Research on the Types and Legal Basis for Biosecurity Crimes under the New Situation

Jin Li\textsuperscript{1,a} and Jian-guo ZANG\textsuperscript{1,b,*}

\textsuperscript{1}School of Investigation, Nanjing Forest Police College, Nanjing, Jiangsu, China

\textsuperscript{a}2753781503@qq.com, \textsuperscript{b}1093865540@qq.com

*Corresponding author

Keywords: A Holistic View of National Security, Biosecurity Crimes, The Types and Legal Basis.

Abstract: Today, China is facing many risk factors and great challenges in biosecurity crimes. Biosecurity-related crimes generally include biological weapon attack, bioterrorism, destruction of biological genetic resources and biodiversity, and finally, interference with infectious disease prevention and control. Crimes related to biosecurity in the Criminal Law of China are mainly stated in the chapters about crimes jeopardizing state security, against public security, social administration, and crimes of dereliction of duty.

1. Introduction

Driven by the economic globalization and the mobility of people, material and information is increasing rapidly. Besides, with the progress of modern biotechnology, biological factors are constantly stimulated and changed, so that the conditions needed for their expansion and dissemination can be realized. The evolution rule has changed. At the same time, the potential risk of biosecurity threats has been intensified. As noted by General Secretary Xi Jinping, in his speech at the meeting of the Central Committee for Deepening Overall Reform in February 2020, we should incorporate biosecurity into the national security system to protect people's health, safeguard national security and maintain the lasting political stability. We also need to systematically plan the construction of the national biosecurity risk prevention and control system and comprehensively improve the national biosecurity management capability \cite{1}. The types and legal basis to govern biosecurity-related crimes were discussed in this document from the holistic view of national security.

2. The Concept and Types of Biosecurity Crimes

According to the statistics of the United Nations Environment Programme in 2017, about 700,000 people worldwide die from infections of drug-resistant bacterial every year. As shown by the global biodiversity report of the United Nations in 2019, one million species out of nearly eight million species in the world are facing extinction. In recent years, the outbreak of serious infectious diseases around the world like SARS, Ebola, and COVID-19, has threatened not only human life and health but also had a great impact on economic and social security.

2.1. The Concept of Biosecurity Crimes

Biosecurity has been defined by researchers at home and abroad from different perspectives \cite{2},...
which can be summarized as the threats and risks caused by various factors related to biology to society, economy, human health and ecosystem, and the state and ability.

Biosecurity crime refers to the serious harm or severe potential harm caused by harmful or potentially harmful biological factors to humans, the environment, ecology, and society. It also refers to a series of behaviors with serious social harm, which endanger or may endanger biological life safety or cause significant consequences, as well as the various activities related to the utilization of modern bioscience technology that seriously threatens the society.

2.2. Types of Biosecurity Crimes

2.2.1. Attack with Biological Weapons

Biological weapons kill or destroy the target with a biological warfare agent\(^3\). As weapons of mass destruction, they have been prohibited by the international community since the 20\(^{th}\) century. During World War II, Japan launched a large-scale biological weapon attack on China, resulting in heavy civilian and military casualties. In December 1971, the 26\(^{th}\) United Nations General Assembly discussed and adopted the Biological Weapons Convention, which plays a vital role in curbing the threat of biological weapons.

2.2.2. Bioterrorism

Bioterrorism refers to the terrorist attacks with pathogenic microorganisms or toxins as weapons, or the spread of pathogenic bacteria or viruses through specific channels, resulting in the outbreak of severe infectious diseases, immobilize or deprive the lives of people, cause social unrest, and finally achieve certain political, ideological or other purposes. In the middle and late 20\(^{th}\) century, terrorist activities have become increasingly wild, and bioterrorism has become the most significant terrorist threat in the world. In September 2001, the "anthrax mail" attack occurred in the United States caused 22 infections and 5 deaths.

2.2.3. Destruction of Biological Genetic Resources and Biodiversity

The loss of biological genetic resources will significantly damage the national interests. The loss of wild soybean resources in China is a typical example here. The protection of national genetic resources is also vital to the national security and major economic interests of a country. The invasion of alien species makes the biodiversity of a region seriously infringed. On the other hand, illegal logging destroys national essential protected plants, and crimes destroying forest resources like unlawful hunting and killing of wild animals in crucial areas such as wildlife habitat and breeding areas, migration stops, and migration channels directly destroy biological species, leading to the shrinking or even extinction of precious species. According to the State of the World's Forests, released by the Food and Agriculture Organization of the United Nations on May 22, 2020, the global rate of deforestation and forest degradation is alarming, and immediate measures must be taken to protect the forest biodiversity.

2.2.4. Interference with Infectious Disease Prevention and Control

Since the 21\(^{st}\) century, a dozen of severe epidemics have occurred around the globe, including severe acute respiratory syndrome (SARS), H5N1 avian influenza, influenza A (H1N1), Middle East Respiratory Syndrome (MERS), Ebola, hand-foot-and-mouth disease, and COVID-19. Under the background of globalization, infectious diseases spread faster and wider with a more significant impact. The global outbreak of COVID-19 in early 2020 has threatened more than 200 countries
and regions in the world by the end of August 30, resulting in about 20,000,000 infections, about 800,000 deaths, and a recession of the global economy. During the epidemic prevention and control, many countries have taken strict prevention and control measures and punished the violations.

2.2.5. Violation of Technical Operation and Management of the Industry, Resulting in Severe Consequences

It includes any violation against the state regulations on animal and plant epidemic prevention and quarantine, causing serious animal or plant epidemics. In August 2007, a foot-and-mouth disease (FMD) occurred on a farm in Surrey, UK, which caused significant economic losses to British animal husbandry. The virus came from the leaking drainage pipe of the Pirbright Institute nearby.\[^4\] It also includes the violation of laboratory biosecurity regulations, resulting in environmental pollution and human infection. For example, in 1979, the anthrax leakage in the Sverdlovsk factory of the Soviet Union led to 99 infections and 64 deaths.\[^5\]

2.2.6. Other Behaviors Related to Biosecurity Crimes

To prevent the abuse (misuse or abuse) of biotechnology is the fundamental guarantee of biosecurity. Biotechnology, a double-edged sword, can cause panic and even change the world once misused due to its typical dual-use nature. After several controversies such as synthetic virus by American scientists, the genetic modification experiment of avian influenza virus carried out by Dutch scientists at the end of 2012 caused another lasting and widespread controversy all over the world, which is a milestone in the dual-use of biotechnology.\[^6\]

3. Legal Basis of Biosecurity Crimes


The crimes related to biosecurity in the Criminal Law of China are mainly stated in the chapters about crimes of jeopardizing state security, crimes against public security, crimes against social administration, and crimes of dereliction of duty.

3.1. Crimes of Jeopardizing State Security

There are ten major articles concerning biosecurity (Articles 102-112). The crimes involve two
kinds of harmful behaviors: making use of the epidemic to create and spread rumors, incite country splitting or unity undermining activities, or stir up any subversion of state power or the socialist system; endangering national security through bioterrorism means, biotechnology, and the like. Behaviors are betraying the state, inciting to country splitting, armed rebellion, riot, and subversion of the state power. Criminal financing activities are endangering national security, defecting to the enemy, espionage, stealing, spying, buying, or illegally providing state secrets, intelligence and information to foreign countries. All fall into this type.

3.2. Crimes against Public Security

There are basically four articles related to biosecurity. Articles 114 and 115 define the acts that endanger public security through "arson, breaching dikes, explosion, or release of toxic or radioactive substances, infectious disease pathogens, and so on. It can also be by other dangerous methods", as well as the consequences of and penalties for such acts. Article 120 stipulates the penalties for "organizing, leading and participating in terrorist organizations and six acts" to commit terrorist attacks by using agents and means endangering biosecurity. Article 125 stipulates the penalties for those who "illegally manufacture, trade, transport or store toxic or radioactive substances", infectious disease pathogens that endanger public security.

3.3. Crimes against Social Administration

Generally, crimes endangering public health or interfering with the protection of environmental resources involve biosecurity.

3.3.1. Crimes of Endangering Public Health

There are basically four articles related to biosecurity. Article 330 on the violation of the Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases prescribes penalties for acts that cause the spread of class A infectious diseases or pose a serious risk of spreading. According to Article 331, those who are engaged in experiments, preservation, carrying, transportation of strains of infectious diseases or virus seed shall be subject to penalties if they violate the relevant provisions of the health administration department under the State Council and cause the spread of strains of infectious diseases or virus seed and serious consequences. Article 332 provides for the penalties to be imposed on those who violate the frontier health quarantine regulations and cause the spread or potential spread of quarantinable diseases. Article 337 defines the penalties for those who violate the state regulations on animal and plant epidemic prevention and quarantine and cause major animal or plant epidemic diseases or pose a risk of causing such diseases.

3.3.2. Crimes are Interfering with the Protection of Environmental Resources

There are basically four articles related to biosecurity. Article 338 states the penalties for serious environmental pollution caused by the discharge, dumping, or disposal of wastes containing pathogens of infectious diseases. Article 340 provides for the punishment to be imposed on those who catch aquatic products in closed areas, during closed seasons, or using prohibited tools or methods, in cases of gross violation that may cause damage to the species. Article 341 provides for the punishments to be imposed on those who illegally hunt, capture or kill the precious and endangered wildlife under special national protection, or illegally purchase, transport or sell the precious and endangered wildlife and their products under special national protection, as well as the behaviors destroying wildlife resources in violation of hunting laws and regulations. Article 344
stipulates the penalties to be imposed on those who illegally cut or destroy precious trees or other plants under special national protection, or illegally purchase, transport, process or sell precious trees or other plants under special national protection and their products.

3.4. Crimes of Dereliction of Duty

There are generally two kinds of such crimes involving biosecurity. Article 407 stipulates the punishment to be imposed to the staff of the competent forestry department who, in violation of the forest law, issue tree cutting licenses in excess of the approved annual cutting quota or in violation of the regulations, which causes serious damage to the forest and affects the living environment of living organisms. Article 409 defines the penalties to be imposed on the staff of the government department for health administration who engaged in the prevention and control of infectious diseases for their serious irresponsibility, which leads to the spread or outbreak of infectious diseases.

Those who commit crimes related to biosecurity against Criminal Law and also commit crimes such as homicide, arson, explosion, kidnapping, robbery, or aircraft hijacking shall be convicted and punished following the principle of combined punishment for several crimes.

As a rising power, China is faced with numerous risk factors and great challenges related to biosecurity, which directly affects ecological security, life health safety, economic security, and is an important part of national security. The outbreak of COVID-19 in early 2020 is a great test of China's ability to respond to, deal with, and resolve the national security risks under the new situation. China, with a large population base, has a higher probability of biosecurity risks, so the prevention and control works should keep rigorous. In February 2020, Xi Jinping pointed out that biosecurity should be integrated into the national security system, and the national prevention and governance system for biosecurity risks should be systematically planned to improve the national ability of biosecurity management.

Biosecurity is a part of the national security, which must depend on the overall strength of a country in essence. To control the biosecurity-related crimes, the countermeasures should be taken in the light of the holistic view of national security: Coordinate traditional security and non-traditional security, to ensure effective biosecurity crime prevention and control. Establish a biosecurity crime prevention and control system based on big data. Carry out research and development of biosecurity technology and promote scientific and technological innovation. Enhance international cooperation in the management of biosecurity crimes, and so on.

Biosecurity-related crimes is a common challenge for humankind, which requires the joint efforts of all countries. There are no borders for infectious diseases. The Ebola in 2014 and 2018 and the outbreak of COVID-19 at the end of 2019, indicate that the global interconnection makes the emergence and spread of pathogens easier, and disease anywhere can become a global threat.

4. Conclusion

At present, in addition to the COVID-19, people all over the world are also on guard against the rising plague, monitoring the impending swine flu, and keeping away from the nearby amebic protozoa. Biosecurity is an essential part of the national security system, and biosecurity crimes are
also a major component of crimes in the field of national security. Although the overall biosecurity risk is in a critical and controllable state, the security risk in some areas is increasing sharply, which may lead to more infectious diseases. Biological invasion results in the deterioration of the ecological environment, so bioterrorism and biological crimes are also growing. Planning biosecurity from the perspective of a community with a shared future for humankind has become a new strategic choice. China is willing to work with the international community to deepen further international cooperation in punishing biosecurity crimes and build a global organization with a shared future for biosecurity.

Acknowledgement

This paper is one of the staged achievements of National Social Science Fund Project “Studies on ‘Islamic State’ Terrorist Activities and Its Impact on the Anti-terrorism in China” (16BGJ032).

References


