

CRIMES RELATED TO TOXIC CHEMICALS USE IN VIETNAM: THE CASES AND RECOMMENDATIONS

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KEYWORDS

appropriate sanctions,
chemicals, crime,
management
responsibility,
malicious poisoning

ABSTRACT

This study evaluates the dangers of harmful chemicals and the effectiveness of current state management in the chemical sector by examining specific criminal cases where defendants used toxic chemicals to commit crimes ranging from less severe to severe offenses. Additionally, by reviewing legal provisions on administrative sanctions in the chemical industry, the author provides assessments of current regulations' effectiveness. Based on these findings, the author presents recommendations to improve chemical management efficiency, enhance administrative sanctions, and determine management authorities' responsibilities when violations occur.

1. INTRODUCTION

There are substances when taken orally (ingested), breathed in (inhaled), injected into the bloodstream, or come into contact with the skin or eyes or mucous membrane in sufficient quantities, result in harmful effects such as death. Such substances are called 'toxic' because of their 'poisoning' effect. The most common toxic substances are "*hydrogen sulphide, carbon monoxide, carbon dioxide, chloroform, Sulphur dioxide, ammonia, formaldehyde, hydrogen cyanide, mercury, arsenic, cadmium and their compounds, catalyst, inert gases, insecticides*" (Subedi, 2020, p.39). Unfortunately, there are many cases of individuals intentionally using toxic substances on others or animals (malicious poisoning) aiming to harm them.

Gupta (2016) avers that "*malicious poisoning is the unlawful or criminal killing of a human or animal by administering certain toxic/poisonous agents.*" This act is referred to as a 'biocrime'. Papagiotas and Shannon (2018) define a *biocrime* as a "*threatened or actual use of a biological or toxic agent for the sole intent of causing harm to another individual or group of individuals.*" Papagiotas and Shannon (2018) further argue that successfully investigating cases of malicious use of toxic substances is very challenging. Hence, they argue that law enforcement agencies must collaborate with epidemiologists/toxicologists in conducting their investigations.

In the course of history, there have been numerous cases of malicious poisoning. Toxins have been used in many instances since ancient times. Recently, there have been widely publicized cases of toxin homicides. On 16th July 2024, the bodies of two Vietnamese citizens and four American guests were found dead in the Grand Hyatt Erawan Bangkok Hotel (a luxury hotel). Local police suspected the poisoning to be a result of a business deal gone bad. A couple who were part of the six had invested 10 million baht (USD 278,000) with the other dead to build a hospital in Japan. Addressing the media on 17th July 2024, the chief of the Thai police forces forensic division, Lt. Gen. Trairong Piwpan, said that autopsy reports showed traces of cyanide in the blood of the deceased. He also said there were traces of cyanide in the cups and thermoses found in the hotel room (Associated Press, 2024). Still, in Thailand, there is the 2023 case of a female serial killer who came to be known as 'Am Cyanide', for cyanide was her poison of choice. According to Thai police, Sararat Rangsiwuthaporn 'Am Cyanide' had an online gambling addiction. She was losing up to 10 million baht (USD 425,000) daily. She began a

scheme of swindling vast sums of money from people and later poisoning them. She owed some of her victims thousands of dollars. Thai police said that she had killed at least fifteen people in eight provinces in a span of eight years using cyanide. 'Am Cyanide was only caught after she poisoned Siriporn Khanwong (Koy), her friend of more than ten years. When Koy's family became suspicious of the circumstances surrounding her death, it was when 'Am Cyanide's killing spree was exposed (Day & Vimonsuknopparat, 2023).

According to the American College of Medical Toxicology (nd.), studies show that in the US, cases of malicious poisoning are more rampant among infants than in other age groups. Toxic Registry Data from 2014-2017, which was published on 14th January 2019, showed that infants and toddlers were frequent victims of malicious poisoning. Of the 60 cases studied, 21 were pediatric (with 17 being below 2 years), and 9 were infants aged below 12 months (American College of Medical Toxicology, nd.). Gummin *et al.* (2023), in the '2022 Annual Report of the National Poison Data System (NPDS) from America's Poison Centers: 40th Annual Report', notes that in 2022 there were 2,064,875 human exposures and 50,381 animal exposures to poison. Most of these exposure cases are unintentional, with very few cases of malicious poisoning reported. Shepherd and Fersew (2009) and Gauthey *et al.* (2019), as cited in Mao *et al.* (2024, p.32), argue that in the US, young children are vulnerable to malicious poisoning. They attribute this because they are unable to protect themselves and also because the poisoning is done mainly by caregivers such as parents and guardians. In addition, there were some cases of malicious poisoning among individuals aged above 85 years. These were also attributed to the vulnerability of older people and the high number residing in homes for older people and healthcare facilities.

Mao *et al.* (2024) reported that there were 82 recorded cases of malicious poisoning in Taiwan between 2012 and 2019. They further noted that malicious poisoning was most prevalent among 13- 49-year-old individuals. Surprisingly, friends accounted for 37.8% among the perpetrators, family members 15.9%, and colleagues 4.9% (p.30). Therefore, it is evident that in Taiwan. Most victims of malicious poisoning were exposed to people who were both known and close to them. The study also noted significant malicious poisoning in entertainment spots, hotels, and friend's residences. In many of these cases, perpetrators of this crime use drugs on their unsuspecting victims for reactional purposes or to exploit them sexually. Mao *et al.* (2024, p.32), in their study, have drawn a similarity between malicious poisoning of children in Taiwan and the US. Their study showed incidences of malicious poisoning in Taiwan are most prevalent among children aged below two years.

Intentional use of toxic substances is not limited to humans only. There are reported incidents of toxic substances, such as poison bait, being used to kill animals and birds. On 16th February 2023, Paul Allen, a gamekeeper in Shaftesbury Estate in Dorset (UK), pleaded guilty to possessing dead buzzards (birds of prey) and illegal pesticides and was given a 15-week custodial sentence suspended for 12 months. Fifty-four-year-old Allen pleaded guilty to multiple wildlife poisons and failure to comply with shotgun and firearms certificates (Bird-Halton, 2023; Church, 2023). Police who had been investigating the poisoning of a red kite raided Allen's home in March 2021 (one of the White-tailed Eagles reintroduced to the Isle of Wight). Allen, who was a gamekeeper at Beech Lodge, Brockington (Wimborne), was found in possession of six dead buzzards, gun ammunition, and three illegal pesticides. The prosecutor told the court hearing the case that although the birds were not endangered, they were protected under UK law. Post-mortem results showed that some of them had died of poisoning while others had been shot with a shotgun.

Allen was also found guilty of possession of three chemicals, Strychnine, Cymag, and Ficam W. These chemicals were either illegally stored, illegal to possess, or both. He was fined £884

for the chemical-related charges to compensate for the cost of x-rays and post-mortems of the birds (Church, 2023). This is not an isolated case in the UK. Bird-Halton (2023) notes that the use of poisons in the UK's countryside is a widespread problem. The poisons kill birds of prey and are a risk to the public. During the Covid-19 lockdown, the number of bird poisoning cases increased. The Wildlife Incident Investigation Scheme (WIIS) handled 230 suspected bird poisoning cases in 2020/21, a notable increase compared to the 124 cases handled in 2019/20. There were 133 suspected animal poisoning deaths in 2021/22.

Another notable incident of using poison bait occurred in Nhu Xuan, Nong Cong, and Nhu Thanh Districts in Vietnam. A duo, Nguyen Van Phuong (43) and his girlfriend Hoang Thi Phuong (35) had used poisoned bait laced with cyanide to kill hundreds of dogs and cats for sale. They informed the police during interrogation that they had obtained 500 kilos of dog and cat meat between June 11 and 14, 2020. They were accused of poisoning 20 dogs and 10 cats in the Nhu Xuan commune. Residents had woken up to the disturbing sight of the dead pets on 14th June 2020, only for the duo to be caught red-handed later in the day collecting the carcasses. During their investigations, police found three kilos of dried fish and 100 grams of cyanide at the duo's home in Nong Cong Districts' Van Thang Commune, Than Hoa, which they had disguised as a dog meat restaurant- it was a storage facility for the stolen meat. According to police reports, the duo ran a major operation where they employed several people to help in slaughtering, freezing, and transporting the animals to Hanoi restaurants and other localities. Also, the police reported that the couple had used poisoned bait to kill and steal tons of cat and dog meat (Hoang, 2020).

The risks posed by the consumption of poisoned meat cannot be understated. An example is the 2015 case of five people who died in Kratie Province, Cambodia, after eating the meat of a poisoned dog. A pet dog had died of suspected poisoning in Snuol Commune, Snuol district, and was sold for 35,000 riels (8.75 Euro) by Chea Rath (76 years old). Rath then barbecued the dog meat and ate it with his friends during a Sunday party. In a sad turn of events, the cook and two other people died after consuming the toxic dog meat. Further, another person succumbed after consuming the toxic meat leftovers at Chea Rath's funeral. Police reported that the fifth person also died after eating leftovers during the funeral (Dara, 2015).

2. RESEARCH METHODOLOGY

To conduct this research, the author employed the experience analysis and synthesis method, examining past practical achievements to draw beneficial conclusions for practice and science. Based on existing data and information from documents, using logical thinking operations to draw necessary scientific conclusions through the following methods:

Theoretical analysis and synthesis: Analyzing materials into components for an in-depth understanding of the subject, then synthesizing analyzed information into a new, more comprehensive theoretical system closely aligned with the research subject.

3. RESEARCH RESULTS

The Vietnam 2007 Law on Chemicals, Law No. 06/2007/QH12, is the law that governs the handling of chemicals, safety, and obligations for persons dealing with chemicals in any form. Over the years, the law has been followed by various ministerial decrees in support of its operationalization. The decrees include

- Decree No. 113/2017/ND-CP Specifying and providing guidelines for implementation of certain articles of the law on chemicals

- Circular No. 40/2011/TT-BCT of November 14, 2011, on Chemical declaration;
- Circular no. 04/2012/TT-BCT stipulating the regulations on classification and chemical labeling (CIRS, nd.)

In addition, amending the Law is ongoing *"to meet the needs of national industrialization and modernization and to ensure consistency with international treaties and free trade agreements"* (ChemRadar, 2024). However, the Amendment draft is not yet operational.

The 2007 Vietnam Law on Chemicals Law No: 06/2007/QH12 in Article 3 (1) stipulates that all handling methods must follow the law and any other related regulations. This is to say that any use of chemicals that cause harm to others, animals, or the environment is in contravention of the law. Unfortunately, there are numerous cases of malicious use of toxic substances in Vietnam. Toxic substances have been used for homicide purposes as well as bait to steal animals for their meat. Unfortunately, the same meat is sold to unsuspecting consumers. Cyanide seems to be the go-to toxic substance in many cases of malicious poisoning. According to Graham and Traylor (2023), cyanide is one of the most lethal poisons, causing death in a few minutes to a few hours, depending on the concentration and amount taken. It gets absorbed quickly through the mucous membranes, inhalation, skin, or even ingestion. It exists in various forms: *"as Hydrogen Cyanide, a salt, potassium cyanide."* There are reported cases where cyanide has been used for mass homicides and suicides (Graham & Traylor, 2023)

The 2007 Vietnam law on chemical handling also addresses the safety concerns regarding the handling of chemicals. Article 5(1) *"Ensure safety for human, property, ecosystem, and environment; and security and defence."* Of key concern to this article is the safety of humans and property as espoused in this particular article. Malicious use of toxic chemicals against humans and pets, e.g., dogs and cats, which is evident in Vietnam, is in direct contravention of this article. Further, Article 7 of the 2007 Vietnam Law on Chemicals addresses prohibited activities regarding the use of chemicals. Article 7 (1) 1. *"Production, trading, transporting, storage, use, sending and giving hazardous chemicals violating regulations of this Law and other legal regulations."* The law has clearly prohibited the usage of chemicals in a manner that violates regulations. As such, malicious poisoning goes contrary to the dictates of this law. Further, Article 7 (4) states, *"Use of toxic chemicals to hunt animals, and other activities causing harmful effects on human health and life, assets and environment."* It is evident that in Vietnam, the law is explicit that it is prohibited for anyone to use toxic chemicals to hunt animals. However, the study has established several occurrences where toxic bait has been used in killing and stealing dogs and cats whose meat is later sold to unsuspecting consumers. The same article has also prohibited the use of toxic substances in a manner that would adversely affect human health. The study has also established cases where toxic chemicals have been used in committing homicide. This calls for more stringent regulations regarding the ease of access to toxic substances that have been used on animals and humans.

In addition, the 2007 Vietnam Law on chemicals addressed the aspect of toxic chemical control in Article 23. Article 23 (1) requires the filling out of a control form by both the seller and buyer during the sale of a toxic chemical. (2) the control form must indicate the *"name of chemicals; quantity of chemicals; purpose of use; name and signatures of buyer and seller, address; ID number of representatives of the buyer and seller; delivery and selling date."* (3) The seller must keep the form for a minimum five years and be ready to submit it to the relevant authorities upon request. This article then shows that Vietnam has acknowledged the dangers posed by toxic chemicals and developed a framework for controlling and tracing transactions involving toxic chemicals in its laws. If these regulations are implemented diligently, they will

play a significant role in curbing the misuse of toxic chemicals. In the event an individual, organisation, or agency violates the stipulations of the 2007 Vietnam Law on Chemicals, the law provides that such a violation *"must be adjudicated under administrative or penal proceedings, subject to their level of violation. In case of causing damage, compensation is required under the law."*

On its part, South Korea has been adapting its chemical regulations to the changes taking place in the industry. The regulations aim to ascertain stakeholder compliance, protect public health and the environment, and mitigate possible risks. These raft of regulations are informed by the chemical industry's critical role in South Korea's economic growth. The regulations governing the chemical industry are contained in The Act on the Registration and Evaluation of Chemicals (K-REACH) and the Chemical Substances Control Act (K-CCA) that came into effect on 1st January 2015. Chemical Substances Control Act (K-CCA) replaced the Toxic Chemicals Control Act (Muenninghoff & Kim, 2024).

South Korea Chemicals Control Act 2015, Act No. 13035 of 20th January 2015, amended Act No. 12490 of 18 March 2014. From the onset, Article 1 of the act lays out the purpose as

The purpose of this Act is to prevent hazards to people's health and the environment caused by chemicals and protect the lives and property of the people or the environment from chemicals by properly controlling chemicals and promptly responding to accidents that occur due to chemicals.

This is evidence that although the chemical industry is critical to South Korea, it recognises that chemicals have to be processed and handled in a controlled manner because of the risks they pose to flora and fauna. The act also envisions a situation whereby businesses that deal with chemicals act responsibly and enact, among other measures, protocols to prevent harm to the environment that hazardous chemicals may cause. Article 5 (2) *"Any person who handles chemicals shall be held responsible for the safety control of the relevant chemicals."* This could rightly mean that businesses are obligated to ensure that hazardous chemicals do not fall into the wrong hands, among other things. Furthermore, the basic plans for control of chemicals, Article 6 (1), *"the Minister for Environment shall formulate a basic plan for the control of chemicals (hereinafter referred to as "basic plan") every five years for the efficient control of poisonous or harmful chemicals."* This shows that South Korea appreciates that the chemical industry is dynamic and that new regulations must be formulated continuously to respond to the challenges arising from the latest developments.

3.1. Specific Cases

3.1.1. First case: Using poison to kill dogs

On October 04th, 2020, at approximately 4:00 PM, Vo Xuan P, intending to use poison to kill dogs for theft, met an individual named H (unidentified) in front of Hoang Anh Gia Lai Hotel and purchased four packets of Sodium Cyanide for VND 200,000. The defendant bought meat and went to the Pine Hill area in I Commune, District, to prepare dog bait. At approximately 5:30 AM on October 05th, 2020, the defendant rode a Yamaha Sirius motorcycle, license plate 81T3-5708, to D Village, I Commune, I District, and placed the previously prepared dog bait near the entrance of Electricity Management Board 2 - Vietnam Electricity. After leaving briefly and returning, the defendant found one dog had died from the bait and attempted to take it but was caught in the act by Mr. Nguyen Huu T and Mr. Dang Tran S. During the investigation, authorities seized one yellow-haired dog weighing 19 kg, one Yamaha Sirius motorcycle (license plate 81T3-5708), one cloudy white object with a small black portion, containing white plastic inside and tied with a white string.

According to forensic conclusion No. 1076/C09C-DD dated October 08th, 2020, from the Institute of Criminal Science - Da Nang Institute of Criminal Science, the examined sample contained Sodium Cyanide, which is highly toxic to humans, livestock, and poultry.

According to Property valuation conclusion No. 56/KL-HĐĐGTS dated December 01, 2020, from the Property Valuation Council in Criminal Proceedings of Ia Grai district determined that the yellow-haired dog (typical dog) weighing 19kg was valued at VND 950,000 as of October 05th, 2020.

Regarding civil liability: The defendant influenced his wife, Ms. Tran Thi My H, to compensate Mr. Nguyen Huu T a sum of VND 950,000.

Indictment No. 02/CT-VKS dated January 19th, 2021, from the People Procuracy of I G district, G province, charged the defendant Vo Xuan P with "Illegal Use of Toxic Substances" under Clause 1, Article 311 of the 2015 Criminal Code.

The People's Court of I G district, G province, determined that defendant Vo Xuan P used Sodium Cyanide to kill dogs for theft. Therefore, the defendant committed the "Illegal Use of Toxic Substances" under Clause 1, Article 311 of the Criminal Code.

The defendant's actions were severe, violating public safety and order and the State's monopoly management of toxic substances. The defendant's behavior affected the living environment, threatened human and animal health and life, and caused public discontent. Therefore, the defendant must bear full criminal responsibility for his actions. Applying Clause 1, Article 311; Article 38; Points b, s, Clause 1, Article 51; Point h, Clause 1, Article 52 of the Criminal Code, the court sentenced the defendant Vo Xuan P to 24 (twenty-four) months imprisonment, calculated from October 05th, 2020.

3.1.2 Second Case: Handling toxic chemicals contrary to regulations

In October 2018, Pham Ngoc T purchased approximately 250m² of gold-bearing soil and rocks in H town, S district, P province, and transported them to a farm area in village C, commune E, S district, P province. Subsequently, T purchased Sulfuric Acid and mercury from gold enterprises in H town, S district, and bought Sodium Hydroxide and Sodium Cyanide from an unidentified individual in Ho Chi Minh City to extract gold from 162.45m³ of soil and rocks. On March 27th, 2019, the Environmental Police Department of P Province, in coordination with S district authorities, conducted an inspection and seized 17.5kg of chemical tablets, white; 126kg of Sodium Hydroxide, 118kg of Sulfuric Acid; 300 grams of mercury.

According to supplementary forensic conclusion No. 777/C09C(D4) dated August 12th, 2019, from the Da Nang Institute of Criminal Science, the 17.5kg of white round tablets were confirmed to be Sodium Cyanide, which is toxic to humans and livestock. Sodium Cyanide is used to extract gold and other precious metals from ore.

The case evidence included 17.5kg of Sodium Cyanide (NaCN), 126kg of Sodium Hydroxide (NaOH), 300g of Mercury (Hg), 118kg of Sulfuric Acid (H₂SO₄), and Two D22 and D24 grinding machines with grinding systems.

During the investigation, the defendant admitted to all criminal acts. According to indictment No. 21/CT-VKS dated November 27th, 2019, issued by the People Procuracy of Song Hinh District, Phu Yen Province, the defendant was prosecuted for "Illegal Use of Toxic Substances" under Clause 1, Article 311 of the Criminal Code.

During court proceedings, the Prosecutor evaluated the nature and severity of the criminal act and maintained the prosecution decision. The Prosecution recommended that the Court:

Declare Pham Ngoc T guilty of "Illegal Use of Toxic Substances" according to Clause 1, Article 311; Point s, Clause 1, Clause 2, Article 51; and Article 65 of the Criminal Code, sentence the defendant T to 24-30 months of suspended imprisonment, with a probation period of 48-60 months from the date of judgment.

3.1.3 Third Case: Using poison bait to trap dogs

At approximately 3:00 PM on August 07th, 2021, while traveling on Ly Nam D Street in Tra B Ward, P City, Do Dinh D observed two young men (unidentified) on a Jupiter motorcycle (license plate unknown) dropping a brown substance on the road in front of the Duc Long GIA L truck station. Knowing that these individuals had dropped bait to trap dogs, D collected the dog bait and placed it in his jacket pocket, intending to use it later for dog theft. At approximately 7:00 AM on August 11th, 2021, D drove a motorcycle (license plate 81B2-477.10), carrying the dog bait collected on August 07, 2021, concealed in his jacket pocket, along with a basket and a roll of tape, at Nguyen D Street, Ia K Ward, P City, intending to locate and steal residents' dogs. At approximately 7:15 AM the same day, when D reached house number 109 on Nguyen D Street, Group 8, Ia Kr Ward, P City, he was subjected to an administrative inspection by the Ia Kring Ward police, P City. They discovered and seized from D's jacket pocket one brown substance of undefined shape, wrapped in white thread, measuring 4.9cm x 3.5cm, with a yellow rubber band 3.1cm long attached to the end (sealed according to regulations); one yellow-green-red basket measuring (50x47x23)cm; one roll of black tape, 5.3cm in diameter; one Honda Vision motorcycle, license plate 81B2-477.10. On the same day, Ia Kring Ward police transferred the case to the Police Investigation Agency of P City for investigation within their jurisdiction. Upon forensic examination, according to forensic conclusion No. 1078/C09C-D2 dated September 24th, 2021, from the Da Nang Institute of Criminal Science, the analysis concluded: "The brown substance in the sealed paper bag, code PS3 2035104, contains Sodium Cyanide (NaCN). Currently, the Institute of Criminal Science in Da Nang lacks standard samples and cannot determine the Sodium Cyanide (NaCN) concentration in the submitted sample. Sodium Cyanide is highly toxic to humans, livestock, and poultry. Sodium Cyanide (NaCN) is listed in the catalog of restricted chemicals for industrial production and trade (No. 73, Appendix II) issued in Government Decree No. 113/2017/ND-CP dated October 09, 2017, regarding "Detailed regulations and implementation guidance for certain Articles of the Law on Chemicals."

In the court's first-instance judgment No. 23/2022/HSST dated March 18th, 2022, the People's Court of P city, GIA L Province ruled, Declaring defendant Do Dinh D guilty of "Illegal Possession of Toxic Substances." Applying Clause 1, Article 311; Article 38; Article 50; Point s, Clause 1, Article 51 of the 2015 Criminal Code as amended in 2017; sentenced defendant Do Dinh D to 18 (eighteen) months imprisonment, with the prison term calculated from the day of sentence execution (Information Portal of the Supreme People's, nd).

3.2 Notable Cases of Murder Using Cyanide

3.2.1. Female serial killer case - 13 victims by cyanide

According to Duyen (2020), using methods of casual acquaintance, building emotional connections and trust, becoming an adopted child or relative, and then inviting victims to eat and drink while poisoning their food and beverages, defendant Le Thanh V killed 13 people and robbed their possessions.

On September 01, 2004, the People's Court of Binh Duong Province sentenced the defendant, Le Thanh V, to death for three crimes: "Murder," "Fraud and Property Appropriation," and "Illegal Possession of Toxic Substances."

3.2.2. Case of Nguyen Thi Thanh T: Men poisoned in property theft incident

Around April 2017, two men were consecutively poisoned with lethal Cyanide for property theft in Go Cong Dong District, Tien Giang Province. The perpetrator was identified as Nguyen Thi Thanh T, a lottery ticket vendor. Due to unpaid debts, T planned to seduce men and kill them with poison to steal their property.

On January 14th, the Supreme People's Court in Ho Chi Minh City held an appellate hearing, rejected the appeal, and upheld the death sentence for defendant Nguyen Thi Thanh T for the crimes of "Murder" and "Robbery."

3.2.3. Case of Lai Thi Kieu T - Online purchase of cyanide for bubble tea poisoning

According to the indictment, defendant Lai Thi Kieu T was found to have had a romantic relationship with her cousin's husband, P.V.Q (born in 1989, residing in Kien Xuong District, Thai Binh Province). Due to jealousy, the defendant conceived a plan to use Sodium Cyanide to poison and kill her cousin, D.T.Y (30 years old, staff member at Lung Hospital of Thai Binh Province), to continue her relationship with P.V.Q openly.

Knowing Y's fondness for bubble tea, on the morning of December 02, 2019, T ordered 6 cups of bubble tea and purchased a syringe with a needle. T used a razor blade to make a small 1cm incision in the plastic seal of the cups and injected Sodium Cyanide into them. After injecting 4 cups, the poison was depleted, and T disposed of the razor blade, tape, syringe, and needle in her family's trash bin.

Subsequently, T brought the 6 cups of bubble tea, including the 4 poisoned ones, to the Lung Hospital of Thai Binh Province, intending to deliver them to Y. As Y had already left, T left the tangerines and 6 cups of bubble tea with P.T.L (born in 1980, Vu Thu, Thai Binh, a nurse in the same department as Y). L later called Y to inform her about the bubble tea delivery, and Y asked to store them in the refrigerator for later consumption.

At approximately 6:30 PM the same day, L took 2 cups, giving one to her son N.P.D.A and drinking half of one herself, storing the remainder in the refrigerator. Around 9:45 AM the next day, L finished the remaining half cup.

At approximately 10:00 AM on December 03rd, victim N.T.H (born 1990, Bo Xuyen, Thai Binh City, a nurse in Internal Medicine Department 3, Lung Hospital of Thai Binh Province, Y's colleague) took one of the 4 remaining cups from the refrigerator to drink. After consuming about two sips, H ran to the bathroom and collapsed. Despite emergency treatment, the victim did not survive.

On July 17, 2020, the People's Court of Thai Binh Province sentenced defendant Lai Thi Kieu T to death for the crime of "Murder."

4. DISCUSSION

4.1. Potential Consequences of Illegal Use of Toxic Substances

The cases above clearly demonstrate the dangerous nature of toxic chemicals. Even small amounts can cause severe consequences. Using toxic chemicals to harm human health, life, livestock, and poultry can be executed easily and quickly.

In two of the mentioned cases, defendants used poisoned bait made from toxic chemicals to poison dogs to sell dog meat for profit. This raises the question of whether consumers of this poisoned dog' meat would suffer health effects from residual toxins in the dogs' bodies. The answer is certainly affirmative, with potential impacts extending to future generations due to parents carrying these toxic chemicals.

A lesson from South Korea, a nation world-renowned for its dog meat trade and consumption, shows a breakthrough in legal approach on January 09^t, 2024. The National Assembly of South Korea passed legislation to end nationwide dog meat sales and consumption, effective 2027. Presently, in South Korea, up to one million dogs are factory-farmed for the dog meat industry annually (Humane Society International/ South Korea, 2024). The new law prohibits breeding, slaughtering, distributing, and selling dog meat for human consumption amid growing awareness of animal rights and increasing pet ownership in this Northeast Asian nation. The

law also supports dog meat industry companies to cease operations or transition to new businesses. Anyone killing dogs for food could face up to 3 years imprisonment or fines up to 30 million won (approximately USD 23,000). Those breeding dogs for food or intentionally buying, transporting, storing, or selling dog meat products will also face imprisonment and fines, albeit less severe (An, 2024).

Perhaps it is about time that Vietnam chose to the South Korean way of banning farming and slaughter of cats and dogs. Many people are now appreciating the important roles cats and dogs play as pets. Active sensitisation of the people involved in the dog meat production chain, for example, could help change their mindsets and finally shut down the industry. However, the government of Vietnam should support these people in transitioning to new ways of making a living. A case in point is highlighted in Block (2024), where Phạm Dũng, a dog farmer who had been in the puppy for slaughter fattening industry, shut down his operations. Pham is reported to have said that he could no longer stand the pain and suffering caused by the dog and cat meat industry. The industry claims the lives of 5 million dogs and 1 million cats in Vietnam annually. The Humane Society International supported Pham in transitioning from dog farming to crop farming. He has switched to bean sprouts and sweet potatoes (Block, 2024).

The demand for dog and cat meat has been driving unscrupulous people into using toxic bait to steal the animals and capture strays. This trend puts the section of the population that eats dog and cat meat at risk. Also, it must be noted that a very high possibility exists that other unintended animals, such as poultry and birds of prey, might be exposed to the toxins. Block (2024) has also reported that not all Vietnamese citizens consume dog and cat meat. She writes that in a 2023 Nielsen opinion poll commissioned by the Humane Society International, only 24% of the population consumed dog and cat meat the previous year. This, in essence, suggests that if the government embraces the Humane Society International push to stop the trade, it will have the support of 75% of Vietnam's population that supports the ban on the dog and cat meat trade. The ban will essentially kill two birds with one stone, i.e., protecting dogs and cats from the inhumane conditions in fattening farms and stopping the use of dangerous toxic chemicals in bait that pose a risk to humans, animals, and the environment.

4.2. State Management Issues in Chemical Control

Another reality revealed by these cases is the ease and low cost of purchasing toxic chemicals. Article 23 of the Law on Chemicals 2007, amended and supplemented in 2018 and 2023, stipulates that:

" The purchase and sale of toxic chemicals must have control receipts, verified by both buyer and seller to establish a basis for monitoring toxic chemicals in circulation; Control receipts for toxic chemical transactions must include information about chemical names, quantities, intended use; names and signatures of buyer and seller; addresses and ID numbers of representatives from both parties; delivery date; Control receipts must be retained by both parties for at least five years and must be presented upon request by competent authorities. However, current chemical trading activities do not follow these regulations, with buyers and sellers trading freely. Regulatory authorities lack strict control, making it impossible to trace the origin of sellers and buyers or track buyers' usage of toxic chemicals. This situation leads to cases where violators use toxic chemicals to commit crimes.

The Law on Chemicals of 2007, amended and supplemented in 2018 and 2023, Article 7 clearly defines prohibited acts in chemical management and use. Accordingly, prohibited activities in chemical operations include:

Manufacturing, trading, transporting, storing, using, sending, giving, or gifting hazardous chemicals contrary to this Law and other relevant legal provisions; Failing to disclose necessary information, providing incomplete or incorrect information, concealing information about hazardous properties of chemicals and products containing hazardous chemicals; Using chemicals not on the permitted list, chemicals not meeting standards and quality requirements, or exceeding permitted concentrations in the production and preservation of food, medicines, animal feed, veterinary drugs, plant protection products, fertilizers, and household chemical products; Using toxic chemicals for hunting animals or acts harmful to human health, property, and environment.

The current management decentralization is quite clear. The Law on Chemicals of 2007, amended and supplemented in 2018 and 2023, also stipulates management delegation from the Ministry level to ministerial-level agencies and People's Committees at various levels in chemical management.

At the central level, there is the Chemicals Agency. In contrast, at the local level, the Department of Industry and Trade serves as the primary state management agency for chemical activities in provinces and cities, directly managing chemical activities in the industrial sector. Other departments, such as the Department of Agriculture and Rural Development, Department of Health, Department of Science and Technology, and Provincial Public Security, manage chemical activities in their specialized fields according to their designated functions and duties. However, localities still face many difficulties and obstacles. The main reason is the lack of qualified human resources in this field. Agencies have not established effective management processes, and inspection, supervision, and violation detection activities lack innovation. This leads to many hazardous industrial chemicals being misused (industrial chemicals used in food processing; solvents from paint and printing industries misused in gasoline and oil mixing; industrial precursors at risk of being used in illegal drug production), causing difficulties for management agencies and businesses.

Current regulations on chemical use are not commensurate with risk levels compared to chemical production and trading activities. Businesses using chemicals operate in various industries, with some units using large quantities of chemicals with potential risks, and there have been many chemical incidents at chemical-using facilities. Currently, organizations and individuals using chemicals are minimally bound by chemical law regulations, resulting in low levels of awareness and understanding of chemical management regulations and failure to meet chemical management objectives (Legal Support Information Portal for Enterprises under the Ministry of Justice, nd.).

Therefore, improving the effectiveness of chemical management is an urgent requirement to prevent chemical harm to humans, livestock, plants, and the environment. Simultaneously, determining administrative and criminal sanctions is necessary to ensure deterrence and prevention of violations.

It is imperative that Vietnam re-strategises on how it implements toxic chemical controls. The cases involving the use of cyanide in homicides and animal baits are proof that there is a failure in the system. Unfortunately, it is all too easy for one to purchase toxic chemicals in Vietnam. Trang (2024) echoes this sentiment, citing the case of 38-year-old Nguyen Thi Hong Bich, a Vietnamese woman from Dong Nai province who used cyanide to kill her husband and relatives due to family conflicts. It is very easy to buy cyanide in Vietnam, and there are even advertisements for the poison on social media, e.g., Facebook. The vendors go to the extent of shipping cyanide door to door while other customers buy the poison over the counter for as low as VND 500,000 per 100 grams (Trang, 2024).

In another report, Tuoi Tre News (2024) concurred with Trang (2024), whose investigative article uncovered widespread advertising and selling of toxic chemicals on social media, websites, and e-commerce platforms in Vietnam. Besides cyanide, it was discovered that some sites also sell 'colorless and odorless rat poison. Tuoi Tre News (2024) buttresses the gravity of the matter by citing several incidents involving malicious poisoning with cyanide. In December 2022, a 22-year-old woman from Vung Tau province was sentenced to life in prison for poisoning her father. Between October 2023 and June 2024, Nguyen Thi Hong Bich from Dong Nai Province killed three members of her family with cyanide.

4.3. Regarding Administrative Penalties in Chemical Management

Administrative penalties apply to cases that do not constitute criminal offenses. Accordingly, the Government issued Decree 71/2019/ND-CP dated August 30, 2019, stipulating administrative penalties for chemicals and industrial explosives. The Decree 71/2019/ND-CP specifies various violations, corresponding monetary penalties, and supplementary punishments.

However, the monetary penalties remain very low and disproportionate to the danger and potential risks of violations. For example, the penalty specified in Clause 1, Article 41 of Decree 71/2019/ND-CP states: *"A fine of VND 1,000,000 to VND 3,000,000 for failing to provide complete information or providing incorrect information about hazardous properties of chemicals, insecticides, and disinfectants leading to unsafe use causing harm to human health, livestock, plants, and environment."* While this violation poses many potentially dangerous consequences, the fine of only VND 1,000,000 to VND 3,000,000 is too low and disproportionate, failing to ensure deterrence, prevention, and warning for violators and society.

Current administrative penalty decisions have also not been fully implemented. The enforcement of administrative penalty decisions remains very limited. Consequently, many violators increasingly disregard the law, continue to violate it, and cause regrettable consequences.

Currently, chemical business violations are widespread and quite severe, especially regarding misuse and food production/processing that harm consumer health on a large scale. Therefore, it is necessary to reassess penalty levels and supplementary punishment forms.

4.4 Regarding Investigation Activities

In criminal cases involving toxic chemicals, investigative agencies primarily focus on investigating the use of toxic substances to commit crimes without sufficiently focusing on investigative measures to track down suppliers and traders of toxic chemicals. Court judgments also do not address the responsibilities of state management agencies in this field when violations occur within their administrative jurisdiction. From a management perspective, state chemical management agencies must bear responsibility when they fail to detect illegal toxic chemical trading activities in their managed areas.

Court judgments and administrative penalty decisions in the chemical field should be sent to competent state administrative management agencies in the administrative area where violations occur. This helps management agencies evaluate their situation and results, leading to appropriate changes and adjustments to meet the requirements of combating and preventing violations in the chemical sector.

5. RECOMMENDATIONS

5.1. For State Administrative Agencies

State administrative agencies at local levels need to develop effective chemical management processes and plans. There must be evaluations to identify causes of ineffective management

in recent times, from which to propose specific and detailed solutions to improve management quality in subsequent periods compared to previous ones. This relates to the commitment level of authorized personnel and the decisiveness in changing management methods and handling violations. Reports and solutions that are generic, vague, and formulaic should be avoided.

For chemical business establishments, regular and unexpected inspections must be conducted to detect violations early for warnings and strict enforcement. The inspection personnel must be adequately educated and trained, possess good moral qualities, and ensure that inspections are conducted to help business establishments perform better and strictly comply with legal regulations rather than causing harassment, trouble, or seeking profit from these activities.

Central management agencies need to conduct more frequent inspections of chemical business establishments to understand the implementation of local management work for timely adjustments and support.

5.2. For Judicial Bodies

Additional regulations are needed regarding the summoning of local state administrative agencies to participate in proceedings when courts try criminal cases involving the illegal use of toxic substances. This regulation aims to highlight management oversights in the trading, exchange, and use of harmful chemicals by management agencies, reassess responsibilities, awaken the sense of responsibility among authorized personnel, and promote changes in management mechanisms and methods.

In such cases, management agencies may be summoned as other participants in proceedings. These individuals attend court sessions to understand the situation and present opinions but have no right to appeal the judgment. This content can be guided through directives from the Chief Justice of the Supreme People's Court or resolutions of the Council of Judges of the Supreme People's Court.

5.3. Regarding Administrative Violations Penalties

Increase administrative penalties in the chemical sector to higher levels appropriate to the nature and severity of violations. This ensures violators are genuinely deterred from recidivism after being penalized, and others are influenced to modify their behavior. Administrative violation decisions must be strictly implemented in all cases, with enforcement measures when necessary. This ensures the significance and effectiveness of penalty regulations and the rule of law in a civilized, progressive society. Learning from advanced nations like the United States and Singapore in establishing administrative penalties is necessary to ensure penalties can effectively change violators' behavior positively.

Strict penalties should be imposed on chemical production and business establishments that violate regulations on management, use, buying and selling procedures, and providing information guidance for chemical goods.

The improper trading of harmful chemicals, contrary to Article 23 of the Law on Chemicals, is the cause of easy, difficult-to-control chemical trading, which actively contributes to subjects using chemicals for criminal acts. Therefore, specifically for acts of buying and selling chemicals without ensuring procedures, where buyers do not provide sufficient information, and sellers do not collect and store complete buyer information, strict penalties must be imposed to establish order in harmful chemical trading within the framework, easy to control and trace when illegal acts occur.

5.4. Legal Dissemination, Promotion, and Education Work

Legal dissemination, promotion, and education work in the chemical field needs focused implementation. Local organizations and associations should be assigned to participate in promotional work with support from professional agencies regarding promotional content.

Promotional forms must be novel, attractive, and appropriate to people's living habits to influence their awareness easily.

5.5. Other Recommendations

- Social media, an element integral to most people's lives today, serves both educational and promotional roles but is also a place promoting harmful behaviors, rapidly spreading violations everywhere, and negatively affecting users' awareness and behavior. Therefore, management agencies can utilize social media as a channel for legal promotion, education, and dissemination through posts with educational images and videos about the harmful effects of improper chemical use and the penalties violators must bear for violations.
- Learn from South Korea regarding regulations prohibiting the raising, slaughter, distribution, and sale of dog meat for human consumption and providing grace periods for dog meat businesses to reorganize their work. Currently, too many dog theft cases have occurred through dog bait – a toxic chemical and the consequences of this behavior harbor more risks than we see. That is the long-term consequences that dog meat consumers will bear when too many dogs are poisoned and sold to restaurants serving dog meat.
- In criminal cases, authorized investigation agencies must actively use professional measures to trace suppliers of toxic chemicals to crime perpetrators. We must address the root cause to reduce crimes related to toxic chemicals soon, as current handling only addresses symptoms, dealing with situations as they arise.

6. CONCLUSION

Cases involving toxic chemicals causing damage to human health, life, poultry, livestock, and the environment are increasingly common. This situation stems from ineffective management mechanisms of the management system from central to local levels. Meanwhile, the current legal framework has not met the requirements to resolve practical issues.

The issue of improving the legal framework on sanctions for violations in the chemical field proves extremely necessary, aiming toward deterrence, education, and warning of long-term potential dangers across generations.

Through specific cases, the author wants to send warning messages to management agencies, individuals, and related organizations about their responsibilities regarding this issue and the future of subsequent generations. Jointly managing and using toxic chemicals according to regulations and checking and monitoring each other to change behavior together is very important. To change crowd behavior, management agencies need to lead and be truly decisive with specific solutions; only then can the community be drawn to act according to standards prescribed by law to respect community interests and safety in the present and future.

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