



IMPORTANCE OF THE STRATEGY OF THE CITY OF BELGRADE IN SOLVING THE PROBLEM OF UNOWNED DOGS AND CATS FOR THE PURPOSE OF ENVIRONMENTAL HEALTH PROTECTION

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Abstract

The constant increase the number of non-owner and pet dogs is a problem in urban areas worldwide and in our country. The complexity of creating Strategy for solving that problem in urban areas is best shown by the fact that many far more developed countries than ours have not yet defined it or they have only a partial or local level. The city of Belgrade belongs to a small number of cities that have a Strategy for solving the problem of non owner dogs, and this is a document that defines the principles, goals and measures that will be implemented by the local self-government in 2011 in terms of solving the problem of non-owner dogs. Such strategy is supported by leading international animal protection organizations and requires full cooperation with them. During its creation and implementation, the principle of humanity was guided, combining the no-kill strategy and the CNR method "Catch-Neuter-Release", with a special focus on the protection of human and animal health, and applying measures of education, control and sanctions against irresponsible owners whose carelessness and disregard for positive legal regulations and moral principles directly cause an increase in the number of abandoned dogs.

Key words: *Nonowner dogs, strategy of resolve, urban environment, Belgrade.*

Introduction

Pets, especially dogs, play a significant role in the lives of modern people, especially in the urban environment. Alienation, stress, and other factors that burden the city man are often psychologically overcome by acquiring a dog that, with its affection, represents excellent psychotherapy (which in some countries is generally accepted as a prevention of mental and stress-related diseases [1, 5].

Unfortunately, in addition to this favorable influence, the presence of dogs in urban areas has another side. In the close cohabitation of stray dogs and pets that are in the immediate environment of people, there is constant contamination of public areas,

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especially streets and parks, with dog excrement. In the urban environment, green areas and parks are the main places where children play and they are resting places for city people, but they are also places where dog owners take their pets out and places where we meet non-owner dogs - usually former pets. [1, 12].

Dog excrement, apart from its unpleasant appearance and smell, represents an epidemiological danger, considering that dogs are carriers and true hosts of a large number of species of zoonotic parasites. Particularly dangerous are *Toxocara canis*, *Ancylostomidae* sp., *Echinococcus granulosus*, *Dipylidium caninum*, *Taenia* sp., *Trichuris vulpis* and *Strongyloides stercoralis* and protozoa *Giardia intestinalis*, *Amoeba* sp. and *Cryptosporidium* sp. [2, 5, 9, 10].

Although this problem on a global scale is not new, its solution is still the subject of numerous analyses, discussions and conflicting opinions that go from the principle of total removal of street animals to much more humane and acceptable solutions. Solving this problem itself also represents a big ethical problem, considering that solving it directly manipulates animals that are able to feel suffering, fear, stress and pain, so that humane solutions are the ones that must be a priority when developing any strategy of this kind [4]. Such programs are also supported by leading international animal protection organizations WSPA (The World Society for the Protection of Animals), RSPCA (Royal Society for the Prevention of Cruelty to Animals International), IFAW (International Fund for Animal Welfare), HSI (Humane Society International), the World Small Animal Veterinary Association and the Alliance for Rabies Control, so the creation of such a strategy requires full cooperation with them and with all other organizations whose goal is animal welfare. The complexity of creating such a strategy is best shown by the fact that many far more developed countries than ours have not yet defined it, or they only have it at a partial or local level.

The city of Belgrade is one of the few cities that has a strategy for solving the problem of unowned dogs, and this is a document that defines the principles, goals and measures that will be implemented by the local self-government in 2011 in terms of solving the problem of unowned dogs. The strategy for solving the problem of stray dogs and cats in the territory of the city of Belgrade is a document that defines the principles, goals and measures that will be implemented by the City of Belgrade in terms of solving the problem of stray dogs. The strategy is monitored and supervised by the Secretariat for Communal Housing Affairs, while the direct executor is VUVB. Operational measures in this area are adopted by the Commission for the implementation of the strategy, which was formed by the conclusion of the mayor. The aforementioned strategy was adopted at the Assembly of the City of Belgrade held on September 21, 2011, based on Article 54, Paragraph 2 of the Law on Animal Welfare, Article 20 of the Law on Local Self-Government, and Articles 25 and 31 of the Statute of the City of Belgrade [13, 14].

The development of this strategy for the City of Belgrade and its implementation was guided by the principle of humanity, combining the no kill strategy and the CNR method "catch-neuter-release", with a special focus on health protection people and animals, and applying measures of education, control and sanctions against



irresponsible owners whose carelessness and disregard for positive legal regulations and moral principles directly cause an increase in the number of abandoned dogs.

Taking into account the gravity of the problem as well as the fact that solving it directly manipulates animals that are able to feel suffering, fear, stress and pain, it was necessary to objectively look at all the relevant causes of the problem, but also to define measures and methods that will be the most adequate, sustainable and humane way in a time period of 5 to 10 years, the intensive implementation of the Strategy will give results that will:

1. Reduce the population of abandoned animals to an acceptable level, without disturbing the biological balance, the violation of which can cause the growth of the population of other animal species (cats, harmful rodents, etc.);
2. Maintaining the population within the number that ensures biological balance;
3. Providing captured abandoned animals with adequate veterinary assistance, including depriving them of their lives in a humane way, when necessary;

General goals of the Strategy

During the development of the strategy, the objectives were first determined, which were the starting point for its development. At the sessions that followed, the general goals of the "Strategy for dealing with stray dogs in the territory of the City of Belgrade" were adopted and they are:

1. Reduction of the population of stray dogs and cats;
2. Control of the existing population of dogs and cats;
3. Protection of human and animal health
4. Promotion of responsible animal ownership and welfare
5. Compliance with legal and by-laws
6. Prescribing measures to stimulate sterilization and marking of owner's animals for population control
7. Construction of new capacities for housing abandoned animals In order to achieve better operability; specific objectives of the strategy were defined along with them

Specific objectives of the Strategy

The specific objectives of the strategy were as follows:

1. Registration of all owned dogs and cats in the territory of the city of Belgrade, registration of all abandoned dogs and cats, as well as the formation of a unique database within the database of the Veterinary Administration (vet up).
2. Introduction to the legal status of guardians of street animals
3. Introduction and collection of local communal tax for keeping pets
4. Construction of ecological zones or parks for dogs
5. Development of an action plan, i.e. a control program to reduce the population of stray dogs and cats



Problems in implementing the Strategy

The problems encountered in the implementation of the Strategy, in addition to the harsh economic conditions, are: non-compliance with applicable laws, lack of conditions for the application of existing legal solutions, but also the fact that certain legal solutions are not good enough and need to be corrected. This applies in particular to:

1. Inconsistency of legal regulations, namely the Law on Veterinary Medicine and the Law on Animal Welfare
2. Centralization of control of both above-mentioned laws in the veterinary inspection
3. The absence of an adequate regulation on the marking of dogs and cats, as well as the lack of adequate control and sanctions against irresponsible owners
4. Inadequately prescribed measures, rights and powers of the control agents (veterinary inspection, communal inspection, communal police)
5. Non-recognition through acts of the existence of a street population of abandoned animals and therefore the inability to adequately record, monitor the epizootic situation as well as adoption.
6. This also prevented the connection of stray dogs and cats to the single database of the Veterinary Administration.
7. Non-recognition of the existence of individuals who want to take care of abandoned animals (guardians), which makes it impossible to keep records of those persons and the number and structure of the animals they take care of.
8. Non-hyphenation of the problem and the term "hoarding", which represents an almost unsolvable problem, especially in urban areas.
9. The general disinterest of pet owners both in terms of the health care of their own pets (vaccination, chipping, deworming, prevention of unwanted mating), and in terms of environmental protection. The explanation of this phenomenon lies primarily in the ineffective control of the competent authorities, in the lack of authority and in the excessive procedure that is required to adequately punish irresponsible owners.

Monitoring the effects of implementing the Strategy

In order to assess the exact state of affairs and prepare this Strategy, the Project "Determining the population size and category of stray dogs in the territory of the city of Belgrade in urban and suburban areas" was carried out. Based on data from the Project from 2006, as well as data from the Veterinary Institution "Veterina Beograd", and before the establishment of the "Strategy for solving the problem of stray dogs in the territory of Belgrade" in the 10 central city municipalities, an estimated number of 4,400 to 4,600 dogs with predicted degree of statistical error from 5% to 10%.

By applying the logical matrix of the actual number of street dogs in 2010, it was determined that their number was 8,500 individuals in 10 Central City Municipalities.



It could also be concluded that the estimated raw number of 2954 dogs according to the logical matrix, on an annual basis, could produce more than 2250 offspring in the F1 generation alone. With the application and implementation of the "Strategy for Solving the Problem of Stray Dogs in the Territory of Belgrade" in the period of 2009 and 2010, followed by a controlled, precise counting of dogs, using the field method, in the territory of the 10 central city municipalities, the number of 8,500 dogs was determined, with the application euthanasia only and exclusively in medically indicated cases.

Results of Strategy application

Analyzing the obtained data, it is unambiguously concluded that:

1. With the implementation of the Strategy for solving the problem of stray dogs in the territory of Belgrade, the population of abandoned animals on the streets was stabilized with a tendency to decrease with the application of the CNR system;
2. By applying the NO KILL (no euthanasia) component of the CNR system, the effect of the increase in the dog population as part of the active implementation of mass sterilization in 2010 resulted in a 50% smaller increase in abandoned dogs;
3. The influx of dogs by irresponsible owners, based on the assessment, constitutes 2/3 of the total number of increments from point 2;
4. In addition to the measures implemented by the Secretariat for Communal and Housing Affairs and the "Veterina Beograd" Veterinary Institution, it is necessary to implement a clear penal policy towards irresponsible owners as well as other measures defined by the Strategy for solving the problem of stray dogs in the territory of Belgrade;
5. It is necessary to increase capacities with the aim of more active performance of animal hygiene activities in the area of other city municipalities;
6. In addition, based on the results obtained so far, it can be unambiguously concluded that:
7. With the implementation of the Strategy for solving the problem of stray dogs in the territory of Belgrade, the population of abandoned animals on the streets was stabilized with a tendency to decrease with the application of the CNR system;
8. By applying the NO KILL (no euthanasia) component of the CNR system, the effect of the increase in the dog population as part of the active implementation of mass sterilization in 2010 resulted in a 50% smaller increase in abandoned dogs;
9. The influx of dogs by irresponsible owners, based on an estimate, accounts for 2/3 of the total number of abandoned dogs;
10. In addition to the measures implemented by the Secretariat for Communal and Housing Affairs and the "Veterina Beograd" Veterinary Institution, it is necessary to implement a clear penal policy towards irresponsible owners as well as other measures defined by the Strategy for solving the problem of stray dogs in the territory of Belgrade;
11. It is necessary to increase capacities with the aim of more active performance of animal hygiene activities in the area of other city municipalities;



Impacts of the Strategy on the contamination of public places

At the same time as the adoption of the Strategy, regular parasitological monitoring of public places and parks in Belgrade continued. By the way, he has been working since 1993 [3, 5, 6, 7]. The average contamination of the parks in 2010 was 39.06%, and in 2020 it will drop to 26.68%. During these ten years, the average percentage of established eggs of *Toxocara canis* was 29.68%, *Ancylostomidae* sp. 27.18%, *Dipylidium caninum* 26.56%, *Strongyloides stercoralis* 7.81%, *Toxascaris leonina* 6.97%, *Taenia* sp. 6.25% and *Trichuris vulpis* 4.68%. *Giardia duodenalis* was found in 15.62%, *Amoeba* sp. in 11.06%, *Isospora* spp. in 9.36% and *Cryptosporidium* sp. in 3.37% [8]._A visible reduction in the degree of contamination of public places was observed in the mentioned period. Despite the visible improvement, from an epidemiological point of view, the research results indicate a real possibility of human infections in the areas of most city parks.

Conclusions

Public interest in the welfare of animals is growing and is increasingly present in the world, as well as in our society. This trend inspires numerous debates and discussions about animal welfare as well as ways and problems that arise when solving the problem of abandoned animals. Factual and scientific knowledge in this area must support and inform ethical decisions, and especially the need to understand the affective states of animals (the problem of interaction with people) and their needs in relation to the environment in which they move and find themselves. Animal welfare is a course that should guide us in applying methods to solve the problem of abandoned animals. The positions that need to be defended, which concern the welfare of animals, require scientific knowledge about the biology of animals, in order to enable the closest determination of their physiological, health and psychological needs, as well as to better solve the problems and issues of their impact on the environment and people's health. The bearers of solutions in this area should first of all be veterinarians, who will bring programs and give expert opinions, and then all state and public officials, who can contribute to a successful solution to this problem through their work and advocacy.

With this approach, our society ranks among developed countries, which approach the solution to the problem of abandoned animals on a scientific basis, and the quality of the Strategy itself is best expressed by the fact that similar guidelines are given in the European Parliament Written Declaration pursuant to Rule 123 of the Rules of Procedure on dog population management in the European Union No 0026/2011 of 06.10.2011 (6) (adopted almost a month after the adoption of our Strategy) [15].

This Strategy has also shown positive results in reducing the pollution of public places by dog parasites because it contributes to the preservation of human health.



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[15] European Parliament Written Declaration pursuant to Rule 123 of the Rules of Procedure on dog population management in the European Union N 0026/2011