

Comparative Analysis and Optimization of Stray Dog Rescue Policy

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ABSTRACT

This study aims to thoroughly analyze the stray dog rescue policies to address the numerous challenges posed by the current stray dog issue. By systematically reviewing relevant global policies and employing literature review, case analysis, and comparative research methods, this study conducts a comprehensive and in-depth analysis of stray dog rescue policies. The research reveals that foreign policies demonstrate significant advantages in animal welfare protection and adoption incentives, but face shortcomings such as high capital consumption. While China's policies have certain provisions regarding capture and sheltering, they encounter issues including incomplete legal frameworks and low public participation. Based on these findings, it is recommended to improve the legal system, broaden funding channels, strengthen public education and interdepartmental coordination to optimize and effectively implement stray dog rescue policies. This will address the stray dog problem and achieve an organic balance between public health, social security, and animal welfare.

KEYWORDS

Stray Dogs; Rescue Policies; Capture and Sheltering; Adoption Placement; Sterilization and Epidemic Prevention.

1. INTRODUCTION

1.1. Research Background

With the advancement of socio-economic development and urbanization, the global population of stray dogs has shown a significant upward trend. This phenomenon poses potential threats to public health security and social order, drawing widespread societal attention. Stray dogs often serve as carriers and vectors of various pathogens, substantially increasing the risk of zoonotic diseases (such as rabies transmitted through bites). Additionally, their aggressive behaviors like attacking pedestrians and disrupting traffic in urban environments further exacerbate public safety hazards. This issue also highlights deficiencies in animal welfare protection systems. Therefore, systematic research on stray dog rescue policies holds crucial practical significance, helping alleviate these problems and promote social harmony alongside sustainable development.

1.2. Problem Statement

While stray animal management has garnered significant public attention, current rescue policies remain significantly inadequate. The primary challenge stems from an underdeveloped legal framework that lacks standardized protocols for critical procedures like capture, adoption, and sterilization, severely hindering policy implementation. Secondly, insufficient public engagement and

limited mobilization of social forces have constrained policy promotion. Furthermore, coordination gaps between government departments, ambiguous jurisdictional boundaries, and inadequate communication channels further undermine policy enforcement. This study aims to thoroughly analyze the core components of the policy system and propose optimization strategies, providing both theoretical foundations and practical solutions for comprehensive governance.

1.3. Research Objectives

This study conducts a global policy comparison to systematically analyze the underlying logic and practical effectiveness of stray dog rescue policies, thoroughly examine the strengths and weaknesses of existing policy frameworks, and propose targeted improvement strategies. Focusing on three core dimensions-capture-and-custody, adoption placement, and sterilization & epidemic prevention, the research explores optimization pathways to enhance rescue efficiency. It also addresses critical bottlenecks including chronic funding shortages, insufficient public engagement, and lack of interdepartmental coordination mechanisms through structured solutions. The findings aim to provide theoretical support and practical guidance for policy refinement, advance solutions to stray animal management challenges, and ultimately promote harmonious coexistence between humans and animals^[9].

2. LITERATURE REVIEW

2.1. Theoretical Basis

Research on stray dog rescue policies must be grounded in the application of relevant theoretical frameworks, with animal welfare theory and public administration theory forming the cornerstone of policy analysis. Animal welfare theory emphasizes animals' moral standing within human society and their fundamental rights, providing ethical justification for stray dog relief efforts. As noted by Namo et al., the surge in stray animals stems not only from pets being lost or abandoned but also reflects societal deficiencies in animal protection awareness^[2]. Consequently, animal welfare theory demands rescue policies to alleviate suffering, ensure basic survival conditions, and enhance public conservation consciousness. Public administration theory highlights the need for coordinated efforts among governments, social organizations, and citizens to optimize resource allocation. Together, these theories establish the theoretical foundation for studying stray dog rescue policies.

2.2. Social Impact of the Stray Dog Problem

2.2.1. Public Health Threats

Stray dogs, carrying viruses, bacteria, and parasites, pose a potential threat to public health. Their widespread lack of immunization makes them susceptible to transmission of deadly diseases like rabies and toxoplasmosis, which can endanger pregnant women. Exposure to contaminated environments increases the risk of pathogen spread, potentially triggering public health emergencies. Urgent comprehensive management measures are needed to mitigate these risks^{[5][13]}.

2.2.2. Social and Public Security Risks

Frequent attacks by stray dogs causing injuries, particularly in residential communities and public areas like parks, have resulted in personal harm and sparked public panic. Large dog breeds exhibit stronger aggression, while small dogs' tendency to gather in groups often leads to accidental injuries. Their nighttime barking disrupts residents' rest and undermines social trust. Urgent implementation of effective control measures is needed to maintain public safety and order^{[3][13]}.

2.2.3. Animal Welfare Dilemma

Stray dogs have long faced food shortages, disease outbreaks, and extreme weather threats, resulting in harsh living conditions. The lack of medical assistance has led to a significant increase in mortality rates and poses risks of human abuse, violating the fundamental principles of animal welfare. The author believes that China currently needs to improve relevant laws and regulations and establish a systematic rescue mechanism to effectively improve the living environment for this group ^[12].

2.3. Global Stray Dog Rescue Policy Research Progress

Research on stray dog rescue policies worldwide exhibits diverse characteristics, with significant differences in policy development processes and current situations across regions. In China, research on stray dogs started relatively late, but in recent years, with the acceleration of urbanization and heightened public awareness of animal protection, the relevant policy systems have gradually improved. For instance, some cities in the Yangtze River Delta region of China have explored and implemented a three-in-one comprehensive governance model characterized by "policy leadership, organizational coordination, and multi-stakeholder governance" to strengthen the management and rescue of stray dogs ^[1]. However, current policies still face shortcomings such as an incomplete legal system and insufficient public participation ^[2]. In comparison, developed countries demonstrate more mature research in stray dog rescue, particularly the United States and certain European nations. These countries generally prioritize animal welfare by establishing robust legal frameworks, implementing adoption alternatives to purchasing systems, and promoting scientific sterilization measures, effectively controlling stray dog populations and improving their living conditions ^[3]. Nevertheless, their policy implementation still faces challenges including substantial funding requirements and high operational complexity. A review of global research progress indicates that practical experiences in stray dog rescue policies from different regions provide valuable references for optimizing China's policies. ^[10]

2.4. Research Gaps

While existing research has made progress across multiple dimensions of stray dog rescue policies, several critical gaps remain to be addressed. First, current literature predominantly focuses on policy design and theoretical discussions regarding implementation challenges and solutions, with insufficient analysis of practical operational issues. Common obstacles such as funding shortages, interdepartmental coordination difficulties, and inadequate public engagement persist in policy execution, yet systematic studies addressing these problems remain limited ^[4]. Second, technological applications in stray dog rescue efficiency remain under-explored. Potential technologies like big data and artificial intelligence for information management and disease surveillance have yet to be fully utilized ^[8]. Additionally, research on public acceptance of rescue policies and its influencing factors remains inadequate, which hinders policy implementation effectiveness. Future studies should prioritize addressing practical implementation challenges, exploring technological application pathways, and systematically examining public attitudes and behaviors to bridge these research gaps.

3. COMPARATIVE ANALYSIS AND DISCUSSION OF STRAY DOG RESCUE POLICY

3.1. Stray Dog Rescue Policies in Developed Countries

The stray dog rescue policies in European and American countries prioritize animal welfare as their core objective, with a strong emphasis on promoting adoption mechanisms. These policy frameworks highlight the protection of animal rights, requiring humane capture methods (such as using capture cages or nets) and mandatory shelter registration (e.g., the U.S. "Pet Find Program"). Additionally,

incentives like adoption fee reductions, tax breaks, and special campaigns such as "Adoption Week" are implemented to encourage public participation in adoption^[6]. The advantages of these policies lie in their comprehensive legal systems and diversified rescue entities that collectively ensure animal welfare, effectively boosting adoption rates and resource utilization efficiency. However, shortcomings include high funding requirements (e.g., shelter maintenance costs) and implementation challenges (such as public resistance to mandatory spaying/neutering measures) .

3.2. China's Stray Dog Rescue Policy

The current rescue policies implemented in China mainly focus on three core areas: animal capture and sheltering, adoption promotion, and spaying/neutering interventions. In some regions, specialized management teams have been established to standardize animal capture procedures; by setting up "Charity Adoption Days" and offering fee reduction measures to encourage public participation in adoption activities; additionally, the government has collaborated with veterinary institutions to provide affordable spaying services. The main issues include: the absence of unified national regulations leading to significant variations in local implementation standards; insufficient public engagement and generally low adoption willingness; as well as systemic barriers in resource integration due to inadequate coordination mechanisms between government departments and non-governmental organizations^[11].

3.3. Discussion on Key Aspects of Stray Dog Rescue Policy

3.3.1. Capture and Custody

The capture of stray dogs requires balancing efficiency with human welfare to minimize harm. Essential tools include capture cages (non-invasive and reusable for public spaces), nets (for agile animals), and sedation injections (administered under veterinary supervision). Strategies like food or sound lures should be employed to boost success rates while reducing stress responses. The entire process must strictly adhere to animal welfare principles, with all forms of violence prohibited.

Animal shelters must provide stray dogs with standardized sanitation facilities, balanced nutrition, and essential medical care. Regular disinfection protocols are crucial for preventing infectious diseases. Dietary plans should be scientifically tailored to dogs' age and health status. Medical services should include routine checkups, vaccinations, disease treatment, and necessary procedures like human euthanasia. Optimizing shelter management can significantly improve stray dogs' living conditions and create favorable circumstances for their future placement.

3.3.2. Adoption and Placement

To boost the adoption rate of stray dogs, a comprehensive approach is required: Strengthen public awareness campaigns (such as community lectures and social media promotions) to promote the "adopt instead of buy" concept; Lower adoption barriers (like waiving fees and simplifying procedures); Provide post-adoption support services (including training for pet care, behavioral guidance, and regular health checkups) to reduce the risk of secondary abandonment.

For stray dogs that cannot be adopted, specialized placement facilities can be established in suburban areas equipped with standardized kennels, ample exercise areas, and qualified professional caregivers. These facilities should collaborate with animal hospitals and animal protection organizations to jointly manage public health responsibilities such as spaying/neutering and immunization, while also overseeing animal welfare. The government should actively encourage social participation in the construction and operation of these facilities. Simultaneously, market-oriented operational mechanisms should be introduced to establish interactive dog experience zones and pet-themed cafes, attracting animal lovers and related groups to consume services. This approach aims to achieve sustainable development for operating units beyond fiscal subsidies.



Figure 1. Design effect of professional placement base for stray dogs



Figure 2. Design effect of a stray dog themed café

3.3.3. Sterilization and Epidemic Prevention

Spaying and neutering remains the cornerstone strategy for controlling stray dog populations. Governments should collaborate with veterinary institutions to deliver affordable spaying and neutering services, while providing adoption subsidies to pet owners. To address implementation challenges such as public awareness gaps and uneven resource distribution, it is crucial to strengthen public education campaigns and expand service network coverage.

Epidemic prevention efforts are vital for safeguarding public health and the welfare of stray dogs. Free core vaccinations that include rabies should be provided to stray dogs, while establishing a robust disease surveillance system to ensure timely isolation and treatment of infected individuals. The effective implementation of these measures requires coordinated efforts from governments, non-governmental organizations, and the public.

3.4. Lessons Learned

Through the analysis of global stray dog rescue policies, valuable experience can be provided for the improvement of China's stray dog rescue policies. First, sound laws and regulations form the foundation for smooth policy implementation. Experience shows that establishing a national legal framework and clarifying the responsibilities of governments at all levels and social organizations can effectively enhance policy execution and coverage. For instance, the United States established

the Animal Welfare Act to specify concrete requirements for stray animal management, providing a legal basis for state-level policy formulation and implementation. Second, diversified rescue entities are crucial for improving policy effectiveness. International policies generally emphasize collaborative cooperation among governments, non-governmental organizations, and the public. By establishing multi-stakeholder governance models, the advantages of each entity can be fully leveraged. For example, Thailand's "Stray Home Model" utilizes abandoned billboards to provide temporary shelters for stray dogs, demonstrating both resource recycling and the innovative capabilities of social forces. Finally, the application of technological means offers new approaches for policy implementation. Some regions abroad have achieved dynamic monitoring and precise management of stray dogs through information management systems, enhancing policy execution efficiency. These experiences provide important references for optimizing China's stray dog rescue policies, contributing to the scientific and systematic development of such policies.

4. DIFFICULTIES AND CHALLENGES IN THE IMPLEMENTATION OF THE BAILOUT POLICY

4.1. Funding Shortfalls

In the implementation of stray dog rescue policies, funding shortages have always been one of the core factors constraining effective policy execution. The work of stray animal rescue is characterized by its long-term and complex nature, requiring substantial investment in human, material, and financial resources, including the purchase of capture equipment, operation of shelter facilities, medical sterilization services, and daily management. However, China's current funding sources for stray dog rescue mainly rely on government allocations and social donations, which are relatively limited and unstable. Especially under the circumstances of limited local government budgets, investments in stray dog rescue often fail to meet actual needs. Moreover, non-governmental rescue organizations generally face operational difficulties due to lack of stable funding sources, further exacerbating the implementation pressure of rescue policies. Funding shortages not only restrict infrastructure construction of shelter facilities but also hinder the popularization of medical and sterilization services for stray dogs, thereby significantly constraining the realization of policy objectives.

4.2. Low Public Engagement

The public's limited understanding of and low engagement with stray dog rescue policies remain major obstacles to policy promotion and implementation. Although the stray dog issue has garnered widespread social attention, most citizens have limited knowledge about specific rescue measures and operational procedures. For instance, survey data shows only a small percentage of people are willing to adopt stray dogs, with high expectations for adoption agencies – reflecting public distrust in rescue policies^[8]. Concurrently, some individuals' fear of stray dogs and concerns over public safety further diminish their support for rescue efforts. Additionally, low public participation manifests in limited outreach of social education campaigns, failing to effectively foster public compassion and sense of responsibility^[14]. This situation not only weakens the policy's grassroots foundation but also hinders the formation of a collaborative social atmosphere for implementation, ultimately compromising the policy's practical effectiveness.

4.3. Poor Coordination between Sectors

The coordination between government departments and non-governmental organizations in stray dog rescue policies faces multiple challenges, severely hindering policy implementation. The primary issue stems from ambiguous departmental responsibilities, leading to frequent overlaps in functions

and buck-passing. For instance, public security, animal husbandry, and urban management departments often lack collaboration during capture, sheltering, and epidemic prevention processes, with insufficient information sharing mechanisms. Secondly, the absence of cross-departmental coordination platforms impedes resource integration efficiency. Non-governmental organizations consistently struggle with funding and human resource shortages, while governments face difficulties in providing timely support due to information asymmetry^[11]. Furthermore, the incomplete local legal framework and significant regional variations in dog ownership regulations further complicate policy execution. To address these issues, strengthening interdepartmental coordination mechanisms, clarifying authority boundaries, and establishing an information-sharing platform have become crucial pathways to enhance the effectiveness of stray animal governance policies.

5. STRATEGIC DECISION-MAKING

5.1. Broadening Funding Channels

The implementation of stray dog rescue policies faces the critical challenge of funding shortages, making the expansion of funding sources crucial for ensuring smooth policy execution. As the core entity in social governance, the government should increase financial investment in stray dog rescue efforts by establishing special funds to support capture and containment, sterilization and epidemic prevention, as well as adoption placement. Additionally, social donations remain an important funding source. Encouraging enterprises, individuals, and charitable organizations to participate in rescue activities can effectively alleviate financial pressure. For instance, establishing a stray dog protection foundation and recruiting donations from compassionate individuals could provide stable economic support for rescue operations^[14]. Meanwhile, corporate partnerships have emerged as an innovative model. Through sponsorships and public welfare project collaborations, companies can fulfill their social responsibility while injecting financial vitality into rescue policies. However, fund utilization must emphasize transparency and efficiency to ensure every penny genuinely improves the living conditions of stray dogs.

5.2. Improving Public Participation

Public engagement directly impacts the effectiveness of stray dog rescue policies. Therefore, enhancing public awareness and participation in this cause is crucial. Public education serves as a vital tool for raising consciousness, utilizing diverse formats like community lectures, media campaigns, and online platforms to disseminate knowledge about stray dog rescue^[7]. For instance, creating public service advertisements featuring real-life cases and heartwarming stories can resonate with viewers through TV broadcasts and social media. Additionally, organizing public welfare activities such as adoption days and volunteer cleanup initiatives allows people to experience rescue work firsthand, gaining insight into the actual needs of stray dogs^[8]. These efforts not only increase public attention to stray dog issues but also cultivate a sense of responsibility and compassion, fostering a positive societal atmosphere of collective participation.

5.3. Strengthening of Intersectoral Coordination

The implementation of stray dog rescue policies requires collaboration among multiple government departments and social organizations. However, due to unclear responsibilities and poor information communication, coordination between departments often faces obstacles, leading to inefficient policy execution. To address this, clarifying departmental responsibilities forms the foundation for enhanced coordination. For instance, public security authorities handle dog registration and enforcement of violations, animal husbandry departments manage immunization and quarantine procedures, while urban management departments are responsible for capturing and housing stray dogs. Building on this framework, establishing an information-sharing platform becomes crucial for efficient

collaboration. By integrating data resources from various departments, a unified stray dog information database can be created to ensure timely data transmission and sharing. Additionally, holding regular interdepartmental meetings to discuss policy implementation challenges and develop targeted solutions can significantly improve execution effectiveness and overall efficiency. Only through clear role definition and strengthened communication can we establish a multi-party collaborative rescue mechanism, fundamentally resolving the stray dog issue.

6. SUMMARY AND OUTLOOK

6.1. Summary

This study focuses on stray dog rescue policies, systematically reviewing the theoretical foundations, practical developments, and core issues of international related policies. Through an in-depth analysis of the social impacts of stray dogs, it elucidates the multifaceted challenges they pose across public health, social security, and animal welfare domains. The findings indicate that effective implementation of stray dog rescue policies requires not only scientifically sound policy design but also active participation from all sectors of society and adequate resource allocation. Regarding key policy components, the importance of humane capture and sheltering measures, optimized adoption and placement mechanisms, as well as sterilization and epidemic prevention policies has been further confirmed. Additionally, the study reveals major challenges in policy implementation, including funding shortages, insufficient public engagement, and interdepartmental coordination issues, while proposing corresponding solutions. Overall, this research provides theoretical support and practical references for improving stray dog rescue policies, advancing the comprehensive governance process of this issue.

Based on the research results, the following suggestions are put forward for improving the stray dog rescue policy:

- 1) Improve the legal system: Accelerate the process of formulating relevant laws and regulations, and clarify the responsibilities and obligations of government departments, non-governmental organizations and the public.
- 2) Strengthening financial guarantee: Expand diversified financing channels, including government financial input, social public welfare donations and enterprise cooperation support.
- 3) Enhancing public participation: Through extensive publicity and education, enhance the public awareness level and sense of responsibility.
- 4) Optimize the coordination mechanism: Build an information sharing platform and strengthen the effectiveness of cross-departmental collaboration.
- 5) Promoting technology application: Explore the use of big data and artificial intelligence to improve the scientificity and accuracy of management.

6.2. Future Outlook

While this study has achieved certain results across multiple dimensions of stray dog rescue policies, several limitations remain. For instance, due to data availability constraints, the policy implementation effects in some regions could not be comprehensively evaluated. Moreover, the specific application scenarios of technological approaches in stray dog rescue still require further exploration. Future research could focus on the following directions for expansion:

- 1) Deepening Technology Application: Explore the application of big data and artificial intelligence technologies to improve rescue efficiency, achieve dynamic monitoring of stray dog populations, predict clustered areas and breeding peaks, and scientifically guide capture and sterilization

operations; utilize AI individual identification technology for traceability management; apply smart devices to optimize operational procedures and reduce management costs.

2) Strengthen public education: focus on cultivating social awareness of care and responsibility, popularize scientific knowledge of assistance and policies and regulations, encourage volunteer services and donations; guide the establishment of correct animal welfare views through the media, and promote social co-governance and joint efforts.

3) Expanding International Cooperation: Drawing on advanced concepts and mature regulatory experiences from Europe, America, and other countries to optimize local policy formulation; actively participating in international forums to share China's practices, introducing cutting-edge technologies to enhance professional standards, and providing a more scientific basis for policy adjustments.

By deepening the above research direction, it is expected to further promote the improvement and practical development of China's stray dog rescue policy.

REFERENCES

- [1] Huang Shuling; Qian Shijie; Chu Sijia; Gao Tao. Exploring Government Governance Pathways for Urban Stray Dogs from a Comprehensive Management Perspective: A Case Study of Selected Cities in the Yangtze River Delta Region [J]. *Monthly Fiction (Second Half)*, 2022, (22):55-57.
- [2] Xing Yue and Yu Desong. Analysis of Challenges and Path Optimization in Stray Animal Rescue Practices [J]. *Mass Standardization*, 2021, (4):71-73.
- [3] Liu Diqin, Wei Bin, Li Xuanyan, Cui Juanjuan, Zhang Jinlong. Exploring New Approaches to Stray Dog Management [J]. *Today's Animal Husbandry and Veterinary Medicine*, 2019,35(2):70-70.
- [4] Liu Wumei & Wang Lu. The "Dogs Far Away, Cats Closer At Hand" Effect in Charitable Rescue of Stray Animals and Its Mechanism Analysis [J]. *Journal of Psychology*, 2024,56(6):777-798.
- [5] Zhai Yunyi; Wang Qiang; Sheng Jian; Wang Hui. Current Status and Analysis of Urban Stray Dog and Cat Placement in China [J]. *Journal of Veterinary Medicine, China*, 2018,54(9):116-118.
- [6] Zhang Ying and Zhang Xiaojing. Localization Pathways of International Stray Animal Management Practices [J]. *Today's Animal Husbandry & Veterinary Medicine (Today's Pet)*, 2023, (7):42-43.
- [7] Wang Haijun; Wang Yanyin Yue. Causes, Hazards, and Countermeasures of Stray Dogs and Cats in Cities [J]. *Shandong Animal Husbandry and Veterinary Medicine*, 2022,43(2):56-58.
- [8] Lu Yixuan; Cui Liyu; Cao Xinyu; Chen Lingzhi; Chen Chen; Fan Changlin; Cai Xinxin; Wu Mei; Liu Penggang. The Origin, Survival Status, and Adoption Assistance of Stray Dogs and Cats [J]. *China Animal Health*, 2022,24(12):107-109.
- [9] Meng Xinpei, Wang Xinyi, Li Wan, Lou Tianyu, Liu Yang. Design Research on a Stray Animal Rescue Device [J]. *Today's Animal Husbandry & Veterinary Medicine (Today's Pet)*, 2023, (6):40-41.
- [10] Han Hui; Wang Cui; Yang Le; Chen Xi. Diurnal Behavioral Rhythm of Stray Dogs in Chengguan District, Lhasa [J]. *Journal of Wildlife Biology*, 2020,41(1):80-85.
- [11] Yang Xi; Yi Feng. Research on Regulatory Mechanisms for Urban Dog Ownership-- Using Local Legislation as an Analytical Sample [J]. *Urban Studies*, 2023,44(1):40-45.
- [12] Wang Bingqian. Thailand uses billboards to set up shelters for stray dogs [J]. *China Working Dog Industry*, 2022, (6):71-71.
- [13] Yan Nan. Public Security Risks of Urban Stray Animals and Management Suggestions [J]. *China Animal Quarantine*, 2020,37(7):49-52.
- [14] Liu Lu, Su Xiaoye, Ding Peng, Fan Shu, Lin Xi. Research on Working Pathways of Animal Protection Associations from the Perspective of Innovative Social Governance System [J]. *Hubei Agricultural Mechanization*, 2020, (1):166-167.