 2nd 6 month period - i.e. 725 females (90% of the remaining fertile females incl. puppies) - the process will be speeded up.

If the average life span of the female street dogs is 2.5 to 3 years rather than the 3.5 to 4 years projected the stray dog population will almost die out within 4 years.

### ***Life-span of street dogs:***

This is in practice probably varies, for dogs which survive to breeding age, from one year to 8 years. Except for animals regularly fed nutritious food by humans, i.e. 'free roaming' dogs, it is unlikely that a street dog will survive beyond 8 years, and only 7 - 8% survives beyond 5 years.

SHKD has the age records of 5587 dogs neutered in our Gokturk and Bakirkoy clinics (see section 20 of this report). 2763 dogs (49.5%) were between 3 months and one year old. Only 404 dogs (7.23%) were estimated by our vets as being older than five years. These figures may be biased towards young dogs, many of which are puppies which have grown up in our care, and away from adult dogs which are harder to catch. 68% were females, but this reflects our targeting of females to reduce the unwanted dog population.



Out of 1500 adult dogs cared for by SHKD in open areas near the rehabilitated Kemberburgaz rubbish dump only 27 dogs have died in 18 months (7 dogs in road accidents after escaping from our shelter). This suggests that the average life expectancy of outdoor dogs with a regular nutritious food source - dogfood one day, dry bread the next - vaccinated against DHLPP and protected from road accidents and poisoning, is at least 8 years.

On the other hand the average age of 477 dogs (3 months and older) neutered by us in Bakirkoy in November 2000 - January 2001 is less than 2 years, suggesting that Bakirkoy's feral and semi-stray dogs die on average at about 18 months of age. We do not know to what extent this low life-expectancy is due to poisoning, road accidents, and incarceration in the municipality's shelter with inadequate food and care.

In W.H.O. studies in Ecuador, Tunisia and Sri Lanka the dog population was roughly 28% under one year old, 17% between 1 and 2 years, 14% between 2 and 3 years, 11% between 3 and 4 years, 8% between 4 and 5 years, 7% between 5 and 6 years and 15% above 6 years old. Life expectancy of free roaming dogs in Zimbabwe was estimated in 1987 at 4.6 years.

### *Abandoned dogs:*

Abandoned pets will continue to be a problem long after Neuter and Release has finished, as indeed they are in Western European cities. However former pets will be easy to catch as they are used to and even seek human contact. People must be educated to collect them or report them to the Police or their local clinic and municipal dog wardens should bring them to the clinic. One hopes they can then be rehomed in Turkey or Europe. Even bitches on heat when abandoned are likely to be caught by dog wardens or brought to clinics before giving birth.

Dog owners who are unable or no longer wish to keep their dog should be educated by publicity to bring their dog to their local clinic rather than to abandon it on the streets.



## THE ONLY PRACTICAL ANSWER

The only solution is a private enterprise - public sector project financed and empowered by Government but implemented by a committed non-profit private organisation or organisations (perhaps one for the European and one for the Asian side of Istanbul).

Public bodies are often too cumbersome, bureaucratic and conservative to succeed in implementing 'Neuter and Release'. Officials lack the motivation radically to change the status quo.

On the other hand private organisations like S.H.K.D., however efficiently run, lack the finance and the authority to implement a solution in a city as large as Istanbul.

Such a project must be centrally financed either by the Governor on behalf of the Government in Ankara or by the Greater Istanbul Municipality. It cannot be left to individual municipalities because one or two incompetent or uncooperative municipalities will sabotage the project for all the others. Local municipalities must be obliged to provide land or a suitable building for at least one neutering clinic with adequate recuperation and quarantine facilities. If they fail to do so a suitable property must be compulsorily taken over. Local officials and municipal vets must have no power or ability to obstruct the project.



Centrally financed clinics would neuter and release dogs from neighbouring municipalities if they have spare capacity. Municipal borders would not be a barrier to co-operation any more than they are a barrier to the dogs themselves.

The following municipalities have already constructed neutering clinics as per the Governor's instructions, which can be incorporated into the project:

**Besiktas  
Bakirkoy,  
Fatih,**

**Zeytinburnu,  
Kucukcekmece  
Gaziosmanpasa  
(small)  
Bayrampasa (small)**

The Greater Istanbul Municipality already has clinics in Eyup and Sariyer municipalities. Sisli, Bahcelievler and Gungoren intend to build clinics.

## **DOG POPULATION MANAGEMENT BOARD**

An organisation must be established to run Istanbul's Dog Population Management Project effectively and dynamically as private businesses are run. An expatriate Chief Executive, experienced in managing public service companies or projects, should be appointed so that there is no question of corruption or political nepotism. He should be answerable directly to a Board consisting of a representative of the Governor or relevant Ministry in Ankara, a representative of a respected world body such as WSPA, an appointee of the Greater Istanbul Municipality and a representative of an Animal Protection Organisation such as S.H.K.D. A commercial sponsor for the overall project could also appoint a member of the board.

The Chief Executive should be assisted by high calibre Turkish graduates, one of whom could take over as Chief Executive in due course. The financial records should be audited by a firm of internationally respected accountants who appoint a full time Chief Accountant to eliminate any danger of corruption or financial waste.



## EXECUTIVE BOARD

The Executive Board should consist of the Chief Executive, a Logistics Director, a Purchasing Director, a Chief Accountant, a Personnel Director and a Chief Vet (all recruited from the private sector). The Board should employ a veterinary surgeon and 2 assistant vets/veterinary nurses in each clinic in addition to student vets/volunteers. SHKD can provide training in neutering techniques, shelter management and dog catching methods as could foreign animal welfare organisations.

Each municipality would have one or two neutering clinics supplying free of charge neutering and vaccination to all residents and stray dogs collected by residents. Each clinic must have recuperation facilities for 7 times the daily neutering capacity and quarantine facilities for 10 dogs. Preferably also a garden area and car park. Incurable dogs should be euthanased humanely after certification by at least 2 vets. Dangerous dogs should only be put to sleep after observation for at least 10 days and if rehabilitation attempts fail.

The Board's HQ should preferably be situated near to a Neutering Clinic so that Management can keep in day to day touch with problems arising. Space in an existing public building should be used if possible to avoid the need to rent office space.



A public liaison team should field calls and complaints from the public.

## ALTERNATIVE STRUCTURE

To grant the contract to a private sector non-profit organisation such as SHKD at a fixed fee plus \$ 25.00 per dog neutered and vaccinated. But this is only workable if initial bank facilities of min. \$ 3 million\* are made available to the contractor to bridge the gap before funds are received from the Governor or Greater Istanbul Municipality. Financial supervision would be necessary to prevent profit making at the expense of the animals or at the expense of the efficacy of the project and to remove any suspicion of corruption.

This alternative would be cheaper, as there might be no need for a highly paid expatriate Chief Executive and there might be other economies of personnel.

However it would be pointless embarking on the project until poisoning (at least poisoning commissioned by public bodies) is stopped throughout the city.

*\*SHKD's experience with municipalities is that payments are held up on average for 3-6 months due to inertia, bureaucracy and probably lack of money. SHKD and probably any other organisation taking on this Istanbul-wide project would therefore be unable to finance the operation and to wait 3 or 4 months for payment unless substantial bank facilities were made available interest-free, or at a very low rate of interest, with the risk of bad debts from municipalities being carried by Government not the contractor.*



## LOCAL NEUTERING CLINICS

Every municipality, which does not already have a clinic, must be forced to make suitable land and/or a building available for a neutering clinic such as illustrated. The local municipality should provide water, electricity and if possible gas free of charge.

Each clinic would have a manager responsible for supervising personnel, record keeping and organising his dog catching/release teams. Each clinic would need 2 vans (sponsored by advertisers) with 3 dog catching teams. At night 2 dog catching teams would operate. During the day one dog catching team would operate. The other van would be used for supplies. Dog catching teams would work outwards from their clinic until their whole catchment area has been covered.

Municipalities with existing clinics should be incorporated into the Project with the Governor and/or Greater Istanbul Municipality providing a subsidy.





## **PUBLICISING THE PROJECT, NETWORKS OF VOLONTEERS**

A budget of perhaps US\$200,000 should be allocated for advertising for local volunteers and to publicise the location of clinics. Neuter and Release should be advertised and explained to the public. A Public Relations Bureau could be engaged.

A network of volunteer dog wardens should be established in each clinic area. Their job would be to locate, feed, befriend and catch street dogs, then to care for them after release, notifying their local clinic of illnesses, injuries or complaints. They would help to recatch dogs for booster vaccinations. They could also guard catching cages to prevent theft.

Weak, small or handicapped dogs would be held in clinics or passed on to animal welfare groups pending adoption/rehoming.

All personnel and dog wardens would be inoculated against rabies.

## **PERIPHERAL MUNICIPALITIES**

Municipalities outside the Greater Istanbul Municipal area but adjoining it (within 5 kms of the conurbation) must be included in the scheme and must provide land for clinics and cooperate with the Dog Population Management Board or with the contractor.

## **COMMERCIAL SPONSORSHIP**

A main sponsor should be sought to sponsor the whole project. This could be a bank, a pharmaceutical or consumer products company or one of the large holding companies with diverse interests. Their name would appear on all publicity, on the vehicles and on the clinics. Secondary sponsors such as dogfood manufacturers should also be sought.

If the clinic buildings and equipment, the vehicles and the advertising were all sponsored this would save about \$ 1.66 million.

Many companies would be interested in sponsoring a socially beneficial project with short term beneficial results for the human (and canine) population of Istanbul which is supported and supervised by the Governor and/or Greater Istanbul Municipality.





## **FUTURE USE OF CLINICS, DOG CONTROL**

Once the number of stray dogs to be neutered diminishes (within 3 years) to about one per day, the local clinics should be converted into commercial veterinary clinics owned by the local or Greater Istanbul municipality. The clinics could be franchised to private vets on condition that all stray and owned dogs continue to be neutered and vaccinated free of charge or at cost price and that free quarantine facilities are available to the municipality.

A licensing system should be introduced whereby all un-neutered dogs be registered (possibly with microchips or discs) at their local clinic and the owner charged a licence fee starting at \$ 10 in the first year, gradually increasing to \$ 50 per dog in subsequent years. Neutered dogs would also be registered but free of charge. Unregistered and un-neutered dogs picked up or brought in would automatically be neutered before being returned to claimants.

Local clinics could also be used as bases for the enforcement of animal protection laws - bases for local 'R.S.P.C.A's'.

## **LICENSING DOG BREEDERS**

These should be licensed (free of charge) by the Chief Vet of their local clinic who would ensure that no bitch has more than two litters and who would remove the licence of any breeder mistreating or in-breeding animals.

## **PITFALLS**

Failure to provide finance when scheduled.

Corruption by employees/supervisors (especially in purchasing).

Misuse of vehicles. Diversion or theft of medicines/dogfood.

Obstruction by local officials/municipal vets.

Failure by municipalities to provide land/buildings for clinics.



## AGES OF 5587 DOGS NEUTERED IN GOKTURK AND BAKIRKOY

| Age group            | Male | Female | % in age group |
|----------------------|------|--------|----------------|
| 3-11 months          | 805  | 1958   | 49.5 %         |
| 1 yr - 1 yr 11 mo.   | 413  | 905    | 23.6%          |
| 2 yrs - 2 yrs 11 mo. | 184  | 404    | 10.5%          |
| 3 yrs - 3 yrs 11 mo. | 106  | 195    | 5.4%           |
| 4 yrs - 4 yrs 11 mo. | 71   | 142    | 3.8%           |
| 5 yrs - 5 yrs 11 mo. | 37   | 53     | 1.6%           |
| 6 yrs - 6 yrs 11 mo. | 31   | 52     | 1.5%           |
| 7 yrs - 7 yrs 11 mo. | 25   | 37     | 1.1%           |
| 8 yrs plus           | 84   | 85     | 3.0%           |

Ages, with the exception of grown puppies, are of course estimates made by our vets.

The preponderance of females reflects the fact that we concentrate on catching females rather than males in order to limit the number of unwanted puppies as fast and as cheaply as possible.

Our estimate is that 70% of the above dogs are feral dogs, or offspring of feral dogs. Of this 70% perhaps a third are dogs which were probably owned or at least deliberately fed somewhere in the city and which were subsequently dumped, usually by municipal dog 'clean up' squads, on the municipal rubbish dump.

Only about 30% of the above dogs is owned or deliberately fed 'free roaming' dogs.

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