Stray dog and cat laws and enforcement in Czech Republic and in Italy

Eva Voslářová^(a) and Annamaria Passantino^(b)

^(a)Department of Veterinary Public Health and Toxicology, University of Veterinary and Pharmaceutical Sciences, Brno, Czech Republic ^(b)Dipartimento di Sanità Pubblica Veterinaria, Facoltà di Medicina Veterinaria, Polo Universitario Annunziata, Messina, Italy

Summary. The growing numbers of stray dogs and cats have posed serious public-health, socioeconomic, political and animal-welfare problems in many EU countries. Stray animal population control is a complex issue and there are no easy solutions. Recognising the importance of the issue the European Commission has, since 2007, actively contributed to the elaboration of the first global welfare standards for the control of dog populations in the framework of the World Organisation for Animal Health (OIE). Problem-solving approaches vary in different countries as there is no common European Community legislation dealing with stray animal control. In this paper the authors describe the characteristics of the stray dog and cat problem in general and focus on existing European legislation. A comparative overview of policies and measures in place in the Czech Republic and in Italy is made to observe the differences between the two countries and understand the different needs in each, considering their historical and social differences (*i.e.* a post-communist eastern country vs a western country and founder member of what is now the European Union).

Key words: stray dog, stray cat, control, legislation, Italy, Czech Republic.

Riassunto (Normativa sul randagismo canino e felino e sua applicazione nella Repubblica Ceca e in Italia). Il crescente numero di cani e gatti randagi pone gravi problemi per la salute pubblica, per il benessere animale, nonché sotto l'aspetto socio-economico e politico in molti paesi dell'UE. Il controllo del randagismo è un argomento complesso e di non facile risoluzione. Riconoscendo l'importanza della questione, la Commissione Europea sin dal 2007 ha attivamente contribuito attraverso l'OIE all'elaborazione di linee-guida per il controllo della popolazione canina. Tuttavia, le strategie per risolvere detto fenomeno differiscono nei diversi paesi, poiché non esiste una specifica normativa a livello comunitario atta a controllare il suddetto fenomeno. Il presente lavoro descrive il fenomeno del randagismo in generale ed analizza la normativa esistente in Europa. Viene, altresì, effettuato un esame comparativo delle politiche e delle misure attuate nella Repubblica Ceca ed in Italia, al fine di confrontare le due realtà legislative stante le differenze storiche e sociali esistenti tra i due paesi (da un lato un paese post comunista e dall'altro un paese membro fondatore dell'attuale UE).

Parole chiave: cane randagio, gatto randagio, controllo, legislazione, Italia, Repubblica Ceca.

INTRODUCTION

Stray (ownerless, feral) and free-roaming (owned) dogs and cats pose a significant threat to human health through their role as vectors of diseases (*i.e.* rabies, toxocariasis, echinococcus spp., leishmaniasis, toxoplasmosis, bartonellosis, etc.) [1-10].

Stray animals also pose animal health and welfare problems due to a lack of resources or of the veterinary care necessary to safeguard each of their five freedoms [11].

They may be responsible for bite occurrences, for damage to property and livestock, for deposition of excreta near or in areas inhabited by people, etc. [12-13].

The growing numbers of abandoned and freeroaming pets (especially dogs and cats) have become a problem in many European countries, including Italy and the Czech Republic.

Although the free-roaming proportion of the dog and cat population is infrequently quantified, evidence suggests that their numbers are increasing in many countries [14-16].

Free-roaming dog and cat population density may vary with habitat, culture, and a variety of socio-economical conditions. Generally, in developing countries many dogs and cats are abandoned on the streets and become part of a stray population. In developed countries, stray and unwanted dogs and cats, purebreeds included, are usually taken to animal shelters. Although it may be assumed that the large amount of money paid for a pure breed dog (or cat) would

Address for correspondence: Annamaria Passantino, Dipartimento di Sanità Pubblica Veterinaria, Facoltà di Medicina Veterinaria, Polo Universitario Annunziata, Viale Annunziata 98168, Messina, Italy, E-mail: passanna@unime.it.

ensure good care and permanent home, this is not always the case and frequently the most popular breeds are relinquished in the greatest numbers.

The southern and eastern EU Member States are home to many stray dogs.

In Bucharest alone, the numbers are put at between 50 000 and 100 000 [17]. At the end of 2009, stray dog populations in the large towns of Bulgaria were estimated to number 43 700 [18].

A report conducted by GfK NOP on behalf of the Dogs Trust shows that 107 228 stray and abandoned dogs were picked up in the UK in 2009, and 9000 were destroyed (www.dogstrust.org.uk/mediacentre/ newsreleases/pr09straydogssurvey.aspx).

Despite the sustained efforts of both animal welfare organizations and local authorities there is an unacceptable increase. Now that microchipping is compulsory for all dogs in the UK, the numbers should fall.

Cyprus has a very large stray dog population and a reluctance to view dog ownership in a responsible manner. A dog law, introduced on 1st October 2004, is structured to correct this. The law aims to reduce stray dog population by controlling indiscriminate breeding, dog abandonment and theft. The authorities responsible for enforcing the law are the municipalities and community councils, assisted by inspectors from the veterinary services and the district animal welfare communities.

There are no data for stray dog numbers in Estonia. Each shelter has its own statistics for the number of dogs collected, but there is no complete objective information about stray animals in Estonia (www. loomakaitse.ee/?q=en/node/866).

On the European side of Istanbul a population of 56 734 stray dogs was estimated in the 2006 report of SHKD (Sahipsiz Hayvanlari Koruma Dernegi, the Turkish Society for the Protection of Stray Animals) [19].

There is a public expectation that agencies or institutions involved in the statutory controls relating, for example, to responsible dog ownership exercise "due diligence" in the care and welfare of dogs in their charge. Ongoing veterinary assessments of and interventions in the management of the health and behavioural attributes of dogs held under the remit of the dog control laws are essential.

Local authorities are in a good position to provide expertise and infrastructure for implementation of the dog control service and to meet statutory and societal demands.

Given these considerations, it is important to develop long-term, sustainable strategies to deal effectively with stray animal populations, not only to protect humans coming into contact with these animals, but also to protect the health and welfare of the animals themselves.

Animals are sentient beings, and as such have the capacity to suffer [11, 20]. This fact was reflected in the Treaty of Lisbon, which came into force on 1st December 2009. It includes an article on animal welfare, which instructs all EU institutions and

Member States to "pay full regard to the requirements of animal welfare".

An attempt to enhance animal welfare worldwide is the Universal Declaration on Animal Welfare proposal [11, 21]. It is proposed to be adopted by the United Nations. If endorsed by the United Nations (as the Universal Declaration of Human Rights has been) it would be a non-binding set of principles acknowledging the importance of animal sentience and of human responsibilities towards them. The principles were designed to encourage and enable national governments to introduce and improve animal protection legislation and initiatives.

This paper describes the character of the stray dogs and cats problem in general and the existing European legislation.

Considering that cultural differences in views of dog/cat ownership and the role of these animals in society influence the prevalence of dogs/cats and the conditions of free-roaming dogs/cats, the Authors examine current legislation in Italy and the Czech Republic to observe the differences between the two countries and understand the different needs of each, considering their historical and social differences (*i.e.* a post-communist eastern country *vs.* a western country and a founder member of what is now the European Union).

EUROPEAN LEGISLATION: BACKGROUND

There is no European Community Directive or Regulation dealing with stray dog control. The only international treaty that mentions pet animals is the European Convention for the Protection of Pets (ETS No. 125) introduced by the Council of Europe [22].

The Convention was signed by 22 countries (out of 47 Council of Europe member states) including Italy and the Czech Republic. The Convention on the protection of pet animals seeks to establish a basic common standard of attitude and practice towards pet ownership. Provisions are included on breeding, boarding, keeping and the Convention also aims to reduce the number of stray animals. Prohibition of abandonment of pet animals is mentioned among the main principles for the keeping of pet animals. Chapter III of the Convention includes Supplementary measures for stray animals, Article 12 - Reduction of numbers. "When a Party considers that the numbers of stray animals present it with a problem, it shall take the appropriate legislative and/or administrative measures necessary to reduce their numbers in a way which does not cause avoidable pain, suffering or distress.

- a) Such measures shall include the requirements that:
 - if such animals are to be captured, this is done with the minimum of physical and mental suffering appropriate to the animal;
 - whether captured animals are kept or killed, this is done in accordance with the principles laid down in this Convention;

DRIGINAL ARTICLES AND REVIEWS

- providing for dogs and cats to be permanently identified by some appropriate means which causes little or no enduring pain, suffering or distress, such as tattooing as well as recording the numbers in a register together with the names and addresses of their owners;
- reducing the unplanned breeding of dogs and cats by promoting the neutering of these animals;
- encouraging the finder of a stray dog or cat to report it to the competent authority.

[...] Exceptions to the principles laid down in this Convention for the capture, the keeping and the killing of stray animals may be made only if unavoidable in the framework of national disease control programmes.

[...] The Parties undertake to encourage the development of information and education programmes so as to promote awareness and knowledge amongst organizations and individuals concerned with the provisions and the principles in this Convention. In these programmes, attention shall be drawn in particular also to unplanned breeding of pet animals and the risks of irresponsible acquisition of pet animals leading to an increase in the number of unwanted and abandoned animals".

In the absence of any normative global framework (*Table 1*), in 2005 the World Organization for Animal Health (OIE) started to address the humane control of stray dog populations [23]. An *ad hoc* group was set up to produce science based measures for the effective and humane control of stray dog populations, to help in preventing zoonotic diseases and to improve animal health and welfare [24].

In May 2008, the European Union published the European Parliament resolution on a new animal health strategy for the European Union 2007-2013 (INI/2007/2260) [25]. Besides other aspects, this strategy is very much in line with the "Draft guide-lines on stray dog population control" of the World Organization for Animal Health (OIE) formulated by the Terrestrial Animal Health Standards Commission. At the 77th OIE General Assembly in 2009, the Guidelines on Stray Dog Population Control were unanimously adopted by OIE Members [26].

STRAY AND ABANDONED ANIMALS IN CZECH AND ITALIAN LEGISLATION

The Czech Republic, as a Member State of the Council of Europe, signed the European Convention for the Protection of Pet Animals on the 24th June 1998. The signature was followed by ratification (23 September 1998) and entry into force (24 March 1999). The text of the Convention was implemented in Czech legislation, specifically in Act No. 246/1992 Coll., on the protection of animals against cruelty, as amended [27]. For the purposes of this Act "stray animal" means any animal under human care which is not under permanent control or supervision of any

Table 1	Legislation	related	to	stray	animals	in	Europe
(Source:	Tasker, 2007;	: modifie	ed)	[41]			-

Countries	Legislation				
Countries	Animal welfare	Stray dogs			
Albania	Ν	N, M			
Armenia	-	-			
Azerbaijan Republic	-	-			
Belgium	Ν	N, M			
Bosnia-Herzegovina	draft	М			
Bulgaria	N, limited	N, M, LV			
Croatia	Ν	Ν			
Czech Republic	Ν	Ν			
Denmark	Ν	Ν			
Estonia	N, M	Ν			
Finland	Ν	Ν			
Germany	Ν	Ν			
Greece	Ν	Ν			
Hungary	Ν	Ν			
Ireland	Ν	Ν			
Italy	N, M	N, M			
Lithuania	N, M	N, M			
Malta	Ν	-			
Moldova	Ν	-			
The Netherlands	Ν	Ν			
Norway	Ν	-			
Poland	Ν	Ν			
Portugal	Ν	Ν, Μ			
Serbia	Ν	N, M			
Slovenia	Ν	Ν			
Spain	Ν	Ν			
Sweden	Ν	-			
Switzerland	N, M	In prep			
Ukraine	Ν	М			
United Kingdom	Ν	Ν			

N: National; M: Municipal; VL: Veterinary Legislation.

natural person or a keeper and which moves freely outside its accommodation, enclosure or outside the household of its keeper, whereas "abandoned animal" means any animal originally under human care which is not under direct control or supervision of a natural person or a keeper, and the facts established indicate that its keeper abandoned it with the intention of getting rid of it or banishing it.

Taking into consideration the aforesaid provisions of the European Convention, the Czech Act No. 246/1992 Coll. on the protection of animals against cruelty, as amended, prohibits cruelty to animals. According to the Czech law, cruelty against an animal also includes abandonment of an animal, with the exception of a wild animal, with the intent to get rid of the animal. No person shall abandon an animal with the intention of getting rid of it or banishing it. Releasing an animal into its natural environment, if this is appropriate with respect to the state of its health and conditions of the environment, shall not be considered abandonment. Any person who keeps a companion animal or who has agreed to look after a stray or abandoned animal shall be responsible for its health and well-being; reporting where the animal was found to the respective municipality or handing over a stray or abandoned animal to an animal shelter is also deemed to be an act of compliance with this responsibility.

For the purpose of population control of stray and abandoned animals, the municipality may (and it is a full responsibility of the municipality to decide if any or which of these provisions will apply in the area):

- a) organize informational, educational and other purpose-oriented preventive activities aimed at promoting responsible behaviour of persons towards animals and especially towards animals under human care;
- b) provide financial or other benefits to persons who have taken on the care of a stray or abandoned animal, especially a dog or a cat;
- c) effect capture of stray or abandoned animals, employing professionally competent persons to perform such a professional veterinary activity pursuant to the Veterinary Act;
- d) support activities conducive to control of animal population by limiting uncontrolled sources of food and unplanned reproduction of dogs and cats by supporting their sterilisation.

The municipality may, through a generally binding decree, impose an obligation upon the keepers to have all dogs without any identification mark marked with permanent identification by a person professionally competent to perform such a professional veterinary activity pursuant to the Veterinary Act; that is, using systems which only cause slight or temporary pain, such as tattooing or microchipping. The municipality may also, in the same way, stipulate an obligation to register dogs and set out the requirements for organising the register of identified dogs and their keepers.

The municipality may have the stray or abandoned dogs without identification marks in the municipality permanently marked by a person professionally qualified to perform such a professional veterinary activity pursuant to the Veterinary Act); that is, using systems which only cause slight or temporary pain, such as tattooing and microchipping. The costs of this identification shall be covered by the municipality. When the keeper claims the ownership of the dog or is identified by the municipality, he shall reimburse the costs of identification of the stray dog to the municipality.

In practice, no healthy animals are destroyed in the Czech shelters, all stray animals are kept alive. The only legal justifications for euthanasia of stray animals are weakness, terminal illness, serious injury, genetic or congenital defect, overall exhaustion or old age of the animal, when survival would entail permanent suffering for the animal. Italy has signed and ratified the European Convention for the Protection of Pet Animals (conventions.coe.int/ Treaty/Commun/ChercheSig.asp?NT=125&CM=1& DF=&CL=ENG) and many of its precepts have been recognised in Law no. 281 of 14th August 1991 [28] for the protection of pets and the prevention of animal abandonment.

Article 1 of the aforesaid law indicates the state as the fundamental promoter of juridical guardianship [23].

This law promotes dog registration and sterilization as well as protection and assistance for free-roaming dogs and cats. It delegates the job of birth control in cat and dog populations to the regions.

It specifically states that:

- all dogs must be individually identified and registered by veterinary services. Identification with microchips and registration of dogs is compulsory and is managed by regional and local veterinary services. The most effective way of clearly connecting an owner with his or her animal is to use registration and identification together. This should encourage a sense of responsibility in the owner as the animal becomes identifiable as his/her own. Registration/identification is an important tool for reuniting lost animals with owners and can be a strong foundation for enforcement of legislation; (including for example abandonment legislation);
- killing captured dogs is forbidden unless they are "seriously or incurably ill or proven to be dangerous";
- captured dogs, if not reunited with the owner, have to be neutered, identified and kept for adoption in a public long term shelter;
- free roaming cats on the territory are protected as "feline colonies";
- humane education and information programs must be promoted by the local authority's veterinary service.

In the first year after the law was adopted, half a million dogs were taken to kennels. Because of the limited space and overcrowding, diseases began to spread and some dogs killed one another. Puppies were born but had no chance of survival. Animal protection groups called for more kennels, and more were built.

In law no. 281/91 the legislator, more concerned to protect stray dogs and cats and wrongly convinced that pets are protected by their owners, prohibits euthanasia of animals three days after capture (in contrast with the veterinary police regulations). In practice, captured dogs will be kept in kennels (sanitary kennels or shelters) for a life time at the expense of the town where they were caught. This has made kennel building become an attractive investment opportunity to business people. Typically the kennels are given \in 3 per dog taken in, and with some kennels holding over 1000 dogs, a kennel can make over \notin 1 million per year.

As part of the law, the Italian government agreed to provide free sterilizing of strays and those being re-homed throughout the country. However, in practice this does not often happen.

100

Regional laws were promulgated after the adoption of national framework legislation 281/91. They stipulated that canine population control be pursued through the identification of dogs using microchips so as to discourage the abandonment of animals and through the capture and sterilization of unwanted dogs [29].

There were regional variations in enforcement and effects of the microchipping scheme. The scheme, including registration, is free when undertaken by government veterinary services and $costs \in 25$ to $\in 43$ when carried out by a private practitioner. One of the most successful regions is the province of Pescara, central Italy, where the number of dogs identified and registered has increased over the last five years. This result is attributed to a big effort in implementing the dog identification and registration rules at a local level. The outcome has been a reported reduction in strays and a reduction of numbers in municipal shelters (from about 5000 dogs in 2004 to 2300 in 2008).

The legislative framework gives authority to local authority Veterinary Services in regard to aspects of public health, environmental health/hygiene and inspection/compliance activities.

The latter is also responsible for the development and enforcement of legislation related to dog ownership (*e.g.* registration, microchipping, vaccination, and abandonment), the control of stray dogs (*e.g.* dog catching and shelters). Despite the above, there are still growing concerns in terms of human health, animal welfare and social costs. Indeed, 25% of pets (150 000 dogs and 200 000 cats) are abandoned every year, 4000 car accidents due to stray pets occurred during the last 10 years, the estimated population of stray dogs and cats in Italy in 2001 was 816 610 and 1 290 692, respectively (www.oltrelaspecie.org/download/animalisti_randagismo_dati.pdf).

Some authors [10] affirm that several important obstacles to implementation the law have included: i) a shortage of funding (national funding was only provided briefly); ii) the high cost of managing a shelter; iii) lack of oversight regarding implementation of the laws.

Relating to point ii) since animals in shelters cannot be euthanized unless seriously ill [8] and because many dogs and cats in shelters are not well socialized, when animals enter shelters, they may spend the rest of their lives there. This is both economically challenging as well as having serious ethical and animal welfare implications [10].

Table 2 shows the official data concerning the numbers of inputs of dogs in kennels and neutered cats in 2009.

In the Czech Republic, there is no central register of dogs and cats but, according to the estimates of the State Veterinary Administration of the Czech

(Source: www.saute.gov.theantoutupaginainternainenaenterneent.jsp.ta 200@mena abbanaono, moujica)									
Regions and Autonomous Provinces (AP)	Enabling electronic database	No. of entrances of dogs to the kennels	Cat sterilization	Resident human population					
Abruzzo	Yes	2995	1339	1 338 898					
Basilicata	Yes	1387	191	588 879					
Calabria	Yes	Not available	Not available	2 009 303					
Campania	Yes	12 145	3333	5 824 662					
Emilia Romagna	Yes	5577	7993	4 377 435					
Friuli Venezia Giulia	Yes	2238	1786	1 234 079					
Lazio	Yes	7908	6943	5 681 868					
Liguria	Yes	1986	2183	1 615 986					
Lombardia	Yes	13 230	7163	9 826 141					
Marche	Yes	2890	4502	1 577 676					
Molise	Yes	523	142	320 229					
Piemonte	Yes	8612	142	4 446 230					
Trento (AP)	Yes	7410	630	4 084 035					
Bolzano (AP)	Yes	2859	153	1 672 404					
Puglia	Yes	7868	873	5 042 992					
Sardegna	Yes	2859	153	1 672 404					
Sicilia	Yes	7868	873	5 042 992					
Toscana	Yes	6701	8433	3 730 130					
Umbria	Yes	1451	2137	900 790					
Valle d'Aosta	Yes	346	396	127 866					
Veneto	Yes	9523	9791	4 912 438					
Total	21	95 648	58 977	59 312 068					

Table 2 | Number of dogs come into shelters and number of cats neutered in Italy in 2009 by the National Health Service (Source: www.salute.gov.it/caniGatti/paginaInternaMenuCani.jsp?id=280&menu=abbandono, modified)

Republic, the dog population is over one million and the cat population is of similar numbers [30]. There are countless wandering or abandoned dogs and cats in the Czech Republic. People have gradually got into the habit of bringing the animals that have become troublesome for them to animal shelters or abandoning them somewhere. The animals are caught by an urban dog catcher, by animal shelter employees trained for that purpose or by policemen. There are also reception camps in towns for these animals. These are capture kennels which are unsuitable for long-term dog keeping, which is why the animals there are usually only held until the owner gets in touch or the animal is transferred to an animal shelter. A community is obliged to look after a found animal for six months, as if it were lost property. After this time, the animal becomes the property of the community. Officially, only seriously ill animals are put to sleep at the urban animal homes, and by a veterinarian. Healthy dogs, in contrast, are, officially, not killed. Because the number of abandoned dogs is constantly increasing, however, and the animal shelters are already vastly overcrowded, considerable doubt must be cast on the credibility of these assertions. Free roaming cats are castrated only in some enlightened communities. With dogs at animal shelters, castrations are carried out only by request. At many animal shelters, reproduction is prevented primarily by the separation of dogs and females in heat, which is not always successful, however. Owners of dogs and cats are generally not ready to have their four-legged friends undergo a castration. Frequently, too, bitches come into an animal shelter already pregnant and give birth to puppies there. At animal shelters, one can also see a strikingly large number of older pedigree dogs which have been brought there by their owner and which are resold to amateur breeders "who earn millions of euros in their own country as well as in Germany and Austria. The dogs which could not be sold and are mostly unvaccinated and ill are often simply abandoned. The Czech government has neither undertaken steps to counteract cheap breeding and the dog traffic, nor shown efforts to include castrations in their Animal Welfare Program" up to now www.strayanimalrights. org/en/europas-laender/tschechien).

CONCLUDING REMARKS

There are many strategies for dog and cat population control but, whatever the method used, it should be based on ethical standpoints and/or practical experiences according to the national/local situation, avoiding animal suffering and, when possible, killing through effective preventative programs.

Any program that only concentrates on the "end result", such as euthanasia, is provisional and does not solve the initial problem. Strategies to control the overpopulation of free-roaming animals include enforcement of laws, owner education and sterilization of pets. Dog-control programs are more widely applied in more-developed countries. In less-developed countries, dog control programs (if they exist at all) tend to employ killing methods (including poisoned baits) [31].

Spay/neuter programs are the best antidote to mass euthanasia, as well as the most humane and financially responsible way to address the pet population problem.

To eliminate the problem of strays, people need to develop compassion and responsibility. In fact, people will be encouraged to act irresponsibly if the right to kill pets is handed to them.

The right to practice euthanasia in order to eliminate a self-created problem makes things easy for politicians and obviates the necessity of teaching their citizens to treat animals with respect. The high standards of animal welfare in Europe and the decades of effort made by many people to produce better animal welfare will be wasted. The brutalization of human attitudes towards their companion animals will be another consequence.

Several programmes have been implemented to eliminate the phenomenon in both countries, but without real results, as a consequence of: i) limited eco-epidemiological data; ii) inappropriate extrapolations of existing studies, lack of understanding of different contexts; iii) poor planning, no evaluation; iv) weak multidisciplinary and intersectorial collaboration; and v) lack of resources.

A re-assessment of funding and resources for dog control services is another aspect that should be considered. Local authorities need additional resources to deal with the increasing number of service requests from the public in relation to the following: Stray dogs; missing/lost dogs; livestock worry; Ineffectual control of dogs in public places, *e.g.* urban areas, public greens, amenity areas, etc.; public nuisance in relation to barking; public nuisance in relation to dog fouling; public nuisance and danger in relation to aggressive dogs; large numbers of dogs held in private dwellings.

Adequate funding must also be provided to local authorities for the implementation of the dog control Service with regard to: *i*) enhanced dog pound facilities; *ii*) dog warden personnel wages and expenses; *iii*) administrative costs; *iv*) veterinary assessments/ interventions (neutering); *v*) training / health and safety; *vi*) public awareness programmes; *vii*) costs of micro-chipping; *viii*) re-homing programmes; *ix*) assessment of dog premises and facilities.

The authors emphasize that the close involvement of veterinarians and of official veterinary services, working in collaboration with universities, public health authorities (national and regional government), animal welfare associations and dog/cat owners, is necessary to reach the long term goals indicated in *Figure 1*.

Each one of aforementioned stakeholders has a welldefined and coordinated role, to make the whole community aware of the vital role of citizens in this social challenge. The success of dog and cat control programs depends on a cooperating public.

Organized veterinary medicine can contribute sub-

102

DRIGINAL ARTICLES AND REVIEWS

Municipalities, Local Authorities Animal welfare associations Legislation Animal welfare Responsable Citizens promotion Ownership (birth control, and humane education registration

control programs.

stantially in educating the public. Local, regional, and national veterinary bodies should work through the mass communications media and with local governments, schools, humane societies, and groups of concerned citizens so that the message of responsible pet ownership becomes part of the conventional wisdom.

Dog lovers must be convinced that officials, from the department head to the dog catcher, are carrying out measures that will improve conditions for all pets, as well as for the human population.

Enforcement of laws will not, on its own, result in lasting, voluntary changes in behaviour; it needs to be supplemented by a range of non-regulatory approaches such as public education.

In fact, an owner's responsible behaviour toward his pet and his neighbours can only be achieved through education. Campaigns to achieve responsible ownership should include information on the reproductive patterns of pet animals, contraception methods, and essentials of proper maintenance. For example, licensing of pet dogs/cats should increase the owner's sense of responsibility. When pet keeping becomes more costly, people buying animals should have a heightened awareness of the obligations involved.

Licensing helps to combat a primary cause of the problem: owner irresponsibility. Switzerland is an example of this [32]. Licensing decreased the number of rash decisions and helped to control abandonment of dogs.

The human population of several European countries, as with most economically underdeveloped countries, must be educated to accept responsibility for stray dogs and for their environment in general. Changing the mentality of young people is a sustainable strategy for the future. School children are a particularly receptive audience since they are invariably interested in pets.

It could be interesting to develop a School Education

Project, targeted at 10-13 year olds. The aim of this type of education project is to motivate children to care about animal welfare, help find fertile and sick dogs in their locality and to teach children to understand the importance of neutering, responsible dog ownership and rehoming.

The control methods initiated and implemented at varying levels in various countries depend on the prevalent cultural values and the availability of resources [33-37].

Proposed strategies must take into account the different history, cultural backgrounds and geopolitical requirements of the member states individually.

In some Eastern European countries, and in the Balkans in particular, the need for such a law is not appreciated and is put aside. The harsh economic environment in most of these countries, as well as mentality, also contributes to the delay.

In conclusion, reducing the number of stray animals must be done in a humane and sustainable way on a scale that enables their social acceptance.

Only the combination of political, legal, educational, medical and professional managing conditions will lead to a sustainable result.

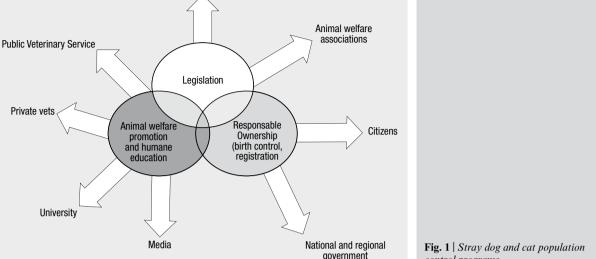
Acknowledgements

The authors thank Caroline Keir for her kind correction of the English language of the manuscript.

Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

Received on 25 May 2011. Accepted on 22 November 2011.



References

- 1. Beran GW, Frith M. Domestic animal rabies control: an overview. *Rev Infect Dis* 1988;10:S672-7.
- 2. Butcher R. Stray dogs: a worldwide problem. J Small Anim Pract 1999;40:458-9.
- Cubeddu GM, Panichi M, Passantino A, Pintori G, Pollicino P. Rabbia. Leishmaniosi, Echinococcosi: problemi di sanità pubblica e protezione animale in Sicilia e in Sardegna. *Progr Vet* 1996;21:775-8.
- 4. Dakkak A. Echinococcosis/hydatisosis: a severe threat in Mediterranean countries. *Vet Parasitol* 2010;174:2-11.
- Daryani A, Sharif M, Amouei A, Gholami S. Prevalence of Toxocara canis in stray dogs, northern Iran. *Pak J Biol Sci* 2009;12:1031-5.
- Fico R. (1994). Population dynamics in dogs and wild animals. In: Siemensis AM (Ed.). Information Circular, Vol. 35. WHO Mediterranean Zoonosis Control Centre. Athens: World Health Organization; 1994. p. 3-4.
- Passantino A. Medico-legal considerations of canine leishmaniasis in Italy: an overview of an emerging disease with reference to the purchase. *Scientific Technical Review OIE* 2006;25:1111-23.
- Passantino A, Coluccio P, Russo M. Canine leishmaniasis and eutanasia in Italy. A critical legal-ethical analysis. *Scientific Technical Review OIE* 2010;29(3):537-48.
- Patronek GJ. Free-roaming and feral cats-their impact on wildlife and human beings. J Am Vet Med Assoc 1998;212: 218-26.
- Slater MR, Di Nardo A, Pediconi O, Dalla Villa P, Candeloro L, Alessandrini B, Del Papa S. Free-roaming dogs and cats in central Italy: Public perceptions of the problem. *Prev Vet Med* 2008;84:27-47.
- Passantino A. Companion animals: an examination of their legal classification in Italy and the impact on their welfare. Actually and prospective. J Animal Law 2008;IV:59-92.
- Matter HC, Daniels TJ. Dog ecology and population biology. In: Macpherson CNL, Meslin FX, Wandeler AI (Ed.). *Dogs, Zoonoses, and Public Health.* New York: CABI Publishing; 2000. p. 17-62.
- 13. Slater MR. Community Approaches to Feral Cats: Problems, Alternatives and Recommendations. Washington, DC: The Humane Society Press; 2002.
- Gibson K, Keizer K, Golding C. A trap, neuter, and release program for feral cats on Prince Edward Island. *Canadian Vet J* 2002;43:695-8.
- Levy J, Gale DW, Gale LA. Evaluation of the effect of a long term trapneuter-return and adoption program on free-roaming cat populations. J Am Vet Medical Assoc 2003;222(1):42-6.
- Wallace J, Levy J. Population characteristics of feral cats admitted to seven trapneuter-return prgrams in the United States. J Feline Med Surg 2006;8:279-84.
- 17. European Parliament. Parliamentary questions 23 April 2008. Protection of stray dogs. Available From: (www. europarl.europa.eu/sides/getDoc.do?pubRef=-//EP// TEXT+WQ+E-2008-2328+0+DOC+XML+V0//EN). Last visited 24/10/11.
- 18. Carodog. Strategy for control of stray dog population in the Republic of Bulgaria in 2010. Available from: www.vier-pfoten.eu/website/output.php?idfile=2874. Last visited 24/10/11.

- Sahipsiz Hayvanlari Koruma Dernegi. The solution to the Istanbul stray dog problem. Available from: www.shkd.org/ common/documents/solution.pdf. Last visited 24/10/11.
- Passantino A, De Vico G. Our mate animals. *Biology forum* 2006;99:200-4.
- Chapouthier G, Nouet JC. The Universal Declaration of Animal Rights, Comments and Intentions. Edition LFDA; 1998.
- 22. Council of Europe. European Convention of 13. November, n. 125. for the Protection of Pet Animals. *European Treaty Series* n. 125, 1987. Council of Europe. Available from: http://conventions.coe.int/Treaty/en/Treaties/Html/125.htm. Last visited 24/10/11.
- Passantino A, Coluccio P, Giammanco A, Russo M. Randagismo in Europa: attualità e prospettive Obiettivi & Documenti Veterinari 2009;5:44-7.
- Kahn S, Sguardo L, Rahman SA. OIE Guidelines on Dog Population Control. *Developments in biologicals* 2008;131: 511-6.
- European Union. New Animal Health Strategy for the European Union (2007-2013). 2007. Available from: www. europarl.europa.eu/oeil/OpenDetailFiche.do?ficheId=1246 &language=en. Last visited 01/12/10.
- World Organisation for Animal Health (2010). Stray dog population control. In *Terrestrial Animal Health Code*. Paris: OIE; 2010. p. 403-19.
- Czech Republic. Act of 15 April, n. 246. on the Protection of Animals against Cruelty. *Sbírka zákonu*° (*Collection of Czech Laws*) n. 50, 29 May 1992.
- Italia. Legge n. 281 of 4 agosto 1991. In materia di animali d'affezione e prevenzione al randagismo. *Gazzetta Ufficiale*, n. 203, 30 agosto 1991.
- Dalla Villa P, Iannetti L, Podaliri Vulpiani M, Maitino A, Trentini R, Del Papa S. A management model applied in two no-kill dog shelters in central Italy: use of population medicine for three consecutive years. *Vet Ital* 2008;44(2):347-59.
- FOCUS Marketing & Social Research. Domaci zvirata v ceskych domácnostech (Pet animals in Czech households). Available from: www.focus-agency.cz/?dl_id=42/TZ_ FOCUS_-Domc_zvata_v_eskch_domcnostech.pdf. Last visited 24/10/11.
- Dalla Villa P, Kahn S, Stuardo L, Iannetti L, Di Nardo A, Serpell JA. Free roaming dog control among OIE-member countries. *Prev Vet Med* 2010;97(1):58-63.
- 32. Tasker L (2007). Stray Animal Control Practices (Europe). London: World Society for the Protection of Animals. Available from: www.rspca.org.uk/servlet/Satellite?blobco l=urlblob&blobheader=application%2Fpdf&blobkey=id &blobtable=RSPCABlob&blobwhere=1212581014356&s sbinary=true&Content-Type=application/pdf. Last visited 10/10/11.
- Arkow P. Animal control laws and enforcement. J Am Vet Med Assoc 1991;198:1164-72.
- Avanzino R. Pet overpopulation and humane education in schools and communities. J Ame Vet Med Assoc 1991;198(7):1237-42.
- Jochle W. Pet population control in Europe. J Am Vet Med Assoc 1991;198(7):1225-30.
- Mahlow J, Slater, M. Current issues in the control of stray and feral cats. J Am Vet Med Assoc 1996;209(12):2016-20.
- Olson PN, Johnston SD. New developments in small animal population-control. J Am Vet Med Assoc 1993;202(6):904-9.

104