

The Socioeconomic Implications of Stray Animal Management Through a Bilateral Comparison Between Cities in China and the United States

Xingu Jiang^{1,a,*}

¹Shenzhen Middle School, Shenzhen, China

a. jiangjen99@gmail.com

*corresponding author

Abstract: This paper uses a comparative analysis method to explore the differences in specific measures, relevant policies, and implementation effects in the field of stray animal management between China and the United States and analyzes the impact of these measures and policies on social stability and economic development in the two countries. Through comparative analysis, this paper believes that the overpopulation of stray animals is a common problem faced by China and the US. With the continuous increase in the number of stray animals, China and the US are facing increasingly severe public health challenges, biodiversity damage, lack of welfare of stray animals, and the pressure of sterilization, sheltering, and adoption of animals is also worsening. This paper aims to explore feasible improvement paths in the field of stray animal management for China and the US through a relatively comprehensive comparison. Meanwhile, this paper encourages future research to focus more on extracting more effective management measures from a global perspective to more effectively deal with the derivative effects of stray animal problems, thereby continuously improving the stray animal management systems of various countries and having a positive impact on the sustainable development of the social economy.

Keywords: Stray animal management, China and the US, laws and regulations, animal welfare.

1. Introduction

With the development of the global economy and the improvement of living standards, people's needs have changed from the initial focus on survival necessities, such as food and clothing, to increasingly include companion animals that can provide humans with projective functions (i.e., projecting human self-symbols), social functions (i.e., promoting interaction between people), and surrogate functions (i.e., interaction with pets can to some extent supplement or replace interaction between people) [1]. However, the intensification of the problem of companion animal abandonment has led to a surge in the number of stray animals in cities. Since there is no unified definition of stray animals, this paper defines stray animals as animals that are ownerless or occasionally fed by humans outdoors (including abandoned, accidentally lost, and offspring produced by ownerless animals themselves), and can roam freely in the city and interact with humans [2]. According to the "2021 China Pet Industry White Paper", the number of stray dogs in China in 2021 was approximately 40 million, and

the number of stray cats was approximately 53 million. According to statistics from the American Humane Association, there are approximately 70 million stray animals in the United States. Today, the overpopulation of stray animals has become one of the most serious problems in the world. The current situation of stray animals in cities is not optimistic. They face threats, such as hunger, disease, poisoning, abuse, and traffic accidents. Meanwhile, the surge in the number of stray animals in cities also poses a threat to urban public health, including disease transmission, environmental pollution, and social disorder. Due to the lack of literature on systematic research and comparison of urban stray animal management practices in different countries, to extract their successful experiences and eliminate their shortcomings, and thus put forward effective improvement suggestions for urban stray animal management, this paper aims to explore the urban stray animal problem and its management measures in China and the US, as well as its socioeconomic significance and put forward improvement suggestions for mutual learning between China and the US in terms of stray animal management measures. The first part of this paper will mainly explore China's policies, regulations, development, and current situation in urban stray animal management. The second part of this paper will mainly analyze the stray animal management policies in two countries, and put forward areas where both sides can learn from each other, to alleviate the socioeconomic problems brought about by the stray animal problem in both countries, gradually reduce the number of stray animals and the economic losses caused by them and ineffective management methods, improve the urban environment and the quality of life of urban residents, maintain biodiversity, and improve the welfare of stray animals.

2. Comparison of Stray Animal Management Policies in China and the United States

2.1. Chinese Laws and Regulations on Stray Animal Management

First, China lacks clear legal provisions and regulatory measures for the management of stray animals. The Animal Epidemic Prevention Law of China sets out relevant guidelines for animal health supervision, epidemic prevention, and quarantine, which can protect the health of animals and humans and promote the healthy development of animals. Through strict monitoring of the health status of domestic animals, it is possible to prevent viruses carried by domestic animals from infecting stray cats and dogs that can move freely in the city. Studies have shown that in addition to the common rabies virus, cats and dogs are also likely to be infected with the avian influenza virus. As pet cats and dogs have more chances to meet humans and wild birds, they can act as vectors for virus transmission to some extent, causing healthy animals and humans to become sick [3]. A 2008 research report showed that among 1,415 infectious pathogens, 374 viruses can be carried by dogs and cats [2]. Therefore, improving the quarantine and treatment of domestic animals through the Animal Epidemic Prevention Law can reduce the risk of stray animals being infected and spreading viruses. Considering the large scale of stray animals in cities, reducing the probability of vector-borne viruses can reduce the security threats and economic losses brought to individuals, society, and the country by mass epidemic outbreaks without reducing the transmission vectors. In addition, the Animal Epidemic Prevention Law also stipulates the vaccination of domestic animals and pets. From May 1, 2021, the new Animal Epidemic Prevention Law has been implemented, stipulating that failure to regularly vaccinate pet dogs against rabies will be subject to a fine. If the owner is ordered to make corrections within a time limit, he may be fined up to RMB 1,000; if the correction is not made within the time limit, he may be fined between RMB 1,000 and RMB 5,000, which has a certain economic deterrent effect on pet owners. By regularly vaccinating pets against major viruses, such as rabies, the chances of sick pets becoming stray animals due to abandonment and infecting other animals and humans on a large scale can be reduced to a certain extent.

The Civil Code of China stipulates that if an animal causes any loss to others due to the fault of a third party, the injured party may request compensation from the animal breeder or manager, or a third party. After the animal breeder or manager pays compensation, he or she has the right to seek compensation from a third party. When stray animals cause harm to others, including scratches, bites, financial losses, etc., the legal definition of the responsible party becomes unclear. Although the Civil Code stipulates that the original breeder or manager shall bear the responsibility for the harm caused to others by abandoned or escaped animals during the period of abandonment or escape, not all original breeders of stray animals can be traced, including the denial of responsibility of the original breeder, the long-term wandering time that cannot be traced to the source, and the offspring of stray animals. Meanwhile, taking the frequent incidents of stray cats scratching as an example, the injured party cannot claim compensation from the kind-hearted people who occasionally feed stray cats, because this occasional feeding behavior does not legally form possession or ownership. However, due to this occasional feeding behavior without implementing sterilizations, the reproduction of stray cats has been promoted, resulting in an increase in their population, increasing the risk of stray cats injuring people. The Civil Code only requires that those who provide food or shelter to stray animals for a long time bear corresponding legal responsibilities. Compared with the public safety issues caused by stray animals, China lacks laws and regulations related to the safety and welfare of stray animals, including abuse and illegal slaughter. Currently, only in cities such as Shenzhen, Zhuhai, and Qingdao, those who sell and eat dog meat will be fined or detained. However, due to the relatively light penalties, even in cities where dog meat is banned, dog slaughter and sales are still emerging. Moreover, since China does not have clear management measures for the impact of stray animals on biodiversity, the negative effect caused by stray cats on biodiversity is also worsening.

The pet registration system in China has also played a positive role in reducing the number of stray animals. According to the Regulations of the Shenzhen Municipality on Dog Keeping, to standardize the dog registration process, the Shenzhen Municipal Urban Management and Comprehensive Law Enforcement Bureau issued a trial notice on electronic tag implantation on June 7, 2024, which means that the pet electronic tag can be directly injected into the dog's body. The trial regulations stipulate that except for sick dogs, pregnant dogs, and puppies under 3 months old or weighing less than 2 kg, all dogs in Shenzhen should be implanted with electronic tags, and the urban management department or the designated unit in the jurisdiction will inject the tag for the dog free of charge and record it into the registration system. This implementation will reduce the number of dogs becoming stray animals due to being lost to a certain extent, since if a lost dog is found and captured by the urban management, it can be identified as an owned dog through its electronic tag, and the relevant department personnel can contact the pet owner to bring it back, which will greatly reduce the probability of capturing dogs as stray animals in the past, thus reducing false execution and the pressure of sheltering.

The existence of stray animals has caused a series of food safety issues. Although the Food Safety Law of China stipulates that food producers and operators shall not use uninspected animal meat as food raw material, some unscrupulous merchants capture stray animals and transport them to underground slaughterhouses and sell them to food distributors to replace more expensive meat ingredients, such as beef and mutton, to obtain greater economic benefits. This illegal slaughter and processing of stray cat and dog meat for sale will lead to serious food safety issues and a crisis of consumer trust.

Furthermore, the strong reproductive capacity of cats and dogs is one of the main reasons for the surge in the number of stray animals in cities. For instance, a healthy female cat can have four pregnancies per year on average, and give birth to an average of four kittens per pregnancy (excluding those that die in infancy) [4]. As a result, local governments in China have introduced a series of laws, regulations, and financial incentives to reduce the surge in the number of stray animals from the source. For example, the Beijing Dog Breeding Regulations adopted an economic incentive policy to

control the serious abandonment problem caused by the disorderly breeding of pets and reward families with 200 yuan for sterilizing their dogs. Some pet-related companies also subsidize the sterilization of stray animals. In September 2024, the Ruipeng Charity Foundation first released application quotas for the free sterilization of stray animals and took the lead in implementing it in dozens of cities including Beijing, Shanghai, Guangzhou, and Shenzhen. This charity cooperated with Ruipeng's pet hospitals and Meilianzhonghe Animal Hospital to promote the implementation of TNR, which is a stray cat management method of capturing, sterilizing, and releasing.

The number of government-run animal shelters in China is very limited, and the facilities and management levels vary greatly, with a shabby environment. As the country pays limited attention to the issue of stray animals, the funding for government-run shelters cannot meet the demand for shelter, rescue, and medical care for the surging number of stray animals [2]. Instead, the sheltering and adoption of stray animals in China is usually promoted by some non-governmental organizations (NGOs). With the help of international organizations, domestic NGOs have begun to establish animal shelters and rescue stray animals. For example, the International Fund for Animal Welfare (IFAW) and the Royal Society for the Prevention of Cruelty to Animals (RSPCA) jointly funded China's first independent rescue shelter, the Beijing Human and Animal Environment Education Center (BHAEEC), in Beijing in 2001 [5]. BHAEEC is an animal rescue center that also promotes animal welfare education through community lectures and media publicity. The privately funded stray animal bases without any funding include the Baobei Rescue Group in Shenzhen (mainly sheltering abused dogs, the operation of the shelter base relies on donations from individuals, regularly conducts offline stray animal adoption activities in Shenzhen, and publishes adoption information on multiple social media), and the Qiuqiu Manor in Nanjing (mainly sheltering stray cats, intercepting illegal cat-trafficking multiple times to rescue and take in nearly 3,000 stray cats, using business to support charity, and the adoption scope of the manor cats is limited to Nanjing), etc.

In conclusion, China lacks laws and regulations or national-level policies and measures directly related to the management of stray animals, resulting in a pessimistic situation for the management of stray animals in China. There are large management blanks in public health and safety, control of the number of stray animals, and animal welfare. This paper regards the management of stray animals by private and NGOs as unsustainable in the absence of national funding and imperfect public awareness. China needs to control the surge in the number of stray animals without neglecting animal welfare through the formulation of relevant laws and regulations, large-scale public education and publicity, and humane stray animal management measures while paying attention to animal protection.

2.2. American Laws and Regulations on Stray Animal Management

The Animal Welfare Act (AWA) is a federal law in the US. Although it does not list relevant regulations directly for stray animals, its content may have an indirect impact on the management of stray animals. AWA reduces pet theft and illegal trafficking by regulating the behavior of animal dealers and research institutions [6]. By reducing pet theft, the chances of pets being abandoned and becoming stray animals are reduced. The formulation and implementation of AWA stipulates the standards for the basic humane treatment of animals in various ways, strengthening the public's attention to animal welfare issues. AWA passed the Pet Protection Act in 1990, which stipulates the minimum holding period for adopting or purchasing animals from shelters, thus playing a role in controlling the generation of stray animals [6]. In terms of penalties for violations, AWA increased the maximum fine from 2,500 dollars to 10,000 dollars in 2008, which has an economic deterrent effect on the public. Moreover, the federal Preventing Animal Cruelty and Torture (PACT) Act, which aims to prohibit extreme cruelty to animals, has strengthened the welfare of pets and stray animals.

In addition, state governments in the US have also issued relevant regulations on the management of stray animals. For instance, California's animal protection law plays a role in controlling the number of stray animals. According to West's Annotated California Codes Penal Code, any owner or keeper of an animal who allows it to roam freely in the city without proper management, attention, and care is guilty of a misdemeanor; and sheriffs, humane society officials, and animal control officers are obligated to kill, treat, or place it in a suitable home after knowing that it is stray or abandoned until it is redeemed by the original owner. Meanwhile, all sheltered stray animals must be sterilized before being adopted. This regulation controls the number of stray animals to a certain extent and reduces the harm caused by stray animals to personal and property safety by combining the prevention of animals being strayed, avoiding threats to public health and safety caused by animals, and the disposal and sterilization of stray animals. Moreover, according to the relevant provisions of the Des Plaines Laws and Regulations of Illinois on the management of stray animals, when anyone discovers or knows that an animal is a stray animal, he/she should immediately notify the treatment of local government, or arrest and detain it personally. This provision increases the chances of stray animals being controlled as soon as they are discovered. Unclaimed sheltered animals should be placed for adoption, humanely euthanized, or otherwise disposed of following Illinois law. This provision ensures that there is enough space in the animal shelter for subsequent shelters, thus maintaining social order and reducing the financial consumption of the shelter, while ensuring that the owner has enough time to claim his/her pets. More importantly, any animal seized for being stray three or more times should be implanted with a microchip for future identification at the expense of the animal owner before being released from the shelter. This provision can reduce the situation where pets are wrongly identified as stray animals and suffer euthanasia while strengthening the management of pets by owners through economic means, improving pet welfare to a certain extent, and reducing the number of stray animals. Illinois law also stipulates that no owner shall abandon an animal that may become a public burden or suffer injury, hunger, or exposure. This regulation has greatly reduced the number of stray animals that come from abandonment in Illinois, improved pet welfare, and controlled the growth of the population of stray animals.

In terms of managing the threat that stray animals may pose to public health, Illinois also requires that all owners who own three months or older animals should have a licensed veterinarian vaccinate the animal against rabies at intervals approved by the Illinois Department of Agriculture. This regulation reduces the chances of pets that may carry rabies endangering social security and hygiene and disrupting social order after becoming strays. Some local governments, such as the government of Chicago, also have strict regulations and requirements for pet registration and vaccination. Chicago stipulates that all dogs must be registered and have a rabies vaccination certificate, which helps control the number of stray animals and prevent the spread of animal diseases while ensuring the health and safety of pets.

In the US, stray cats have also had a significant impact on biodiversity. In 2013, a study by American conservation biologists Scott Loss and Peter Marra showed that stray cats and free-range domestic cats in the US kill 1.3 billion to 4 billion birds and 6.3 billion to 22.3 billion mammals each year, which may be the largest human-made cause of death for birds and mammals in the US [7]. Therefore, federal law has enacted the Endangered Species Act (ESA) to protect birds from stray cats. Protection measures are formulated and implemented by the U.S. Fish and Wildlife Service, mainly including habitat protection, that is, protecting critical habitats for endangered species and prohibiting activities that may damage these habitats, and Recovery Planning and Implementation, such as the Hawaiian Petrel Recovery Plan which explicitly mentions protecting Hawaiian mynah birds by controlling stray cats. The measures mainly include installing cat-proof fences to prevent stray cats from approaching habitats in a humane manner while protecting endangered species and not endangering the lives of stray cats [8], that is, protecting habitats, controlling predators (including

stray cats), and reducing human interference. These legal measures protect endangered birds from stray cats to a certain extent. However, birds and mammals that are not included in the Endangered Species List have not yet received protection and are still being harmed by stray and free-range domestic cats. Some local and state laws also provide for reducing the threat of stray cats to local wildlife. For example, the Florida Fish and Wildlife Conservation Commission (FWC) achieves protection by reducing the food source of stray cats, capturing and placing stray cats, including using live traps to humanely capture cats and sending them to animal shelters, and does not promote TNR programs.

There are many NGOs in the US dedicated to the rescue, sheltering, and adoption of stray animals, and assisting state governments in managing stray animals. For example, the American Society for the Prevention of Cruelty to Animals (ASPCA) is one of the oldest and largest animal welfare organizations in the US, dedicated to preventing animal abuse and providing animal rescue and adoption services. The ASPCA has sheltered a large number of stray animals and encouraged animal adoption constantly by regularly holding offline adoption events, as well as calling for donations to subsidize the cost of rescue and sheltering. NGOs like the ASPCA jointly manage stray animals and related issues with federal laws and state and local laws.

The US has issued relatively comprehensive laws and regulations on the management of stray animals, which provide for the prevention of animal abandonment, population control, and increasing public attention to the welfare of stray animals and the resulting health and safety issues. However, these laws and regulations still have weaknesses, resulting in the number of stray animals not being controlled within a reasonable range that does not affect social security and hygiene, which requires public participation and more refined policy strategies.

2.3. Comparison

From a legal perspective, China lacks direct laws and regulations on the management of stray animals. Existing laws and temporary policies issued by local governments when major accidents occur lack national unified policy standards. Compared with China, the United States has issued more targeted laws and regulations on the management of stray animals, including federal laws such as the Animal Welfare Act and the Pet Welfare Act, as well as animal protection laws in various states. Moreover, the enactment of relevant policies has strengthened American's awareness of stray animal issues and animal protection, resulting in higher attention being paid on animal welfare as compared to China. Therefore, the US is more effective than China in the management of stray animals and the governance measures for public health and safety, disorderly breeding, and ecological diversity caused by stray animals.

Although China's concept of animal welfare is relatively weak, in recent years, NGOs on animal protection and volunteer activities in both China and the US have been actively promoting the concept of animal welfare and humane management of stray animals, supporting adoption instead of buying to reduce the number of stray animals, and denouncing abandonment. In respect to animal shelters, China lacks large, environmentally sound, and well-equipped (including daily care and animal medical systems) stray animal shelters, and lacks a humane disposal and scientific adoption system for animals. In the US, on the contrary, public and private animal shelters have a complete set of facilities, and provide medical and scientific adoption services, including filling out application forms, sterilization, deworming, vaccination, licensing, etc. Specifically, animals cannot be abandoned within the period specified in the license; if the adopter decides not to keep them, adopted animals can be turned to the shelter. These procedures ensure the health and safety of adopted animals to the greatest extent. Although early shelters in the US focused on public health and used large-scale capture and euthanasia to control the number of stray animals, in recent years, with the improvement of animal welfare concepts, many shelters have begun to implement the No-Kill Policy, reducing the

number of animals euthanized, and increasing the adoption rate of shelters and public satisfaction, maintaining social order [9].

2.4. The Referential Significance of Chinese and American Stray Animal Management Policies

This paper believes that China should learn from the comprehensive legal system of the US in the management of stray animals, accelerating the introduction of animal protection laws according to local conditions, clarifying the responsibilities and obligations of stray animal management, and avoiding the fragmentation and ineffective governance of various cities, which may cause social disorders. Meanwhile, China should learn from the No-Kill Policy of American animal shelters, that is, 90% or more of the animals entering the shelters can receive live treatment, and try to avoid killing in reducing the number of stray animals, which will cause adverse social impacts and be detrimental to the formation of animal welfare awareness. The Chinese national government should also reasonably allocate resources and appropriately increase the investment in animal shelter equipment and environmental improvements, extend the survival time of stray animals in shelters, and ensure the health of animals in shelters; as well as emulate the strict adoption system of American animal shelters, reduce animal abuse incidents, and increase the adoption rate of stray animals.

Although the US is better than China in terms of stray animal management policies overall, this paper argues that the US can also learn from China in terms of innovative stray animal management technologies. For instance, the smart stray cat house, which is called "Street Cat", has been put into use in various cities in China.

3. Comparison of Socioeconomic Significance of Urban Stray Animal Management in China and the United States

3.1. Social Stability Significance

In China, the lack of laws and regulations to restrict the abandonment of companion animals has led to a continuous increase in the number of stray animals in cities. Given the lack of laws related to animal welfare and protection, there are countless cases of stray animals being abused and illegally slaughtered. According to statistics from the Capital Animal Welfare Association, there are approximately 200,000 stray cats in Beijing [10]. This gives us an idea of the scale of inhumane harm to animals across the country. Animal abuse not only causes great pain to the animals, but also has serious negative psychological effects on the abusers and ordinary people, and will in turn undermine social stability to a certain extent. Studies have shown that people who engage in animal abuse are more likely to behave violently towards humans. In addition, people who have witnessed animal abuse incidents are more likely to abuse animals themselves than those who have not witnessed animal abuse [11]. In the absence of legal restrictions, abuse will intensify and expand to personal injury within society, undermining public order and spreading people's anxiety. A 2024 survey found that more than 60% of people opposed trapping and killing stray cats [12]. Therefore, animal abuse will cause psychological pain to such people who have empathy for animals, including symptoms such as fear, anxiety, and even depression, and may trigger demonstrations criticizing animal abuse and advocating animal protection legislation, which will hurt social stability.

Although the US has a relatively comprehensive and strictly enforced animal welfare legal system, which has significantly reduced animal abuse compared to China, the difference between the implementation of the United States' stray animal management policy and public opinion may also pose a potential threat to the country's social stability. According to a nationally representative survey, the vast majority of Americans believe that it is more humane to let stray animals live out their lives outdoors than to capture and kill them, which is contrary to the current US stray animal population

management policy, which is that killing stray animals is more reasonable [13]. The difference between management policies and public ethical and moral cognition may lead to extreme animal protectionist terrorist demonstrations, such as the actions of PETA, and thus undermine the stability of American society.

3.2. Economic Development Significance

In China, although the implementation of the new epidemic prevention law has significantly reduced the incidence of rabies in domestic pets, stray animals are still one of the main hosts of rabies. According to statistics from the Ministry of Health in 2009, China vaccinates 12 million to 15 million doses of rabies vaccine every year, spending approximately 1 billion dollars, making China the largest vaccine market in the world [14]. Since the government rarely invests in free rabies vaccination, this imposes a certain financial burden on the public. However, since the total cost of rabies vaccines for the public is too large if the government invests more in this area, it may affect the financial allocation of other important infrastructure construction, while increasing the government's financial burden, which is not conducive to the development of the national economy. In addition, TNR is adopted and promoted by an increasing number of NGOs and animal welfare advocates in China as a more humane way to control the number of stray animals. However, most current TNR projects are funded and carried out by NGOs and animal welfare advocates in first- and second-tier cities, lacking government financial support [12]. With the rapid growth in the number of stray animals, this paper argues that such a stray animal management method that relies on a small number of people consuming private property without receiving national financial support is unsustainable in China.

Compared with China, fewer people in the US receive rabies vaccinations due to scratches or bites from stray animals, thus reducing the financial pressure on the public in this field. This positive aspect as compared with China is mainly since states in the US have established more comprehensive public animal shelter systems than China. When people find stray animals wandering in the city, they can directly report them to relevant local agencies for shelter. However, the relatively complete animal shelter system also allows the US to control the number of stray animals through euthanasia, in addition to TNR. As most of the animals in shelters that have been unadopted for a long time will be humanely euthanized, due to the huge number of stray animals, the financial pressure on animal euthanasia by state governments in the US has also increased accordingly. Therefore, attributed to the reduction in fiscal budget allocation, the implementation of euthanasia hurts the construction of urban infrastructure to a certain extent.

4. Conclusion

This paper conducted a comparative study on the policies, measures, and application effects of stray animal management in China and the US, as well as their significance in social stability and economic development. By comparing the main national and local policies and regulations on stray animal management, (including public health and safety, ecological diversity, disorderly breeding, illegal slaughter, etc.), sterilization of pets and stray animals, and sheltering and adoption of stray animals in both countries, this paper found that China lacks targeted stray animal management policies and regulations compared with the US. Therefore, in terms of national coercive power and local support functions, China should reasonably learn from the mandatory management measures of the United States based on actual conditions. Meanwhile, by learning and refining China's innovative management methods, such as "Street Cat", the US can then play an auxiliary role in the application of local stray animal management measures to some extent. The bilateral research method adopted in this paper can make up for the reference application of stray animal management in different

countries so that both China and the US can be more fully aware of the shortcomings of their respective management measures, as well as the aspects that can be developed sustainably and should be strengthened. However, the current comparative study lacks the support of quantitative analysis and is limited to the comparison of management measures between China and the US. Therefore, in the future, more comparative analysis studies combining qualitative and quantitative methods on stray animal management measures in more countries are needed to maximize the management advantages of each country and achieve common progress in stray animal management. It is hoped that through the bilateral research in this paper, a step will be taken to develop the reference of national stray animal management policies, promote social and economic development, and pay attention to the survival and welfare of stray animals in human society while improving the quality of life of the people and the efficiency of national management.

References

- [1] Veevers, J.E. (2016) *The Social Meanings of Pets: Alternative Roles for Companion animals*. In Routledge eBooks, 11–30.
- [2] Feiyang, L. (2020) *Multi-Source Review on Domestic Stray-Animal Problems*. In 2020 2nd Scientific Workshop on Advanced in Social Sciences, Arts & Humanities, 21-23.
- [3] Zhou, H., He, S., Sun, L., et al. (2014) *Serological Evidence of Avian Influenza Virus and Canine Influenza Virus Infections Among Stray Cats in Live Poultry Markets, China*. *Veterinary Microbiology*, 175(2–4), 369–373.
- [4] Nutter, F.B., Levine, J.F., Stoskopf, M.K. (2004) *Reproductive Capacity of Free-roaming Domestic Cats and Kitten Survival Rate*. *Journal of the American Veterinary Medical Association*, 25(9), 1399–1402.
- [5] Carpenter, A.F., Song, W. (2016) *Changing Attitudes about the Weak: Social and Legal Conditions for Animal Protection in China*. *Critical Asian Studies*, 48(3), 380–399.
- [6] Cardon, A.D., Bailey, M.R., Bennett, B. T. (2012) *The Animal Welfare Act: From Enactment to Enforcement*. PubMed Central (PMC). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3358977/>
- [7] Loss, S.R., Will, T., Marra, P.P. (2013) *the Impact of Free-ranging Domestic Cats on Wildlife of the United States*. *Nature Communications*, 4(1).
- [8] Carlile, D.P.N., Zino, F., Natividad, C., Wingate, D.B. (2003) *a Review of Four Successful Recovery Programmes for Threatened Sub-tropical Petrels*. *Marine Ornithology*, 31, 185-192.
- [9] Miller, L. (2007) *Animal Sheltering in the United States: Yesterday, Today, and Tomorrow*. *Veterinary Medicine-bonner Springs Then Edwardsville*, 102(10), 656.
- [10] Li, P.J., Davey, G. (2013) *Culture, Reform Politics, and Future Directions: a Review of China's Animal Protection Challenge*. *Society & Animals*, 21(1), 34-53.
- [11] Flynn, C.P. (2011) *Examining the Links Between Animal Abuse and Human Violence*. *Crime Law and Social Change*, 55(5), 453–468.
- [12] Gu, X., Wu, D., Zhang, Z., et al. (2024) *Public Attitudes towards and Management Strategies for Community Cats in Urban China*. *Animals*, 14(16), 2301.
- [13] Chu, K., Anderson, W. M. (2007) *US public opinion on humane treatment of stray cats*. *Law & Policy Brief*.
- [14] Yin, W., Dong, J., Tu, C., et al. (2013) *Challenges and Needs for China to Eliminate Rabies*. *Infectious Diseases of Poverty*, 2(1).