

## Psychotropic Drugs and ASEAN Road Safety: The Need for New Legal Framework

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### Abstract:

**Background:** Currently, ASEAN has policies but no uniform legislation controlling driving under the influence of psychotropic drugs. Numerous road safety concepts and theories may be used to improve road safety in ASEAN. However, member nations continue to under apply these principles.

**Objective:** The goals of this study are to investigate international theories and concepts for promoting road safety, the ASEAN concept of driving under the influence, global traffic strategies for dealing with driving while intoxicated, and to suggest the appropriate ASEAN-specific policies that can effectively prevent drugged driving.

**Materials and method:** A qualitative documentary research was conducted for this study. The scope of this study also includes global concepts and theories to promote road safety, concept of driving under the influences in ASEAN, concept of harmonizing road safety laws, international traffic strategies to dealing with impaired driving issues, and human rights and drug testing.

**Results:** In accordance with the United Nations' five pillars of road safety, ASEAN has focused on driving under the influence. ASEAN has no additional guidelines for controlling psychotropic drug use among drivers. In the case of cross-border driving, it is difficult for most individuals to know what blood alcohol concentration or drug levels are permitted for drivers in the country into which they are traveling. All human rights and drug testing issues must be addressed as part of ASEAN's implementation of the concept of drug testing among road users.

**Conclusion:** This article suggests that ASEAN should develop a clear policy to promote the prevention of drug-impaired driving and the consequences of such driving among ASEAN drivers. The prospective ASEAN Agreement for the Protection of Driving Under the Influence of Psychotropic Drugs and its Work Plan should be proposed. The ASEAN should support instruments for measuring alcohol and psychotropic drugs at border crossings in each coun-

try. Finally, ASEAN should monitor each country, particularly during physical examination and drug testing procedures at checkpoints, traffic accident scenes, and while driving.

**Keywords:** Alcohol, Psychotropic Drug, Road Safety, Traffic Accident

## Introduction

According to the 2030 Agenda for Sustainable Development, which has 17 goals for eradicating poverty and ensuring sustainable development, Target 3.6, focuses on reducing road fatalities and injuries, is a significant key issue as the reduction of premature mortality from noncommunicable diseases (NCDs) for making of well-being of all ages.<sup>1</sup> One of the most concerning issues for global health is road traffic fatalities and injuries. In accordance with the World Health Organization's (WHO) global status report on road safety, an updated 2016, the number of road traffic deaths remained high, measuring 1.35 million deaths per year, the 8th leading cause of death for people of all ages, the first cause of death for children and people aged 5-29, and death rates in low-income countries were 3 times higher than in high-income countries. Over the last 15 years, the global rate of road traffic deaths has been around 18 deaths per 100,000 population.<sup>2</sup> In 2016, the leading causes of death that contribute to men having a lower life expectancy than women were ischemic heart disease (0.84 years), followed by road injuries (0.47 years).<sup>3</sup> The African Region (26.6 deaths per 100,000 people) and South-East Asia Region (20.7 deaths per 100,000 people) had the highest rates of road traffic deaths, both of which were significantly higher than the global average.<sup>3</sup> As a result, road injuries and fatalities are unavoidably the most important factors

influencing the death rate of global citizens.

In accordance with the World Drug Report 2022, cannabis was the most widely used drug in the world, followed by opioids, amphetamines, cocaine, and ecstasy. An approximated 284 million people worldwide aged 15-64, the vast majority of whom were men, had used a drug in the previous 12 months.<sup>4</sup> Table 1 displays the global estimates of the numbers of drug users in millions (2020). Following global drug use and road safety policies, the WHO revealed that a total of 1,252,071 road traffic deaths occurred in 2013. These deaths were due to alcohol use (188,151 cases) and illicit drug use (39,625 cases).<sup>5</sup> In the group of illicit drug-related traffic death, the use of amphetamines was the biggest illicit drug contributor to road accidents (51%), followed by cannabis (22%), cocaine (14%), and opioids (13%), respectively.<sup>5</sup> There are three types of psychotropic drugs that are relevant to the risk of a motor vehicle accident: illicit drugs (such as cannabis, cocaine, heroin, and methamphetamine) used for recreational purposes; prescription drugs (such as benzodiazepines, opioid analgesics, and antidepressants), which can be legally purchased or given out by a doctor for treatment; and new psychotropic substances (such as synthetic cannabinoids and synthetic cathinones), which are created for recreations without medical purposes.<sup>5</sup>

**Table 1** World drug report 2022 of global estimates of the numbers of drug users in millions (2020)<sup>4</sup>

Drugs (millions users)				
Cannabis	Opioids	Amphetamines	Cocaine	Ecstasy
209 (between 149 to 265)	61 (between 37 to 78)	34 (between 29 to 41)	21 (between 18 to 26)	20 (between 9 to 36)

The chance of a crash and its severity, which can result in fatalities and severe injuries, are both greatly increased when driving after drinking alcohol. Twenty percent of fatally injured drivers in high-income countries had blood alcohol concentrations (BAC) that are higher than the legal limit. According to studies conducted in low- and middle-income countries, between 8% and 29% of drivers who suffered non-fatal injuries and between 33% and 69% of drivers who suffered fatal injuries had drunk alcohol before their collision.<sup>6</sup> While 17,000 people are murdered every year in traffic accidents attributed to drunk driving in the United States, 34% of driver fatalities and 23% of motorcycle fatalities in Colombia have been linked to speed and/or alcohol.<sup>6</sup> Around 20% of fatally injured drivers in Europe, for instance in Sweden, the Netherlands, and the United Kingdom, have blood alcohol levels above the legal limit.<sup>6</sup> In the case of cannabis and road safety, since its legalization in Uruguay in December 2013, followed by Canada in October 2018, some academics have speculated that non-medical cannabis use may increase the likelihood of a collision.<sup>7</sup> Many questions were raised, such as the relationship between cannabis and driving skills, the impact of tolerance to cannabis effects on road safety, and the cannabis dose-response relationship to change a car's driving.<sup>7</sup> An important substance that affects cannabis-impaired driving, also known as delta 9-tetrahydrocannabinol (THC), can

impair cognitive and movement under conscious mental functions. Many studies found that drivers with blood THC concentrations of 5 ng/ml or higher were more likely to be involved in traffic accidents.<sup>8</sup> As more states in the United States legalize recreational and medicinal cannabis, the number of people driving under the influences of this drug has risen dramatically. Cannabis can impair attentional allocation, body steadiness, choice reaction time, danger perception, distance estimation, information processing speed, short-term memory, signal detection, stress, task switching, time estimation, useful field of view, visual search, and working memory in drivers.<sup>9</sup> An epidemiological study discovered that when a serum THC concentration reaches 7-10 ng/ml, which is comparable to 50 mg/dl of BAC, driving-relevant skill impairment will occur.<sup>10</sup>

Amphetamine and amphetamine-like compounds including methamphetamine and 3, 4-methylenedioxymethamphetamine (MDMA, ecstasy), cocaine, and opioids are other significant illicit drugs that can influence cognitive deficits. Each of them is associated with both acute and long-term cognitive consequences, which can induce the possibility of driving impairment. The recommended cut-off levels for cocaine, THC, morphine, codeine, MDMA, amphetamine, and methamphetamine, is shown in Table 2.<sup>11</sup> As part of prescribed drugs, in general, when they are taken as doctor's prescription, most drugs do not pose a significant risk of causing

a traffic accident. However, drug abuse can sometimes result in impairment. Serotonin is classified as low risk drugs causing impairment, whereas sympathomimetic (e.g. pseudoephedrine), less sedating histamine (e.g. cetirizine), and diabetes medications are classified as low to moderate risk drugs. Muscle relaxants (e.g. orphenadrine) are in the moderate risk category, while anticonvulsants (e.g.

phenytoin), sedating antihistamines (e.g. chlorpheniramine), antipsychotics (e.g. haloperidol), benzodiazepines, opioid analgesics, tricyclic antidepressants, and tetracyclic antidepressants are in the high-risk category.<sup>12</sup> However, in the Association of Southeast Asian Nations (ASEAN), the use of policies to control international illicit drug use as well as prescribed drug use to promote road safety has been a challenge.

**Table 2** The recommended cut-off levels for each substance that can affect driving skills<sup>11</sup>

Cut-off levels (ng/ml)						
Cocaine	THC	Morphine	Codeine	MDMA	Amphetamine	Methamphetamine
1-80	1-80	1-80	1	1-300	1-600	1-200

To recognizing the problem, currently ASEAN has policies but no unified law governing driving under the influence of psychotropic drugs. Therefore, driving regulations must be enforced according to each country's laws. The differences in laws among ASEAN countries regarding driving under the influence of psychotropic substances create four main issues. Firstly, driving under the influence of certain drugs, particularly cannabis, is not considered illegal in Thailand but is prohibited in many other countries within ASEAN. Secondly, each country has different legal limits for alcohol levels while driving, leading to problems when driving cross borders. For instance, a driver who legally consumes alcohol in one country may be breaking the law in another country with lower alcohol limits. Thirdly, physical examination requirements for drivers vary among ASEAN countries, with unclear guidelines on drivers' rights to refuse testing. Finally, ASEAN lacks clear guidelines for different types of psychotropic drugs, leading to varied law enforcement and testing standards, causing problems with cross-border law enforcement and creating

inconsistencies in road safety measures. Following the lack of a clear ASEAN policy for preventing driving under the influence of psychotropic drugs hinders road safety efforts in this region. Additionally, the lack of harmonization in laws governing drivers under the influence of drugs among ASEAN countries results in inconsistent law enforcement across borders.

Currently, there are numerous road safety concepts and theories that can be applied to improve road safety in ASEAN. However, there is still a lack of widespread application of these principles in practice among member countries. The objectives of this study are to investigate global concepts and theories, including, Vision Zero policy, Safe System approach, and five pillars of road safety management, in order to promote road safety in the ASEAN, to investigate the concept of driving under the influences in the ASEAN, to investigate the international traffic strategies to dealing with impaired driving, and finally, to propose the appropriate measures which can effectively prevent driving under the influences of drug for the ASEAN.

## Materials and Method

This study is a qualitative documentary research that uses laws, textbooks, research articles, review articles, theories, and policies from international databases relating to driving under the influences. The process of this article also includes, first, an investigation of concepts and theories in order to promote road safety, and ASEAN traffic measures in regards to driving under the influence of drugs. Second, a summarization and discussion of all concepts, theories, and related laws will be conducted. Finally, the creation of novel ASEAN measures that can improve road safety in accordance with driving under the influences will be done. According to road safety policies including, the Vision Zero policy and the Safe System approach, a traffic accident is not an uncontrollable event but can be avoided by utilizing controllable factors. In this case, legal and policy enactment may be beneficial. However, each member of the ASEAN has different policies on controlling drug driving. Therefore, the scope of this study also includes global concepts and theories to promote road safety, concept of driving under the influences in ASEAN, concept of harmonizing road safety laws, international traffic strategies to dealing with impaired driving issues, and human rights and drug testing. The findings will be interpreted as the appropriate measures for the ASEAN in order to improve road safety.

The meaning of each term that use in this article is shown below.

1) Alcohol: A psychotropic drug that is a bioactive compound found in beverages such as beer, wine, whisky, and liquor, and is chemically known as ethanol or ethyl alcohol.

2) Driving under the influences (DUI): The act of drivers consuming any psychotropic drugs before or while driving, which may affect their emotion and consciousness.

3) Illicit drug: A psychotropic drug which is classified as an illegal drug or narcotic drug.

4) Impaired driving: Driving while intoxicated or under the influence of psychotropic drugs.

5) Psychotropic drugs: Drugs or other substances that alter or influence the brain functions, resulting in changes in consciousness, feelings, emotions, or habits, for example, ethyl alcohol, amphetamines, cannabis, cocaine, prescribed drugs, and illicit drugs.

6) Traffic accident: An unfortunate incident that occurs on the road or land unexpectedly and unintentionally, usually resulting in injury or harm.

## Results

The outcomes of scrutinized documentary reviews are described below.

### Global Concepts and Theories to Promote Road Safety

The goal of the Vision Zero policy is that no one dies or is seriously injured in a traffic accident, then the road transportation system should be designed to meet those requirements, particularly the concept that road safety system designers are responsible for the tolerance of kinetic energy of the human body. Vision Zero is widely regarded as a promising road traffic safety policy. This impression is supported by official statistics in Sweden, which show that the number of road deaths had been cut in half and the number of deaths among car users had decreased by 60% between 2000 and 2010, resulting in Sweden's roads remaining among the safest in the world.<sup>13</sup> The Vision Zero philosophy for road traffic safety has been adopted in other countries, for example, Norway, Denmark, and the United States. A policy content analysis framework is divided into four steps: policy decision, policy problem, policy goal, and policy measures.<sup>13</sup> Table 3 depicts an example of

road safety analysis for driving under the influences using Vision Zero policy. Some toolkits that can be used to reduce fatalities and injuries in tandem with the Vision Zero policy include 1) education for road users,

2) law enforcement, and 3) structural improvements, for example, the installation of median barriers, pedestrian islands, roundabouts (traffic circles), and speed humps.<sup>14</sup>

**Table 3** Road safety analysis for driving under the influences using Vision Zero policy

	Policy decision	Policy problem	Policy goal	Policy measures
<b>Road safety analysis</b>	- Local government decision - National government decision	- Drivers are intoxicated or under the influence when they drive. - Human bodies are fragile.	- Eradicate behaviors of driving under the influence.	- Legal enactment - Legal enforcement - Policy support

The Safe System approach prioritizes safety and acknowledges that the road transportation system is complicated. It also recognizes that in order to prevent fatalities and serious injuries from occurring, people, cars, and the road infrastructure must interact in a way that assures a high level of safety. Consequently, a safe system is made up of four components, including, 1) safe roads and roadsides, 2) safe speeds, 3) safe cars, and 4) safe road users. This system's objectives include accommodating human error, incorporating road and vehicle designs that keep crash forces within the range of human tolerance, and inspiring road designers to create and maintain roads, produce vehicles, and manage safety initiatives so that drivers share responsibility for safety.<sup>6</sup> Both the Vision Zero policy and the Safe System approach can be applied to road safety promotion in the policy formulation stage and in the process of integrating the analysis of the root causes of errors leading to traffic accidents.

#### **Concept of Driving Under the Influences in ASEAN**

The ASEAN issued "The Agreement on the Recognition of Domestic Driving

Licenses Issued by ASEAN Countries" in 1985, with the general condition that the holder of a license issued by one of the ASEAN countries and intends to stay temporarily in the territory of another country be able to drive vehicles of the category for which the license is granted. However, he is liable for traffic violations under the laws of the country into which he drove the vehicle.<sup>15</sup> Now the ASEAN community comprises of Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. The ASEAN countries' road safety context has been related to the United Nations' five pillars of road safety (please see Table 4).<sup>16</sup> As part of pillar IV, an indicator involving drug and/or substance control has been appealed to set each country's national drug-driving law. In the national drink driving law, for example, the policies include the use of random breath testing and/or police checkpoints. The blood alcohol concentration (BAC) limit varies by country, ranging from 0.00 mg/dl (for commercial vehicle and/or motorcycle drivers) to 80 mg/dl for the majority of drivers.<sup>16</sup>

The “ASEAN Regional Road Safety Strategy” has established specific guidelines for preventing driving under the influence, such as providing roadside alcohol monitoring devices for general driving and ensuring that commercial drivers are licensed and fit to drive, including checking a driver’s license, measuring alcohol levels, and implementing

programs to reduce fatigue from driving.<sup>16</sup> It can be observed that the five pillars of road safety management have been expanded upon in terms of road safety management systems and post-crash response beyond what is outlined in the Safe System approach, which can be utilized as tools in designing road safety in the overall context of ASEAN.

**Table 4** The ASEAN’s five pillars of road safety management from the ASEAN Regional Road Safety Strategy<sup>16</sup>

<b>Pillar I Road safety management</b>	<b>Pillar II Safer roads and mobility</b>	<b>Pillar III Safer vehicles</b>	<b>Pillar IV Safer road users</b>	<b>Pillar V Post-crash response</b>
<ul style="list-style-type: none"> <li>- Lead Agency</li> <li>- Funded in national budget</li> <li>- National road safety strategy</li> </ul>	<ul style="list-style-type: none"> <li>- Formal audits for new road construction</li> <li>- Regular inspections of existing road infrastructure</li> <li>- Policies to promote walking or cycling, encourage investment in public transport, and separate road users to protect vulnerable road users</li> </ul>	<ul style="list-style-type: none"> <li>- UN World forum on harmonization of vehicle standards</li> <li>- New car assessment programme</li> <li>- Front and rear seat-belts</li> </ul>	<ul style="list-style-type: none"> <li>National laws for;</li> <li>- Speed limits,</li> <li>- Drink driving</li> <li>- Motorcycle helmet</li> <li>- Seat-belt</li> <li>- Child restraint</li> <li>- Mobile phones while driving</li> <li>- Drug-driving law</li> </ul>	<ul style="list-style-type: none"> <li>- Emergency Room based injury surveillance system</li> <li>- Emergency access telephone number</li> </ul>

As part of the psychotropic drug control, the history of ASEAN’s illicit drug policies dates back to 1976, when the Heads of Government issued “the Declaration of ASEAN Concord”, which resulted in the signing of “the ASEAN Declaration of Principles to Combat Narcotic Drug Abuse” by the Foreign Ministers of the five ASEAN founding members later that year. ASEAN leaders endorsed the concept of “a Southeast

Asia free of illicit drugs, free of their production, processing, trafficking, and use” in 1997. The ASEAN Foreign Ministers signed “the Joint Declaration for a Drug-Free ASEAN” by 2020 in July 1998. Following that, in July 2000, the ASEAN Foreign Ministers agreed to move the target year for achieving a drug-free ASEAN to 2015.<sup>17</sup> The “ASEAN Work Plan on Securing Communities Against Illicit Drugs 2016-

2025,” adopted by the 5<sup>th</sup> ASEAN Ministerial Meeting on Drug Matters (AMMD) in Singapore on October 19-20, 2016, is an updated version of ASEAN drug policies, which their activities also range from national and regional level activities, law enforcement, preventive education, research, treatment and rehabilitation, alternative development, and extra-regional cooperation, respectively.<sup>18</sup> The ASEAN Work Plan 2016-2025 is based on the previous “ASEAN Work Plan on Combating Illicit Drug Production, Trafficking, and Use, 2009 to 2015.” The ASEAN Work Plan 2009-2015 focused on significant and sustainable reductions in illicit crop cultivation, illicit manufacturing and trafficking of drugs and drug-related crimes, and the prevalence of illicit drug use.<sup>18</sup>

### **Concept of Harmonizing Road Safety Laws**

Integrating or harmonizing the laws of different countries entails replacing existing national laws with general rules, such as those established by the United Nations Commission on International Trade Law (UNCITRAL), the Organization for the Harmonization of Corporate Law in Africa, the International Institute for the Unification of Private Law (UNIDROIT), the Principles of European Contract Law (PECL), and the Principles of Asian Contract Law (PACL). The benefits and drawbacks of replacing existing local laws with new rules shared by a group of countries include losing the benefit of expertise gained from one’s own system and having to comprehend a novel set of rules.<sup>19</sup> As part of the ASEAN, one of the primary responsibilities of “The ASEAN Consultative Committee on Standards and Quality” (ACCSQ) is to create “the ASEAN Guidelines on Good Regulatory Practices” (ASEAN Guidelines on GRP). These guidelines are intended to assist ASEAN Member States in developing and implementing appropriate regulatory

approaches for the preparation and application of technical regulations, which also adhere to the Technical Barriers to Trade (TBT) Agreement, declared by the World Trade Organization (WTO).<sup>20</sup> The ACCSQ has developed three harmonized regulatory regimes including, 1) the Agreement on the ASEAN Harmonised Cosmetic Regulatory Scheme, Schedule B: ASEAN Cosmetic Directive (ACD) (2003), 2) the Agreement on the ASEAN Harmonized Electrical and Electronic Equipment (EEE) Regulatory Regime (AHEEERR) (2005), and 3) the ASEAN Agreement on Medical Device Directive (AMDD) (2014). The AHEEERR and ACD are monitoring initiatives to promote market integration in particular fields. The AMDD requires Member States to guarantee that only compliant medical devices are available in the marketplace. It calls on ASEAN Member States to adopt common templates for technical document submission, conformity declarations, and post-market surveillance, as well as medical device standards and risk classification. Harmonized regulatory regimes in all three sectors force Member States to harmonize their domestic regulatory processes and requirements.<sup>21</sup> As a member of the ASEAN Economic Community (AEC), which was established on December 31, 2015, the Competition Law has a direct effect on its member countries, particularly in business practices.<sup>22</sup> It can be seen that ASEAN has good practices in harmonizing laws between countries through the implementation of “Agreements,” which are jointly recognized international principles. ASEAN has regional guidelines to increase equity in business practices, however, the policies do not cover driving under the influences. As a result, harmonizing ASEAN psychotropic road user regulations appears to be a long way off.

### **International Traffic Strategies to Dealing with Impaired Driving Issues**

Many strategies have been used to

prevent and control impaired driving, but they may differ across global regions. The following are examples of effective impaired driving laws that have been enacted around the world; 1) setting the blood alcohol concentration limit to 5 mg/dl or even zero mg/dl, 2) creating reasonable penalties for convicted offenders who drive under the influences (e.g. license revocation/suspension, appropriate fine levels, mandating alcohol ignition interlocks, and appropriate substance abuse treatment program) and 3) impaired driving laws for teenagers (e.g. minimum legal drinking age laws, zero tolerance laws for young drivers, and graduated driver licensing laws for young drivers). Policy support instruments also include 1) social marketing and public education (e.g. mass media campaign and community activities), and 2) increase the likelihood of detecting impaired driving (e.g. random breath test, sobriety checkpoints, saturation patrols, and publicity of novel enforcements). Finally, some effective impaired driving offenders' sanctions, which can promote road safety, can be applied for international traffic strategies including, 1) home confinement systems with electronic monitoring of blood alcohol tests, 2) vehicle seizure or impoundment program, 3) vehicle registration and license plate confiscation program, and 4) ignition interlock system.<sup>23</sup> Enforcement, however, may be insufficient due to a variety of factors such as socioeconomics, capacity, and politics. One way to alleviate the problem of road safety is to ensure that the regulation or law states very clearly how enforcement will be performed and who will be liable for enforcement. Effective enforcement measures used to prevent road traffic accidents include 1) stationary speed enforcement, 2) patrolling, 3) reducing the blood alcohol limit, 4) breath testing at random, 5) drunk-driving enforcement, 6) seat belt enforcement, 7) speed cameras, 8) red light cameras,

9) fines, license suspension, imprisonment, 10) warning letters, 11) demerit point system, 12) driving license suspension.<sup>24</sup> In summary, international traffic strategies emphasize the importance of comprehensive and well-enforced impaired driving laws and policies to promote road safety and reduce accidents.

### **Human Rights and Drug Testing**

Following the second world war, the modern era of human rights recognition started on December 10, 1948, in Paris with the adoption of "the Universal Declaration of Human Rights" (UDHR) by the United Nations General Assembly, General Assembly Resolution 217 A (III). Representatives from all over the world came together to draft and proclaim the inherent dignity and inalienable and equal rights of all members of the human family. The UDHR is a universal standard of achievement for all peoples and nations.

Such details of the UDHR relating to human rights and drug testing, also include;

- Article 3 "Everyone has the right to life, liberty and the security of person."
- Article 9 "No one shall be subjected to arbitrary arrest, detention or exile."
- Article 11 "Everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defense".<sup>25</sup>

After the enactment of the UDHR, some regulations and organizations were established. The United Nations General Assembly adopted "the International Covenant on Economic, Social, and Cultural Rights" (ICESCR) and "the International Covenant on Civil and Political Rights" (ICCPR) on December 16, 1966. These are frequently referred to as "the International Covenants," and when combined with the UDHR, they form "the International Bill of Human Rights." The ICESCR and the ICCPR outline that everyone is entitled to, such as equality between men and women, freedom from discrimination, freedom of movement,

freedom of non-citizens from arbitrary expulsion, freedom from slavery, freedom from torture, right to be treated with humanity in detention, right to liberty and security of person, and right to a fair trial.<sup>26</sup> Therefore, the driver's arrest and physical examination, which would be a violation of international human rights principles, cannot take place. The Office of the High Commissioner for Human Rights (OHCHR) is the leading United Nations (UN) agency in the field of human rights, with the unique objective of advancing and protecting all human rights for everyone. The High Commissioner for Human Rights' role also includes, first and foremost, carrying out the functions specifically given to him or her by the General Assembly in its Resolution 48/141 of December 20, 1993, and results in a significant of policy-making bodies. Second, it advises the Secretary-General on the United Nations' human rights policies. Third, ensures that the human rights program's projects, activities, organs, and bodies are supported. Fourth, the OHCHR represents the Secretary-General at meetings of human rights organs and other human rights activities. Finally, it carries out special assignments as directed by the Secretary-General.<sup>27</sup> Then the United Nations General Assembly A/RES/60/251 established "the United Nations Human Rights Council" (UNHRC), based in Geneva, to replace the Commission on Human Rights on March 15, 2006. This Council is responsible for promoting universal respect for the protection of all human rights and fundamental freedoms for all, without discrimination of any kind and in a fair and equal manner, as well as addressing situations of human rights violations, including gross and systematic violations, and making recommendations on these violations. Furthermore, it encourages effective coordination and mainstreaming of human rights within the UN system.<sup>28</sup> Thus, international human rights frameworks

and institutions play an important role in protecting fundamental rights and ensuring equitable treatment for all individuals, and can be used to improve international road safety among ASEAN members, particularly in terms of drug-driving testing.

## Discussion

The ASEAN has focused on driving under the influence, particularly alcohol, but some issues should be addressed. Firstly, according to the ASEAN Regional Road Safety Strategy, ASEAN aimed to promote road safety in accordance with the United Nations' five pillars of road safety. However, this strategy is not mandatory or obligatory for member countries to implement. There is also a lack of analysis of the underlying infrastructure of impaired driving, which leads to traffic accidents. Furthermore, it focuses on blood alcohol concentration without taking into account prescribed or illicit drugs. Despite the fact that ASEAN announced the ASEAN Work Plan on Securing Communities against Illicit Drugs 2016-2025, it makes no mention of driving under the influence of psychotropic drugs. The harmonization of laws in ASEAN appears only in the protection of trade barriers from the technical guidance of ACCSQ, which was generated in terms of ASEAN Agreements. To promote legal harmonization, an example from the harmonized laws in the European Unions (EU) should be mentioned. The harmonization and integration of domestic substantive laws as part of EU law have been well developed in the European Union, whereas similar merging and harmonization of procedural rules has not actually happened.<sup>29</sup> There is presently no harmonized EU-level approach to combating drug-driving legislation. However, a variety of options for guiding EU-level action are available, including, opinions, recommendations, regulations, decisions, and directives.

The EU Directive appears to be the best option because Member States are required to align themselves with the European goal but are free to apply their own regulations. Driving should be prohibited for anyone who uses or abuses psychotropic substances, according to EU Directive levels.<sup>30</sup> In the EU, the concept of driving under the influence of drugs and/or alcohol is addressed by the United Nations driver's permit. Driving under the influence, according to the UN, can impair coordination, decision-making, hearing, judgment, sight, and touch, potentially increasing the risk of an accident. The permitted BAC level for driving should not exceed 50 mg/dl of blood or equivalent, and drivers may not operate a vehicle with a BAC level greater than 20 mg/dl while on duty. Other drugs and/or substances, on the other hand, have no restrictions or cut-off levels.<sup>31</sup> According to the global plan developed by the WHO and the UN to guide and support the implementation of "the Decade of Action for Road Safety 2021-2030," recommended actions to ensure safe road use include the establishment of blood alcohol concentration (BAC) limits to prevent impaired driving (drink- and drug-driving), with specific provisions for beginner and expert drivers.<sup>32</sup> Then, all member states of the EU issue driving licenses in accordance with Section 15, drug and medicinal product, Annex III, the Directive 2006/126/EC of the European Parliament and of the Council. In terms of abuse, driving licenses will not be issued or renewed to applicants or drivers who are dependent on or regularly use psychotropic substances.<sup>33</sup> Therefore, each country then enacted the legal provisions in drug control laws or road traffic laws, addressing the substances, the levels of penalties, and any blood-drug or impairment levels, resulting in drivers being stopped and evaluated at any time or if the police require. However, different approaches exist across Europe,

with national laws separating or combining the goals of road safety and illegal drug control. In some countries, such as Finland, drivers found with traces of illicit substances in their bodily fluids may be prosecuted for illicit drug consumption, whereas in Belgium and the United Kingdom, the drug tests' results conducted under road traffic laws cannot be used for any other criminal offense. Like penalty ranges, the punishments for drug-driving violations vary widely between countries, ranging from a few months license suspension to a minimum of a year in others.<sup>34</sup> The EU Directive techniques allow individual countries to establish their own legal measures to regulate driving under the influences. However, the ASEAN's integrity is not binding strongly as in EU. It highlights that the existing regional harmonized regulatory regimes among ASEAN members also lacks of comprehensive guidelines for addressing driving under the influences. Even though it also suggests considering the EU Directive as a potential model for harmonization, which includes blood alcohol concentration limits and restrictions on drug use for driving, however, this method may not be fully implemented for ASEAN. As a result, the legal use of terms such as "Agreement" and "Work Plan" that will result from the establishment of meetings among ASEAN members is advised.

ASEAN does not have any additional guidelines to control psychotropic drug use among drivers. Following a review of international traffic strategies for dealing with impaired driving, many countermeasures for ASEAN members can be implemented including, legal enactment, legal enforcement, policy support, and alternative justice for controlling driving offenders, which should be combined with concepts and theories to promote road safety at both the micro- and macro-levels using the Vision Zero policy and the Safe System approach. Sharing

experiences from Sweden, the model country for Vision Zero policy, Sweden is one of the safest road use countries in 2021, with only 18 deaths per 1,000,000 people, compared to the EU average of 44. This rate fell from 20 deaths per 1,000,000 people in 2020, and 22 deaths per 1,000,000 people in 2019.<sup>35</sup> As part of the legal enforcement, police conduct both random breath testing and directed alcohol checks. Drivers will be systematically inspected for drink-driving when they are stopped for any reason (e.g. speeding, and seatbelt use). If the breathalyzer detects alcohol levels above the legal limit, the driver will be transported to the police station for further testing. Since 2010, the amount of alcohol roadside police tests in Sweden has decreased dramatically, falling from nearly 2.7 million in 2010 to 1.3 million in 2019. To deal with limited police resources, discussions are currently under way about allowing non-police personnel to conduct random breath tests. Sweden offers rehabilitation and an alcohol interlock program to drink-driving offenders in order to promote road safety. Driver rehabilitation is frequently part of a probation sentence, but Sweden also has a voluntary program called SMADIT (Joint action against alcohol and drugs in traffic), which aims to quickly offer treatment to suspicious drink and drug drivers if they require assistance in overcoming their addiction. They can join the program as soon as they are suspected and do not have to wait for a sentence. Instead of having their license revoked, they will participate in an interlock program.<sup>36</sup>

ASEAN implemented an agreement on driving licenses that can be used by all state members. A driver must be held responsible for all traffic violations under the laws of the country into which the vehicle was driven. In the case of cross-border driving, it is difficult for most individuals to know what blood alcohol concentration or drug levels are permitted for drivers in the country into which they are traveling. The alcohol interlocks program is one of the interesting programs that has been used to protect driving under the influence in cross-border areas. This program requires drivers to push their breath into an interlock device that is linked to the vehicle ignition system; if that device detects alcohol on your breath, the vehicle will not start, which became a part of rehabilitation programs for drink drivers since 1999. In 2013, Sweden launched a pilot project to install a fast-moving automated 'Alco Gate' at the Port of Gothenburg (please see Figure 1). The Alco Gate trial use technology similar to alcohol interlocks in the setup of checkpoints for all transport vehicles arriving Sweden via ferry. The goal was to enforce drink-driving controls along the country's maritime borders and ensure that no driver traveling to or from Sweden was under the alcohol influence. The Alco Gate seems to be a successful and direct measure to combat drink driving among commercial drivers. Before entering the country by ferry, drivers must blow into a breathalyzer connected to a gate. The automatic system takes just a few seconds for each driver, and the checks have no effect on traffic flow.<sup>37</sup>



**Figure 1** Alco Gate in Sweden<sup>37</sup>

Finally, as part of the application of the concept of drug testing among road users in ASEAN, all of the above-mentioned human rights and drug testing issues must be followed. Then everyone has the right to drive, is free from arbitrary arrest, and is presumed innocent until proven guilty in a fair public trial. The ASEAN state members must adhere to all human rights declaration principles under the protection of UNHRC, particularly during physical examination and drug testing procedures. Many developed countries, including the United Kingdom, Norway, Germany, Ireland, and New Zealand, have anti-drug-driving laws in place to promote human rights protection. Drug detection methods used in each country include oral fluid collected and field impairment assessment at the roadside for drug screening test, and blood drawn at a police station or hospital, then sent to a laboratory for drug confirmation test. The investigation must begin with non-invasive techniques before moving on to invasive or intrusive techniques. Patients who provide prescribed drugs can use a

medical defense; if they are not impaired and use a prescribed product as directed, they will not be classified as illicit drug users.<sup>38</sup> The suggestions from this article is also shown below;

1) Policy to control the influence of psychotropic drugs on driving for ASEAN: The ASEAN should have a clear policy on the use of psychotropic drugs while driving. Such policies should complement any legal measures to promote the prevention of drug-impaired driving and its consequences among ASEAN drivers. ASEAN should assist all state members by analyzing each country's policies and infrastructures in order to promote road safety and reduce the rate of psychotropic drug use among drivers. According to ASEAN's legal enforcement often taking the form of "Agreements," which are cooperative arrangements to establish best practices and promote trade and investment facilitation rather than direct legally binding regulations like EU Directives, there has not been a specific "Agreement" in the past for controlling the influence of psychotropic drugs on driving.

This could potentially lead to issues regarding member country acceptance of principles and ASEAN's pathway towards enhancing domestic traffic laws. Another possible approach to controlling the influence of psychotropic drugs on driving without creating new agreements is to enhance the details of driving influence control within "the Agreement on the Recognition of Domestic Driving Licenses Issued by ASEAN Countries," addressing current situations. This would necessitate discussions with relevant agencies of member countries to design mutually agreed-upon agreements on this matter.

2) Legal measures to control the influence of psychotropic drugs on driving for ASEAN: ASEAN has been effective in adopting international legal principles for controlling driving within member countries. However, there should be clear legal measures to control the influence of psychotropic substances on driving internationally, particularly concerning driver's license issuance, license renewal, testing individuals with a history of alcohol misuse, drug addiction, or drivers using other substances that may affect driving performance. Similar to the legal measures of the European Union, this aims to enhance road safety.

3) Legal measures to prevent cross-border driving under the influence of psychotropic drugs in ASEAN countries: ASEAN should consider improving regulations or guidelines for testing drivers for psychotropic drugs when crossing borders within member countries, including data sharing and the use of modern technology for screening drivers under the influence. It should also establish legal measures to control drivers who commit traffic violations in one country and cross borders into other ASEAN member countries, to prevent repeat offenses due to lack of awareness or repeated violations across borders. This is similar to

measures enforced in the European Union and Sweden. To prevent cross-border driving while under the influence of psychotropic drugs, ASEAN should support instruments for measuring alcohol and psychotropic drugs at each country's border crossing, potentially avoiding legal issues in each country that determines alcohol and prescribes drug levels differently.

4) Legal harmonization among ASEAN countries: Following the European Union's legal harmonization approach is seen as a good operational model for a region with close relationships, cooperation, and relatively similar levels of development. However, due to differences in legal systems, politics, economies, and societies among ASEAN countries, there are significant variations. While some countries have high stability in various aspects, many others still require development in all areas, including addressing internal issues unique to each country. Therefore, adopting region-level legal measures in the form of Directives, which are characterized as hard laws, may not be suitable for the current ASEAN situation. Hence, convening meetings to gather consensus among member states and leading to the creation of "Resolutions" or "Agreements" as the basis for action, along with using "Recommendations" combined with the preparation of "Final Reports" to fill gaps in details not mentioned in "Resolutions" and "Agreements," seems to be a more appropriate approach for ASEAN. To harmonize national laws, the prospective ASEAN Agreement for the Protection of Driving Under the Influence of Psychotropic Drugs and its Work Plan should be proposed to guide any state member in implementing this "Agreement" in their own countries. Other technical guidelines, such as blood alcohol concentration (BAC) and drug levels prescribed, should also be declared. To support each member's work plan against

drug-driving, ASEAN should add some additional guidelines at multi-levels, such as laws and regulations, policy support instruments, and impaired driving offenders' sanctions.

5) Driver physical examination standards based on ASEAN member countries' laws: ASEAN should monitor each country, particularly during physical examination and drug testing procedures at checkpoints, traffic accident scenes, and while driving, to promote human rights protection among road users. This should be based on medical principles for preliminary testing to help screen traffic offenders and prevent disputes that may arise among drivers who cross borders from countries with high examination standards to countries with lower or no established standards, in accordance with international guidelines. If human rights violations are discovered, the facts should be reported to the UNHRC, and that violated country should be punished.

## Conclusion

According to the findings of this study, ASEAN has no direct strategy that can mandate or obligate all state members to support the prevention of driving under the influences. ASEAN has no additional guidelines for controlling psychotropic drug use among drivers. In the case of cross-border driving, the countermeasures to prevent driving under the influence is unclear. Human rights and drug testing should be scrutinized among road users. In summary, ASEAN should have a clear policy on the use of psychotropic drugs while driving. The prospective ASEAN Agreement for the Protection of Driving Under the Influence of Psychotropic Drugs and its Work Plan, and other technical guidelines should be proposed. ASEAN should support instruments for measuring alcohol and psychotropic drugs at each country's border crossing. ASEAN should monitor each

country, especially during physical examination and drug testing procedures in accordance with international human rights law. Different measures and policies among the ASEAN members should be investigated further.

## Conflict of Interest

The author declares no conflicts of interest.

## Author Contributions

Arnon Jumlongkul created all research design, analyzed, and drafted this article solely.

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