ЭКОЛОГИЯ

CONTROLLING STREET DOG POPULATION IN MOSCOW

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The issue represents the analysis of the fundamentals and world-wide best practices of controlling street dog population in Moscow and other global cities. Actions proposed to improve the strategy of managing free-ranging dogs in Moscow.

Some reasons of increase in number of stray dogs and "pet overpopulation" ware studied. There are ecological types of stray dogs characterized the types of running wild of dogs and foraging (food procurement) strategy of animals.

The analysis of the basic principles of management of the number of stray dogs of urban areas was carried out. The work on the field of stray dogs' population regulation is directed to prophylaxisactions and prevention of the animals' homelessness phenomenon, and also carrying out actions of catching and creation of a network of shelters for available homeless animals.

The international experience and methods of successful practice of stray dogs' population management program were studied. It is necessary for developing various programs for stray dogs' population management in Moscow. The basic principles of "TNR" program and experience of its application in Moscow and other countries was studied.

Actions for management of the number of stray dogs in Moscow were offered. There are two main directions of different measures: a creation of specialized professional structures for the number of homeless animals' management of the city and an active involvement of animals' owners to increase of responsibility and knowledge of the people.

The main actions of these directions consist of neutering of healthy and nonaggressive animals, vaccination against dangerous diseases (plague, rage, leptospirosis, enteritis and others) with the return to their habitat, construction of shelters for street animals, euthanasia of terminally ill and aggressive, finding new owners for healthy and nonaggressive animals; improvement of the waste system, limiting breeding of dogs, stimulation of neutering of pets, registration and the recording of animals, installing chips in pets and tagging stray sterilized dogs, administrative sanctions against people for violation of the rules of pets keeping, developing in society of a responsible attitude to animals, education in the field of the treatment of animals and public service advertising to promote the idea of animals from shelters are necessary.

Key words: street dogs, managing the population, TNR program (trap/neuter/return)

Introduction

When developing different programs aimed at managing street dog population, it is wise to consider global best practices, as well as factors related to specific urban conditions and social and cultural communities.

Street dogs and cats initially appeared due to irresponsible care and pet overpopulation attributable to potentially high fertility of cats and dogs resulting in a discrepancy between supply and demand with potential owners being fewer than puppies and kittens born. Very often, pets who did not find their new home ended up in the street [10; 17; 18].

This overpopulation is the result of low pet ownership culture (e.g., uncontrolled mating), changing fashion for specific dog and cat breeds, etc. This is how pets and their offspring become street-bound [1; 17].

There are different views of the street dog problem in the city. On the one hand, biologists believe that every dog pack and every individual dog has a certain place, an environmental niche, or a habitat. Its presence creates a buffer for other animals. When an animal is withdrawn, the place is vacated. Any biological population and site strives to fill this place. The resulting species will use the same resources (usually these are dogs from other areas) [8].

But in view of feed resources, there is no necessity for every vacated point to be filled. The niche of birds of prey such as hawks and falcons in modern cities is apparently empty despite plenty of suitable food [10; 12]

On the other hand, street dogs are considered a negative phenomenon in view of humanity and the best option is to minimise or zero their numbers. It means that pet dogs must not be part of the natural ecosystem [3; 5; 22; 25; 31].

Free ranging dogs are also considered a hazardous carrier of epidemiological, epizootological, or zoonotic diseases [8; 17; 30]. Dog aggression against people and other pets should not be ignored. It can be territorial, food- or defence-related, interspecies (e.g. protection of puppies), and hunting aggression. People feel psychological discomfort with street dogs around, and show compassion or violence towards them. Street dogs are also often the cause of road traffic accidents [2; 6; 19; 25; 26; 27].

Ecological Types of Street Dogs

The street dog population consists of different ecological types related to different stages of running wild. The first group includes nominally neglected dogs associated with people and cared for by company employees (in car parks, garages, factories, etc.). The second, the largest, group includes free-ranging dogs with double socialisation and mainly oriented towards other dogs. They have official and unofficial leaders, dominating dogs, and frontier guards making up an intricate social organisation. The third group includes running wild and wild dogs which are not socialised with people and perceive humans as a source of danger. Such dogs inhabit city outskirts [7; 8; 9; 20; 22; 24].

The foraging (food procurement) strategy identifies several types of street dogs. It is closely related to running wild stages and may be represented by four main behavioural strategies: sponging, beggary, gathering and predation [7; 8; 9].

Sponging implies: living in care of people who provide them with most of their food. This strategy assumes complete dependence on people. Beggary is the behaviour strategy aimed at begging people dogs either know or not for food, usually in crowded places (near markets, catering facilities, or metro stations). The gathering strategy involves finding most food independently by examining the territory. The dogs following this strategy usually know potential places of food accumulation (feeding zones). Gathering dogs normally have a large individual or group area unlike the dogs following the first two

strategies. Predatory behaviour in cities involves hunting for rodents (mice and rats) and cats. This strategy is not dominating in a city because it is the least profitable in view of energy efforts and is complementary, while it remains the most attractive option for animals emotionally [8; 9].

The main efforts in controlling street dog populations are [4; 14; 31]:

— Measures aimed at preventing dogs running wild,

— Trapping efforts and shelters for street cats and dogs.

Global Best Practices in Controlling Dog Numbers

Trapping and placement in shelters is the main format of handling uncared for former pets in Western countries. This involves removal of street dogs form the streets without their return to previous habitats and placement of trapped animals in shelters which also accept abandoned dogs to be handed over to new owners [6; 36].

Municipal and private shelters cooperate with Animal Control. Usually, control covers all uncared dogs in public places. After mandatory temporary care period (from 3 to 5 days to two months depending on country), when trapped animals are returned to their owners (if lost), pets can be handed over to new owners or to a public shelter for further care. Unclaimed animals are euthanised [13; 15; 28; 29].

The period to euthanasia depends on a number of conditions but in any way it cannot be shorter than the mandatory temporary care period. Some European countries do not have to euthanise non-aggressive animals which are usually transferred to care within a reasonable period of time. Basically, euthanasia is considered a necessary measure since shelters implementing municipal programs (open-admission shelters) are expected to support adequate capacity and be ready to handle new comers. Thus, the largest American national animal rights organisations (e.g., The Humane Society of the United States (HSUS) and People for Ethical Treatment of Animals (PETA)) assume that euthanasia is acceptable while it is necessary. They believe that in most cases it would be more humane to euthanise animals than leave then to their own devices in the street thus foredooming them to violent death or breeding in the streets thus aggravating the street dog issue. When selecting animals for euthanasia, behavioural characteristics are taken into account (attitude to people and aggressiveness) as well as age. In this case dogs that are less likely to suit potential new owners are euthanised first of all [15; 29].

Apart from large open-admission shelters, there are shelters of different scales: either private or owned by animal rights activists that do not find it ethically correct to euthanise healthy animals. These shelters stop admitting animals as soon as they do not have space and are called limited-admission shelters. They keep animals until they find a new owner or until the animal dies if no one is willing to take it. Shelters make maximum efforts to find new owners and promote taking pets from shelters ("Adopt, don't buy") [15; 28].

Preventive measures In order to reduce the number of street dogs and cases of euthanasia, the critical measures is to prevent the breeding of home dogs and improve the pet dog care culture. In some countries (United States and Canada), this is achieved by introducing reduced license fees or taxes on the owners of sterilised pets. Other preventive measures are large-scale campaigns of animal protection authorities and free neuter surgery of pets owned by low-income people. All dogs transferred by the shelter to new owners are sterilised. Non-neutered pets must be held solely by licensed breeders [25].

There are also measures combating uncontrolled mating, registration, and identification of home dogs (badges, tatoos, or microchips). With an efficient system of responsible pet ownership in place and a certain share of sterilised home dogs (usually from 60 to 80% of the total) achieved, the number of abandoned and street animals ending up in shelters will be significantly lower [15; 33; 34; 35].

These efforts helped some cities (in the U.S.) and countries (Scandinavian countries, Germany, and the Netherlands) to minimise the number of euthanasia cases since supply there almost equalled demand and street animals are rare. In these cases, euthanasia applies only to mortally ill or aggressive animals or the ones that cannot exist on their own [21; 23].

Positive trends related to the improvement of animal care culture and large-scale neuter surgery of pets can be seen in many countries despite a slight increase in home pet numbers [6; 36]

About half of all trapped dogs in the UK are lost and are returned to their owners within a week. Most other dogs are handed over to new owners, and only 10% to 15% (mainly street dogs) of all trapped dogs are euthanised (additionally to injured or seriously ill ones) [21; 23].

While almost the only form of street dog control in developed countries is non-returnable trapping, another approach is practised towards cats [5; 30].

"TNR: trap/neuter/return" In some U.S. cities (usually, in southern, some eastern, and western states) and in some towns in UK, Canada, Australia, France, Spain, and Poland, the trap/neuter/return (TNR), sometimes called trap/alter/return (TAR) strategy is used. It is additional to normal municipally-organised trapping and applies only to some isolated "colonies" (family groups) of street cats inhabiting industrial sites, private areas, etc. that do not cause serious problems. "Colonies" subject to TNR must have responsible custodians who will care about cats and provide them with required veterinary support. Use of TNR strategy will be efficient which means that a sustainable reduction in the number of animals in a group (population) will be observed firstly as the result of one-time neutering of as many she-cats as possible (usually when their number exceeds 70% to 80% in the isolated group total) which means prevention of their migration to the area and new animals joining the group. In this case, the reduction in animal numbers through death will not be compensated by newborns in the group or new comers from the outside [14; 15; 29].

This practice is not used for dogs since they do not form compact isolated "colonies" and are prone to migration. Trapping of street dogs is usually very efficient, and street dogs are removed from the city environment before they have time to go wild and/or start breeding [11].

TNR has been used in the last 20 years in India as the main method of controlling street dog numbers. There were several similar experiments in some regions of Latin America [10; 12; 15; 33].

The TNR strategy for dogs as an alternative for combating rabies was proposed by Indian animal rights activists. In this case, the goal is not liquidation of street dogs (TNR is almost ineffective for radical reduction of large and poorly isolated dog populations in cities) but stabilisation of their numbers and vaccination against rabies (primarily of those with nominal owners (1)) [10; 12].

Control of Street Dogs in Moscow

Street dogs in Russian cities are abandoned pets and their offspring. There are no "pure street dog lines" which can be tracked back many centuries in Russia. Their populations are significantly maintained and constantly renewed through «overproduction» and abandonment of home dogs and them running wild [7; 10; 12; 15].

While large dense populations of castaway dogs have existed in South Asia for millennia, the latest sharp increase in street dog numbers in Russia has been observed for the last 10 to 15 years [13; 15; 28; 29].

Before 2002, Moscow authorities had a street dog control strategy involving trapping of all animals without regard for any behavioural or environmental characteristics. That strategy ignored any potential environmental effects. Large animal populations were destroyed at one time: they were mainly poisoned, and trapping methods were often incompatible with any ethical principles [14].

This strategy resulted in a number of consequences. First of all, the street dog population compensated for increased death rates by increasing the number of female dogs in litter and increased share of puppies surviving to adult age to become part of the pack. Secondly, dogs became more mobile for two reasons. The first was the shift towards younger dogs in the population that were more mobile than older ones. And the second reason was expansion of neighbours to the areas vacated by exterminated territorial groups. Vacated areas could also be taken by migrating dogs. Increased mobility and lower stability along the routes limited control capabilities over the population of street dogs, and increased intergroup contacts which resulted in epizootic breakouts. A population shift towards younger animals was equally dangerous as young animals are more exposed to different diseases as compared to older dogs [7; 13].

In 2002, the street animal neuter surgery initiative (TNR: trap/neuter/return) was approved in Moscow by Decree of the Moscow Government on October 1, 2002 No. 819-PP on Developing a Control and Financing System to Improve Care, Use, and Protection of Animals. The initiative included trapping and neutering of female dogs followed by their return to the sites where they were trapped for free ranging in the city. The initiative was preceded by a local experiment in Marfino district fostered by the animal right community.

The TNR initiative developer commented that for the strategy to be effective for animal numbers control, it was to be large-scale and required major one-time investment to neuter more than half and preferably 80% of all female dog inhabiting Moscow. It was key to efficient strategy implementation [14].

The goal of the neutering strategy was to create an animal buffer incapable of breeding but capable of keeping the area. It was to reduce intensive breeding rates and keep wild street dogs from the outskirts far away. Larger number of dogs taken away from the streets will speed up the breeding of the remaining animals [7; 14].

A.D. Poyarkov and other researchers prove that the number of street dogs in Moscow is not limited by food resources or trapping efforts but is contained by lack of suitable areas for breeding and growing puppies. Therefore, trapping of free-ranging dogs solely for their destruction was inefficient and abortive [7; 8; 14].

In 2008, the authorities approved new rules for trapping, transporting, neutering, keeping, recording, and registering free-ranging dogs and cats in Moscow. They stipulate non-returnable trapping of street animals with neuter (castration) surgery and further placement of animals in shelters without return to their previous habitats being the main method to control their numbers.

Street Dog Control Activities in Moscow

The strategy aimed at reducing the street dog population in Moscow must be integrated and long-term and cover two areas: 1) creation and functioning of specialised professional organisations; 2) active involvement of animal owners, improved responsibility, and information to the population.

Special municipal services should be arrange to control numbers and care for city animals. They must take necessary measures based on actual conditions and coordinate all activities related to pets at city level.

Taking into account current western best practices, the main method for handling street dogs must benon-returnable trapping of the dogs which could present hazards to city residents or other dogs when left in the streets (ill or aggressive dogs). Trapping methods must become more humane and a network of open-admission temporary care points must set up to become centres for admission of abandoned pets and handing them over to new owners after neuter surgery. Potentially free-ranging previously home dogs must also be trapped. Owners should be expected to compensate for their care when taking them back. Shelters and temporary care centres must use euthanasia for unclaimed animals (using painless methods) after the elapse of a certain temporary care period. Nevertheless, euthanasia must be practised until it is absolutely necessary to ensure a required capacity for animal care in the shelter (temporary care centre) [10; 12; 13; 15].

Neutered nominally owned and free-ranging dogs that can safely live in the streets must be tagged when returned back to their habitat to prevent them from being trapped again. A tag must be place in a strictly defined place on the animal body and be visible from a sufficient distance not only to animal control officers but to other parties, including street cleaners, animal rights activists, and animal registration authorities. It must be durable not to be lost, discoloured, not to disappear, or be masked by hair on the animal body. Different tagging methods used for neutered street dogs were reviewed and presented at the Animals in the City conference by G.G. Skvortsov [14].

The prerequisite of successful control of street dog numbers is every possible promotion and encouragement of pet care culture and prevention of uncontrolled breeding of pets by their owners. Overpopulation of pets must form the basis for the municipal program aimed at controlling numbers of animals and reducing the need in euthanasia [7; 14; 15; 33; 34].

Activities aimed at controlling street dog populations will not be efficient without building a public opinion on the causes and hazards of many street dogs around. Measures are to be taken to prevent abandonment and irresponsible breeding of animals. It is recommended to work with people who feed street animals in the streets and encourage people to take free-ranging dogs from streets or shelters.

It is necessary to encourage neutering of pets and nominally owned animals. Following the example of developed countries, we would recommend to start registering home dogs.

Owners and caretakers must be inspected to make sure they follow the dog care rules in households or company and other industrial sites. A system is needed to identify all home dogs (badges, tatoos, or microchips) to make it easier to find owners of free-ranging and abandoned animals. This also requires penalties for non-compliance with the rules (warnings, fines, and confiscation of animals) supported by relevant regulations.

Charity initiatives, including private and public shelters, public owner finding services, etc. must be encouraged. We must launch campaigns to neuter dogs and cats for low-income owners.

An important additional measure is the reduction of feeding resources represented by waste made accessible for animals. Measures should be taken to prevent access of street animals, rodents, and birds to food involving installation of special devices barring access to garbage containers (fences and reliable covers), improving performance of responsible services, and waste management culture among city residents. The number of wild dogs outside settlements should be reduced by minimising countryside dump sites [13; 15; 33; 35].

Therefore, the street dog population reduction strategy in Moscow involves a number of different activities, including

— neutering of healthy and non-aggressive nominally owned and street animals followed by the return to their initial environment subject to their vaccination against rabies and other dangerous diseases;

— construction of shelters for street animals followed by euthanasia of terminally ill and aggressive specimens and finding new owners for healthy and non-aggressive animals;

— improvement of the waste collection system;

— limiting breeding of dogs by all possible means;

— encouraging neuter surgery (castration) of pets not intended for special breeding;

— mandatory registration and recording of all pets and street animals, installing chips in pets and tagging neutered street dogs;

— administrative sanctions against people abandoning (losing) animals or their offspring or leaving animals without care;

— developing tolerance in people towards street animals, humane, and responsible attitude, raising awareness in animal relations and public service advertising to promote the idea of animals from shelters.

The street dog population control strategy for Moscow will be integral and workable only if the aforementioned aspects are implemented.

FOOTNOTE

(1) Castaway dogs represent an ecological form of running wild street dogs inhabiting southern cities and villages. There are often many of them and they have typical morphological traits [2].

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УПРАВЛЕНИЕ ЧИСЛЕННОСТЬЮ БЕЗДОМНЫХ СОБАК

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Статья посвящена проблеме бездомных собак в больших городах. Изучены причины увеличения численности и описаны экологические типы бездомных животных и их основные пищевые стратегии.

Приводится анализ основных используемых в мировой практике методов контроля численности популяций бездомных собак в крупных городах. Изучены основные принципы программы «TNR» и опыт ее применения в Москве и в городах других стран.

На основе собственных исследований и проведенного анализа мирового опыта разработаны предложения по улучшению контроля численности бездомных собак в г. Москве.

Анализ мирового опыта регуляции популяций бездомных собак в городах показывает, что существуют два основных направления работы в этой области: создание специальных структур для управления численностью животных и работа с населением, направленная на повышение ответственности хозяев домашних животных.

Основные методы первого направления включают кастрацию здоровых и неагрессивных собак, их мечение, вакцинацию против опасных заболеваний и возвращение в их первоначальную городскую среду обитания. Параллельно необходимо строительство приютов, поиск новых владельцев для здоровых и неагрессивных животных, эвтаназия неизлечимо больных и агрессивных собак, совершенствование системы отходов.

Второе направление предполагает регистрацию, ограничение разведения, стимуляцию кастрации домашних животных, установку у них чипов и административные санкции в отношении людей, нарушивших правила содержания домашних собак. В рамках этого направления также входит работа по воспитанию в обществе ответственного отношения к животным.

Ключевые слова: бездомные собаки, управление численностью популяции, программа ОСВ (Отлов-Стерилизация-Возврат)

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