# Advisory Council on Food and Environmental Hygiene 

Trap-Neuter-Return Trial Programme for Stray Dogs

## INTRODUCTION

This paper briefs members on the outcome of the "Trap-Neuter-Return" (TNR) trial programme for stray dogs.

## BACKGROUND

2. The Government's policy objective is to ensure that animals and people co-exist in a harmonious way in Hong Kong. While protecting animal welfare, we take appropriate measures to properly deal with the possible nuisance and public health problems caused by stray animals, such as managing the stray dog population, with a view to safeguarding public hygiene and safety in Hong Kong. In this regard, the Agriculture, Fisheries and Conservation Department (AFCD) had assisted two animal welfare organisations (AWOs) in implementing a three-year TNR trial programme for stray dogs between January 2015 and January 2018. Details of the trial programme were introduced to this Advisory Council in January 2014 (ACFEH Paper No. 3/2014).
3. Under TNR, stray dogs are caught, neutered and then returned to their original habitat. Proponents believe that, through TNR, the stray dog population will decline over time, gradually and naturally from dying of natural causes. It is however noted that so far there is a lack of scientific study in other comparable places to prove the effectiveness of TNR in reducing stray dog population.
4. The TNR trial programme was launched to assess its effectiveness in reducing the stray dog population and associated nuisance in Hong Kong. The Society for the Prevention of Cruelty to Animals and the Society for Abandoned Animals, acting as Programme Coordinators (PCs), carried out the programme in the trial sites in Cheung Chau and Tai Tong, Yuen Long respectively. The PCs recruited carers to feed and catch stray dogs within the trial sites. Dogs in the two sites were caught, dewormed, neutered, microchipped and given anti-rabies
vaccination and other vaccines for major infectious diseases of dogs. The temperament of the dogs caught was assessed.
5. The following three performance targets have been set out in the protocol for the trial programme as agreed with the two PCs:
(a) neutering at least $80 \%$ of stray dogs in the trial sites during the first six months of the programme;
(b) achieving an average of $10 \%$ annual decrease in the population of stray dogs in the sites during the trial period; and
(c) complaints received should be matching with, or lower than, the territory-wide average during the trial period.

## CONSULTANT'S FINDINGS

6. AFCD has commissioned an independent consultant to monitor progress and assess the effectiveness of the trial programme. The Consultant's findings showed that it took the two PCs around ten months to achieve the target of neutering over $80 \%$ of the stray dogs in their respective trial sites (i.e. around four months longer than the agreed target) as it was difficult to capture some of the dogs that were more alert to the trap. This might have left a larger window for reproduction by stray dogs in the sites during the initial period of the study ${ }^{1}$.
7. The Consultant observed the number of stray dogs in the two sites on a monthly basis, and noted that the number fluctuated from month to month. The wide range in counts might be due to a number of reasons, including new dogs entering the sites from time to time and movement of dogs in and out of the areas due to weather and seasonal effects and extra food supplies during festive periods, and relocation of some stray dogs to a shelter by the carers at the Tai Tong site which might not be accessible by the Consultant all the time, etc.
8. Over the three-year study period, the Consultant estimated that there was a $14 \%$ decrease in the number of stray dogs at the Cheung Chau trial site and no significant change in the stray dog population at the Tai Tong site. Neither site achieved the target of an average 10\% annual reduction in the stray dog population. The number of dogs recorded by

[^0]the Consultant in the two trial sites from February 2015 to January 2018 is summarised in Annexes A and $\mathbf{B}$ respectively.
9. The number of stray dog complaints was found to have increased in the Cheung Chau trial site but went down in the Tai Tong site (see the table below).

| Number of Complaints Received Annually |  |  |
| :---: | :---: | :---: |
|  | Cheung Chau | Tai Tong |
| Feb 2014 to Jan 2015 <br> (i.e. before the commencement of <br> the study) | 19 | 14 |
| Feb 2015 to Jan 2016 | 39 | 8 |
| Feb 2016 to Jan 2017 | 27 | 1 |
| Feb 2017 to Jan 2018 | 26 | 6 |

## CONSULTANT'S OBSERVATIONS

10. The target of an average annual reduction of $10 \%$ in the stray dog population was not achieved in the two trial sites. According to the Consultant, this might be due to-
(a) difficulty in recording accurately the number of dogs in the sites ${ }^{2}$ as they could move around the vast site areas;
(b) new dogs entering the sites;
(c) the relatively short period of study when compared to the average lifespan of dogs (around 10-12 years or more for pet dogs), as well as the improved health conditions of stray dogs under the caring of and medical treatment given by the PCs. A relatively small number of dogs died of natural causes during the study. In fact, the number of stray dogs in the Cheung Chau site may have gone up if the new puppies found in that site (see footnote 1) were not rehomed by the PC.

[^1]11.

The number of complaints related to stray dog nuisance territory-wide fell from 6060 in 2015 to 4268 in 2017 (i.e. a 30\% reduction over the past three years). The trend is consistent with the decrease in stray dogs territory-wide, i.e. from 2412 in 2015 to 1566 in 2017 (representing a $35 \%$ reduction over the past three years). On the other hand, the number of complaints received at the trial sites during the period showed fluctuations and the target set out in paragraph 5(c) above could not be achieved. Such a result could be brought about by a number of factors and might not necessarily be related to TNR. For instance, according to the Consultant and the PCs, an initial increase in complaints in the Cheung Chau trial site from 19 (before commencement of the trial programme) to 39 (first year of the trial programme) might be a result of increased nuisance to the nearby residential areas caused by dogs attracted to the site by the dog food supplied by the concerned PC and other people in the vicinity, as well as heightened public attention to the trial programme. The drop in the number of complaints in the Tai Tong trial site, on the other hand, might be because of temporary relocation of some TNR dogs to a shelter by the concerned PC from time to time having regard to the health conditions of the dogs during the study period.
12. Overall speaking, the results of the TNR trial in the two sites are quite different, possibly due to the different settings, with the Cheung Chau site being more open and bigger with more movement of dogs in and around while the Tai Tong one is a semi-enclosed and smaller area with less movement of dogs; and there is a shelter there to which the PC concerned would relocate dogs from time to time.

## WAY FORWARD

13. The three performance targets set were not achieved in either site under the three-year trial programme. Having regard to the study results, it appears that the TNR concept may not be effective in reducing the stray dog population and nuisance within a short period, given the average lifespan of stray dogs under the caring and medical treatment by the PCs is expected to be longer than other stray dogs that are not regularly fed and cared. While the trial programme has ended, the two PCs have agreed to continue to monitor the numbers of dogs recorded for the TNR trial programme, and provide AFCD with the information on changes of the population and the average lifespan of these dogs in the coming years.
14. Since the result of a TNR programme might vary from one
site to another, the Government is open-minded about conducting further TNR if AWOs or other parties are interested in running such a programme to manage stray dogs at specific locations. Any proposal of conducting a TNR programme at other location(s) will be considered individually for its suitability, taking account of factors such as population density, proximity to community facilities, and traffic conditions, etc. Support of the local community is also essential before exemption of relevant legislative provisions under the Dogs and Cats Ordinance (Cap. 167) and the Rabies Ordinance (Cap. 421) can be granted to the PC(s) and their carers to facilitate their implementation of a TNR programme. AFCD will assist proponents and facilitate the implementation of such a programme, including sharing experience gained in the trial programme, helping liaise with the relevant District Councils and local stakeholders, and seeking legislative exemption from LegCo.
15. Meanwhile, AFCD will continue with its current multi-pronged approach towards the management of stray animals in line with international standards set by the World Organisation for Animal Health, including fostering responsible pet ownership and proper caring for animals through publicity and education, and promoting neutering and rehoming of animals with the support from AWOs. The decrease in the number of stray dogs caught by AFCD in response to complaints (paragraph 11 above) shows that the current strategy in stray animal management is by and large bearing fruit.

## ADVICE SOUGHT

16. Members are invite to note the outcome of the TNR trial programme for stray dogs.

Food and Health Bureau<br>Agriculture, Fisheries and Conservation Department<br>May 2018

Table 1 Summary of population surveys in the Cheung Chau trial site from February 2015 to January 2018

|  | $\begin{gathered} \text { Feb } \\ 2015 \end{gathered}$ | $\begin{gathered} \text { Mar } \\ 2015 \end{gathered}$ | $\begin{gathered} \text { Apr } \\ 2015 \end{gathered}$ | $\begin{aligned} & \text { May } \\ & 2015 \end{aligned}$ | $\begin{gathered} \text { Jun } \\ 2015 \end{gathered}$ | $\begin{gathered} \text { July } \\ 2015 \end{gathered}$ | $\begin{aligned} & \text { Aug } \\ & 2015 \end{aligned}$ | $\begin{gathered} \text { Sep } \\ 2015 \end{gathered}$ | $\begin{gathered} \text { Oct } \\ 2015 \end{gathered}$ | $\begin{aligned} & \text { Nov } \\ & 2015 \end{aligned}$ | $\begin{gathered} \text { Dec } \\ 2015 \end{gathered}$ | $\begin{gathered} \text { Jan } \\ 2016 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total no. of dogs for TNR study* | 14 | 18 | 6 | 6 | 26 | 24 | 28 | 18 | 27 | 29 | 17 | 18 |
| No. of new dogs** | NA | NA | 2 | 2 | 6 | 0 | 0 | 2 | 1 | 5 | 0 | 1 |
| Cumulative no. of neutered and returned dogs | 0 | 3 | 6 | 13 | 24 | 25 | 31 | 34 | 37 | 43 | 50 | 60 |

## Table 1 (continued)

|  | $\begin{aligned} & \text { Feb } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Mar } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Apr } \\ 2016 \end{gathered}$ | $\begin{aligned} & \text { May } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Jun } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Jul } \\ 2016 \end{gathered}$ | $\begin{aligned} & \text { Aug } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Sep } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Oct } \\ 2016 \end{gathered}$ | $\begin{aligned} & \text { Nov } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Dec } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Jan } \\ 2017 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total no. of dogs for TNR study* | 37 | 42 | 41 | 35 | 35 | 31 | 37 | 33 | 41 | 25 | 30 | 38 |
| No. of new dogs** | 12 | 5 | 3 | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 0 | 5 |
| Cumulative no. of neutered and returned dogs | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 61 | 64 | 64 | 64 | 64 |

Table 1 (continued)

|  | $\begin{aligned} & \text { Feb } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { Mar } \\ 2017 \end{gathered}$ | $\begin{aligned} & \text { April } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { May } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { June } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { July } \\ 2017 \end{gathered}$ | $\begin{aligned} & \text { Aug } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { Sept } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { Oct } \\ 2017 \end{gathered}$ | $\begin{aligned} & \text { Nov } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { Dec } \\ 2017 \end{gathered}$ | $\begin{gathered} \text { Jan } \\ 2018 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total no. of dogs for TNR study* | 28 | 24 | 36 | 29 | 37 | 36 | 30 | 26 | 34 | 36 | 28 | 27 |
| No. of new dogs** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Cumulative no. of neutered and returned dogs | 64 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |

*Total no. of dogs for TNR study: Total no. of dogs recorded minus number of dogs previously identified as neutered before the trial commenced or as owned dog (i.e. dog found with microchip) during the study
**No. of new dogs: number of dogs that had not appeared in previous surveys

Table 2 Total number of dogs recorded in the Tai Tong trial site from February 2015 to January 2018

|  | Feb <br> 2015 | Mar <br> 2015 | Apr <br> 2015 | May <br> 2015 | Jun <br> 2015 | Jul <br> 2015 | Aug <br> 2015 | Sep <br> 2015 | Oct <br> 2015 | Nov <br> 2015 | Dec <br> 2015 | Jan <br> 2016 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total no. of dogs for TNR study* | 12 | 22 | 15 | 27 | 24 | 21 | 24 | 24 | 22 | 20 | 24 | 21 |
| No. of new dogs** | 2 | 3 | 0 | 4 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 2 |
| Cumulative no. of neutered and <br> returned dogs | 2 | 9 | 14 | 14 | 15 | 15 | 23 | 24 | 37 | 37 | 37 | 37 |

## Table 2 (continued)

|  | $\begin{aligned} & \text { Feb } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Mar } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Apr } \\ 2016 \end{gathered}$ | $\begin{aligned} & \text { May } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Jun } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Jul } \\ 2016 \end{gathered}$ | $\begin{aligned} & \text { Aug } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Sep } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Oct } \\ 2016 \end{gathered}$ | $\begin{aligned} & \text { Nov } \\ & 2016 \end{aligned}$ | $\begin{gathered} \text { Dec } \\ 2016 \end{gathered}$ | $\begin{gathered} \text { Jan } \\ 2017 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total no. of dogs for TNR study* | 25 | 23 | 18 | 24 | 28 | 21 | 33 | 33 | 32 | 25 | 25 | 28 |
| No. of new dogs** | 2 | 1 | 0 | 0 | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 0 |
| Cumulative no. of neutered and returned dogs | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |

Table 2 (continued)

|  | $\begin{aligned} & \text { Feb } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { Mar } \\ 2017 \end{gathered}$ | $\begin{aligned} & \text { April } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { May } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { June } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { July } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { Aug } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { Sept } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { Oct } \\ 2017 \end{gathered}$ | $\begin{aligned} & \text { Nov } \\ & 2017 \end{aligned}$ | $\begin{gathered} \text { Dec } \\ 2017 \end{gathered}$ | $\begin{gathered} \text { Jan } \\ 2018 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total no. of dogs for TNR study* | 33 | 29 | 29 | 25 | 26 | 27 | 28 | 27 | 8 | 30 | 7 | 7 |
| No. of new dogs** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative no. of neutered dogs | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |

*Total no. of dogs for TNR study: Total no. of dogs recorded minus number of dogs previously identified as neutered before the trial commenced or as owned dog (i.e. dog found with microchip) during the study
**No. of new dogs: number of dogs that had not appeared in previous surveys


[^0]:    ${ }^{1} 33$ dogs (i.e. puppies) were found in the Cheung Chau site and were rehomed by the PC. One dog caught around the Tai Tong trial site was rehomed.

[^1]:    ${ }^{2}$ The areas of the trial sites in Cheung Chau and Tai Tong, Yuen Long, are about $274,000 \mathrm{~m}^{2}$ and $171,500 \mathrm{~m}^{2}$.

