Research on the Legal System Construction of Environmental Food Drug Investigation in the Intelligent Age

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Abstract: *With the rapid development of China's economy, crimes in the ecological environment, food and medicine, and intellectual property rights have emerged one after another, which has caused a bad impact on society. Based on the analysis of the difficulties faced by the high integration of big data resources in environmental food drug investigation and law enforcement, the in-depth application and the difficulties in building an integrated platform of politics and law, this paper finds the paths of intelligent construction of law enforcement places, intelligent construction of law enforcement and case handling, intelligent construction of law enforcement supervision and intelligent construction of law enforcement management, so as to comprehensively improve its work quality and case handling efficiency.*

Keywords: *intelligent age, environmental food drug detection, wisdom legal system, legal construction*

1. Introduction

China's public security work should not only face the increasingly complex risk situation in the United States and western countries, but also face the transformation of major social contradictions at home, and people's expectations and requirements for public security work are getting higher and higher. The application of the emerging technological revolution not only brings unprecedented opportunities to public security work, but also dramatically increases challenges [1]. With the steady progress of the new development concept, the overall layout of "five in one" and the strategic layout of "four comprehensiveness", "ruling the country according to law in an all-round way" has become an important link in the national governance system, and the construction of public security rule of law is indispensable. Under the absolute leadership of the Party, we should persist in taking the people as the center, resolutely take the "Socialism with Chinese characteristics road of public security ruled by law" and speed up the establishment of a "modern public security legal system", which is the path. "Comprehensive reform", "digital public security, public security big data strategy, and intelligent public security" are the measures. How to organically integrate "big data, artificial intelligence" and "public security rule of law construction" and cross-border integration to produce efficient "chemical reaction" is an important strategy for the construction of public security rule of law system in the intelligent era [2].

In recent years, with the rapid development of China's economy and the rapid transformation of society, some criminal problems have emerged one after another in the fields of ecological environment, food and medicine, intellectual property rights and so on, which have had a bad impact on society. In response to these phenomena, the Yunnan Provincial Public Security Department put the brand of the Ecological Environment and Food and Drug Crime Investigation Corps in the Forest Police Corps in 2021 with the model of "one institution, two brands" to achieve a unified crackdown on the ecological environment, forest grasslands, ecological security, intellectual property rights, food and drugs and other related illegal and criminal activities. In the era of intelligence, the use of big data and artificial intelligence technology will inevitably transform the environmental food drug investigation from the traditional public security legal system construction to the modern public security legal system construction [3]. Relying on the legal database of environmental food drug investigation, we will comprehensively optimize the public security workflow of environmental food drug investigation by using new technologies such as artificial intelligence and big data, realize the deep integration of big data, artificial intelligence and environmental food drug investigation public security legal system

construction, and comprehensively improve its work quality and case handling efficiency.

2. The significance of the legal system construction of environmental food drug detection in the intelligent era.

2.1 To ensure the legalization of public security work in environmental food drug investigation

In recent years, China's food and drug safety problems are high. Faced with all kinds of food and drug crimes that occur frequently, how to draw the sword out of its sheath and crack down severely to create a healthy and safe food and drug environment for the whole society has become a problem that the public security organs and even related industries are thinking about. General Secretary Xi pointed out: "We should strengthen food and drug safety supervision, and accelerate the establishment of a scientific and perfect food and drug safety governance system with the most stringent standards, the strictest supervision, the severest punishment and the most serious accountability [4]". Based on the specific objectives of environmental food and drug investigation, we should gradually construct its law enforcement norms to ensure that its work is more legal and fully reflects the current modernization level of governance system and governance capacity. The construction of "intelligent legal system" of public security in environmental food and drug investigation is the product of the full integration of modern information technology and law enforcement standardization, and it also belongs to the guarantee of building public security under the rule of law and improving the level of legal work. It relies on modern information technology to supervise, record and manage the whole process and all elements of law enforcement in a full-time, precise and meticulous manner, and to standardize, evaluate and inspect all links and activities of environmental food drug investigation and law enforcement in an automatic, intelligent and dynamic way, which is the subjective influencing factor in law enforcement activities, reduces the subjective space of anomie as much as possible, and fully reflects the authority and objectivity of relevant law enforcement work. At the same time, it can also ensure fair and civilized law enforcement to a certain extent, so that the law enforcement of public security organs can more reflect the level of credibility and rule of law, and ensure that people can feel justice and fairness in every case of drug investigation.

2.2 Boost the efficiency maximization in environmental food and drug investigation

On April 15, 2021, the Ministry of Public Security reported that in 2020, 23,000 cases of ecological and environmental resources crimes were cracked by public security organs nationwide, with more than 40,000 suspects involved, involving 16.6 billion yuan. The legal system construction of the environmental food drug investigation team plays an important role in preventing and promoting the crime of attacking and shocking the ecological environment and forming the concept of green and safe development in the whole society. Realize the modernization of the national governance system and governance capacity, and further enhance the vitality and connotation of the "smart legal system" of environmental food and drug investigation public security. The main purpose of applying science and technology is to liberate and improve productive forces. At the present stage, the construction of the "Wisdom legal system" for environmental food drug investigation police is the proper means of promoting the modernization of the national governance system and governance capacity, an important embodiment of the modernization of environmental food drug investigation police work, and a key basis for ensuring the improvement of law enforcement efficiency and implementing efficiency change, quality change and power change [5]. Based on various modern information technologies, it can fully integrate various resources in the process of environmental food drug investigation and law enforcement, further optimize business processes, improve the level of supervision and management, make law enforcement case handling, management and supervision more active, convenient and intelligent, fully alleviate complex law enforcement work and limited resource contradictions, minimize the pressure on police, promote the integration of environmental food drug investigation and law enforcement work and technology, and achieve optimal law enforcement efficiency with the least manpower and resources.

3. The dilemma faced by the legal system construction of environmental food drug investigation in the intelligent era

3.1 The integration ability of big data resources for environmental food drug investigation and law enforcement needs to be promoted

Although the internal resources of public security have achieved certain integration results at this stage, different business systems have also been highly integrated, and the police handling cases only need one-click use. However, the integration of resources is not sufficient, the loss of data transmission across the network and the failure of connection between different police departments still exist. These are all urgent needs to be solved. At the same time, the scope of the current integrated social data resources still needs to be further expanded, and a normalized update mechanism has not been established.

There are three types of public security data. One is basic work data, which specifically involves case information, place information and clue information. The second is to share data on the intranet, which specifically involves early warning and judgment and related information of criminals. Third, social information, mainly including laws and regulations, judgment results, abnormal information of enterprises, etc. The above information is scattered in public security network, industry regional network and Internet. Although the integration of public security network resources has achieved remarkable results, there are still problems such as interface barriers between platforms, lack of normal updating mechanism of data, and the scope of integration of social resources needs to be further expanded. If we can rely on big data, cloud computing, artificial intelligence and other modern scientific and technological means to develop an interactive information inquiry platform for law enforcement and case handling, and gather the latest laws and regulations, judicial interpretations, provincial and municipal case handling guidelines, typical case judgment results and other information to the maximum extent, it will effectively break the "data chimney" problem. By searching the name of a case, the police can obtain the applicable laws, regulations, case judgments and other handling elements of similar cases, fully expand their case review "information pool", and realize the transformation from "manual retrieval" to "one-click call" in information collection, further improving work efficiency and accuracy of judgment.

3.2 The in-depth application of big data resources for environmental food drug detection and law enforcement still needs to be improved

While integrating law enforcement big data resources, all kinds of law enforcement data should be carefully cleaned and recreated, and the corresponding standard system should be gradually improved to ensure the optimal allocation and effective correlation of data. For all kinds of law enforcement information, it is necessary to mine and analyze it through big data and build a specialized law enforcement model. However, the application of software and hardware equipment is not advanced enough, and it is still necessary to improve the automation, intelligence and precision service level of law enforcement [6]. In addition, it is necessary to improve the convenience and effectiveness of human-computer interaction.

It is also essential to cultivate talents with deep application. The improvement of the overall level of the team is by no means a day's work, and the application of modern science and technology can play a dual role of "making up lessons and cultivating excellent students". Based on the deep mining of law enforcement big data, a set of law enforcement case-handling model is constructed with the case-handling link as the main axis, which realizes intelligent assistance to interrogation guidance, evidence exclusion, clue mining, case file binding and other links, fills the loopholes in law enforcement and improves the case-handling effect. For example, push a targeted interrogation outline according to the type of case; Related investigation materials, combined with relevant elements to form a digital evidence chain; For their scattered evidence materials, prompt to supplement the missing items, and find contradictions and doubts, focusing on prompting the police handling the case to further investigate and collect evidence; Compare the model file template, and correct the procedural problems such as upside-down files and no signature. Give full play to the intelligent guiding role of the system and truly provide menu-based operation guidance and authoritative guidance for the police.

3.3 There are still some difficulties in the construction of an integrated platform for environmental food and drug investigation, politics and law

The existence of departmental barriers cannot be ignored, and the smooth collaborative docking of business functions, classification screening of shared data and the security of cross-network transmission information should be coordinated.

The essence of the modernization of public security work is to demand police force and combat effectiveness from science and technology, but the contradiction between the complexity of public security work and the limitation of police force resources still exists for a long time. Taking the management of the property involved in the knowledge of environmental medicines as an example, on the one hand, faced with the problems of "Non-standard storage, unprofessional storage and unsmooth retrieval" of the property involved, grassroots law enforcement departments have concerns of "Dare not detain, unwilling to detain"; On the other hand, the full implementation of evidence adjudication rules and the enhancement of people's awareness of property rights protection have put forward higher requirements for property management involved. To standardize the management of the property involved, it is necessary to break through the traditional mode of transferring the case and decentralized custody, and actively build a "1+1+3" management mechanism, that is, to set up an offline center for financial management involved and an online information registration platform, and to restrict each other and benefit each other through the public security inspection law. The seizure, freezing and seizure of the case finance shall be entered into the online platform in accordance with the relevant regulations, and the items shall be scanned offline and put into storage [7]. According to the idea of the operation mode of "moving a single item without moving another person", if the litigation stage is changed, you only need to go through the legal procedures online, and you can realize the cross-departmental "Transfer documents but not articles, change people but not locations", effectively solving the problems of cumbersome transfer procedures, slow progress and low disposal rate of closed cases among the property departments involved. In addition, the identification and testing work involved in the case also needs to be coordinated.

4. The practical path of the legal system construction of environmental food drug investigation in the intelligent era

4.1 Intelligent construction of law enforcement places

4.1.1 Build a "five-in-one" functional area for law enforcement and case handling

The "five-in-one" functional areas involved in law enforcement case handling are: (1) Case management area, as the core of the whole law enforcement office management, can comprehensively supervise and manage the whole case handling process, and fully create an instant and one-stop supervision and management model; (2) The case handling area is a special area for criminal suspects to carry out personal safety inspection, interrogation, information collection and inquiry according to law; (3) According to the "One Area and Seven Branches", that is, the property management area involved, the team's pre-collection repository, the central direct repository, the entrusted escrow repository, the on-site physical evidence repository, the electronic evidence repository, the financial assets repository involved and the property repository with undetermined properties should be well managed and regulated, and the property involved should be kept in the same place from the beginning of the public security organ to the formal judgment of the court, and between the public security organs; (4) Synthesize the combat zone, integrate the resources of various relevant police departments, and then link them in the law enforcement case management center to ensure that the case can be fully cooperated and shared in the process of handling, so as to achieve the effect of joint efforts in actual combat; (5) Service guarantee area, providing targeted services such as mailing legal documents, judicial expertise, price appraisal, assisting lawyers, and expediting court proceedings.

4.1.2 Build an all-round information intelligent management and control

The research and development content mainly involves the place management system such as face recognition, smart bracelet binding, intelligent tracking and accounting, which fully guarantees the management of "eight intelligent [8] ":

(1) Intelligent reservation, which can be used to make an appointment for handling places to avoid the difficulty of finding places and related hidden dangers;

(2) Intelligent verification, which connects ID card verification and face recognition equipment with the relevant business systems of provincial offices, and saves the time of handling cases through the information data of public security departments and provincial departments to the greatest extent;

(3) Intelligent collection: through the integrated information system and collection equipment, comprehensively collect the basic information of the people involved, including fingerprints, footprints, portraits, signs, DNA, irises, voice prints and other different types of information as important basic data;

(4) Intelligent positioning, which realizes rapid registration, monitoring and positioning, and abnormal early warning of persons involved in entering the area through smart bracelet binding;

(5) Intelligent storage, using the Internet of Things, electronic tags, intelligent file cabinets and other technical equipment means, implementing the relevant systems such as registration and photo taking of personal belongings, electronic signature retrieval of two-way lockers, and unified storage of files, which can record and archive financial and case-related information in the whole process;

(6) Intelligent sharing, ensuring the smoothness of the site management system and different business systems, enabling information to be shared in all directions, and truly implementing "input at most once";

(7) Intelligent patrol, which uses the patrol subsystem to manage the specific patrol frequency, location and frequency of relevant police personnel, so as to fully avoid the problems of sleeping and leaving the post;

(8) Intelligent gathering, which integrates the information, people and things related to the case in the public security big data platform, so that the public security law enforcement process can be supported by more effective data.

4.1.3 Build a whole process of information-based intelligent case handling

In the case management area, the police register the situation on the spot through the alarm module in the law enforcement case handling system, and realize the synchronous reception and sharing of alarm data on the platform to form a complete, unified and standardized alarm system, which is incorporated into the law enforcement case handling system to provide source data for the case being filed; At the same time, reduce burden, increase efficiency and improve quality[9].

In the case-handling area, the guidelines such as the Evidence Book of Criminal Cases and the Guide to Demonstration Files of Administrative Cases of Public Security Organs are embedded into the law enforcement case-handling system, and the functional modules of standardized case templates are built to create a "template supermarket" for handling all kinds of cases, providing the police with "list-style" guidelines for handling cases and obtaining evidence; Using the integrated interrogation host and electronic recording system, combined with the transformation of the mobile phone marking and legal document examination and approval functions of the Police Service Mobile APP, the time limit for handling cases is improved, the burden on the police is reduced, and the transactional working hours are shortened.

In the synthetic war zone, the system platforms and technical resources of various police departments are maximized to provide information services such as verification, judgment, investigation, and control for the police. This facilitates online processing supported by the technical resources of multiple police divisions, leaving a trace of examination and approval data while returning business data in real time. These enhancements greatly improve the efficiency of case handling.

4.2 Intelligent construction of law enforcement and case handling

4.2.1 Front-end "data multidimensional perception"

The convergence and integration of law enforcement big data is an important foundation and premise of intelligent application. It is necessary to vigorously build big data integration centers in provinces, cities and counties, collect law enforcement information and data from all parties, and build a highly shared and intensive public security data cloud in the province, which can realize the overall association, navigation, mobile application and sharing of data resources in the province, so that the law enforcement work can be smoother. Internally, emphasis is placed on data normalization updates, effective police communication, and the application of front-end acquisition equipment such as video monitoring. Active utilization of 5G technology is encouraged to establish secure and efficient data

transmission channels, ensuring comprehensive connectivity among data systems. Real-time collection and transmission of all data are guaranteed. Regarding external social data, it is crucial to intensify and broaden the acquisition efforts. This involves obtaining more valuable social information data for law enforcement cases, including data gathered by other government departments and various Internet companies. For external social data, it is necessary to further strengthen the intensity and scope of acquisition, and obtain more useful social information data for law enforcement cases, including data collected by other government departments and various Internet companies.

4.2.2 Mid-range "Intelligent Assistance for Handling Cases"

The intelligent feature in the process of law enforcement and case handling is embodied in the middle-end "intelligent case handling assistance" link, which is to further deepen the application of software and hardware based on cloud computing, big data, artificial intelligence and the Internet of Things, and provide more intelligent assistance for police to handle cases.

(1) Integrated system integration. Taking the law enforcement case handling system as the core, the system platforms of different police types, functional modules and business applications in the case handling process are horizontally integrated, so that law enforcement case handling can truly implement one-person collection, sharing by all police, one-point login and network-wide correlation, and data association, query and comparison can be more convenient, and the role of big data in law enforcement case handling can really be brought into play.

(2) Application of smart devices. In the process of law enforcement and case handling, the use of various machines, equipment and software has helped to improve the work efficiency of the police, including intelligent electronic transcripts, collection equipment and mobile terminals.

(3) Intelligent model construction. The embodiment and support of intelligent law enforcement case handling involves the construction of intelligent auxiliary case handling and evidence review models. The most important thing is to build an intelligent review mechanism for related evidence, which is also the deep application of artificial intelligence and big data technologies.

In the law enforcement case handling system, based on big data, deep correlation analysis should be conducted according to the characteristics of crime laws, case types, criminal records, behaviors, trajectories, etc., and an intelligent law enforcement case handling model should be constructed to realize the intelligent push and guidance of "from case to person" and "from person to case" and improve the accuracy and initiative of law enforcement case handling.

4.2.3 Back-end "Provide standardized litigation"

(1) Evidence transformation of law enforcement data. Implement the construction of evidence-based transformation platform for law enforcement big data, innovate and transform the whole process of law enforcement data acquisition by integrating artificial intelligence and big data, and automatically convert the collected data into a form consistent with "litigation evidence" according to the evidence template, making it more convenient for police to handle cases. Full consideration should be given to practical application scenarios, and the on-site data collection equipment, inspection lockers, integrated information collection equipment of case handling points and certificate storage cloud platform should be connected in series in the process, and synchronous collection methods should be provided to improve the collection speed and resource utilization rate, so as to serve law enforcement and case handling intelligently and quickly.

(2) Construction of a cooperation platform for integration of politics and law. By building an integrated cooperation platform of politics and law, the data of docking courts, procuratorates and judicial organs are fully collected, and reverse services are provided for case quality evaluation, key early warning and data query, forming a continuous, cyclical and efficient data support stream. Based on the formulation of evidence standards and evidence rules applicable to public security and prosecution law, through technologies such as cloud computing, big data and artificial intelligence, diversified functions such as rule guidance, evidence standards, external condition inquiry, sentencing reference and electronic file transfer are constructed, and auxiliary functions such as all-round evidence prompt, verification, supervision and check are provided for criminal cases.

4.3 Intelligent construction of law enforcement supervision

4.3.1 The implementation of full police, all factors, the whole process of supervision, to achieve full coverage of supervision

Based on the principle of full-process supervision, all the money transfer information is recorded and transmitted through the Internet, and one port entry, one channel circulation and one closed-loop disposal are implemented. We will improve the system of marking the whole process of online case handling, and truly record case information, review and approve cases, network early warning, evaluation and assessment of law enforcement case handling level, network-generated case files and law enforcement files through the Internet.

4.3.2 Implement the integrated circulation and static management mode of the property involved, and carry out all-round joint supervision

Based on the principle of key supervision, it is necessary to pay close attention to the financial management involved in the case, which is a key area where responsibilities are jumbled and violations of laws and regulations are frequent, build a new mechanism for cross-departmental management of property involved in the case with procedures flowing and objects static, build a cross-departmental management platform for the purpose, improve the data standards of unified classification, unified name, unified input content and unified code of public security inspection laws, and realize the whole process optimization.

4.4 Intelligent construction of law enforcement management

4.4.1 Intelligent auxiliary command and decision-making

On the basis of big data, we will build and improve the statistical evaluation function, dynamically grasp and monitor the law enforcement work in a panoramic view, analyze and evaluate various criminal situations and regular characteristics in real time, understand the attributes and characteristics of criminals, the hot spots of regional crimes and the effectiveness of case detection, and automatically generate evaluation reports, which will provide assistance for the trial of cases and provide strong support for the overall decision-making in combating crime and law enforcement.

4.4.2 Intelligent auxiliary team management

The profound application of law enforcement big data in the management of environmental food and drug investigation teams is being reinforced. Extensive collection of cases handled by the police through the police receiving and handling system and law enforcement case handling system is conducted. The objective is to conduct precise analysis of the handling situations, identify the strengths and weaknesses of each law enforcement case, and develop customized law enforcement training programs for the police. This facilitates efficient, targeted, and cost-effective training, leading to accurate enhancement of the police's legal literacy and professional quality. At the same time, the police electronic law enforcement files are used to support the implementation of the law enforcement case-handling points system, and a unified law enforcement performance evaluation system is built in an all-round way, which provides a scientific basis for selecting case-handling experts, law enforcement pacesetter, post adjustment, police recruitment, etc., and continuously improves the refined management level of the law enforcement team of environmental food drug investigation.

5. Conclusion

At present and in the future, the construction of intelligent legal system is in the development stage, especially the new crime type of food and drug abuse. It is even more necessary to unswervingly implement the big data policing strategy, grasp the development trend with a forward-looking vision, identify the direction of work with a problem-oriented, and solve difficult problems with the spirit of reform, so as to truly make "digital policing" a "brain" for the high-level operation of legal work and an "engine" for high-quality development.

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