Cindy Cloudia Salsabila

Criminal Law Policies on the Abuse of Nitrous Oxide (N_2O): a Comparative Study of Indonesia and the Netherlands

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Criminal Law Policies on the Abuse of Nitrous Oxide (N_2O): a Comparative Study of Indonesia and the Netherlands

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Abstract

The misuse of Nitrous Oxide (N_2O) for recreational purposes in Indonesia has become a serious concern. has reported an increase in cases, indicating an increasingly alarming trend of misuse among adolescents and young adults, which poses a risk of permanent neurological disorders, paralysis, and even death. Its distribution is becoming increasingly widespread through e-commerce and social media, while the absence of specific regulations regarding the non-medical use of N_2O creates a legal vacuum. This study analyzes criminal law policies regarding N_2O abuse in Indonesia and compares them with those of the Netherlands, given the latter's responsive regulatory approach in criminalizing N_2O through the Opium Act 2023, thereby providing a relevant policy model for Indonesia. The method used is a normative legal approach incorporating legislative, conceptual, and comparative perspectives. The results show that Indonesia lacks specific regulations, leading to legal uncertainty, whereas the Netherlands has ensured legal certainty and the protection of public health. Therefore, regulations on N_2O are needed within the Narcotics Law, accompanied by education, monitoring, and rehabilitation. The contribution of this study is an examination of criminal law policies regarding the misuse of nitrous oxide (N_2O) in Indonesia through a comparison with the Netherlands.

Keywords: Nitrous Oxide Abuse; Psychoactive Substances; Legal Vacuum; Criminalization; Illegal Distribution

INTRODUCTION

The rise in the misuse of "whip pink" gas canisters containing nitrous oxide (N_2O) reflects a form of social deviance that has not yet been fully addressed within Indonesia's legal framework,[1] even though nitrous oxide (N_2O) is a legal substance used in the medical

[1] Lutfia Alydia, 'Penegakan Hukum terhadap Penyalahgunaan Nitraous Oxide', *Jurnal Hukum Lex Generalis* 6, no. 10 (October 2025): 1, https://ojs.rewangrencang.com/index.php/JHLG/article/view/3156.

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and food industries; however, nitrous oxide (N_2O) s often abused by young people using "whip pink" canisters to experience a euphoric high.[2] When inhaled, nitrous oxide (N_2O) rapidly affects the central nervous system, reducing pain or discomfort, and producing sedative effects such as calmness, euphoria, and hallucinations.[3] In the Indonesian legal system, narcotics are regulated under Articles 5 and 6 of Law No. 35 of 2009,[4] while psychotropic substances are regulated under Article 2 of Law No. 5 of 1997;[5] but, nitrous oxide (N_2O) it has not yet been classified as a controlled substance under either of these legal frameworks. As a result, there is a regulatory gap that causes the government's response to the misuse of nitrous oxide (N_2O) to remain reactive rather than preventive. Meanwhile, some countries, such as the Netherlands and the United Kingdom, have responded to this phenomenon by enacting policies to criminalize or restrict the distribution of nitrous oxide (N_2O).

Several previous studies have been conducted, *First;* in an article titled "Recreational Nitrous Oxide Dosing and Administration and Its Use in Traffic," written by Vinckenbosch et al., found that the increase in recreational use of nitrous oxide (N_2O) in the Netherlands led to psychomotor impairments and traffic accidents, thereby necessitating stricter controls on its distribution.[6] *Second;* "A comparative study of the harms of nitrous oxide and poppers using the MCDA approach" written by Plinio M Ferreira et al., focusing on health aspects and the level of danger, rather than criminal law policies.[7] *Third,* "Law Enforcement Regarding the Circulation of New Psychoactive Substances in Indonesia," written by Deassy Jacomina et al., states that the emergence of new substances not yet listed in regulations poses obstacles to law

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[2] Tiara Ajeng Pramasta and Rakhmat Nur Sefiadi, 'Kegiatan Pengabdian Masyarakat Melalui Seminar "Gen-Z Cerdas: Bahaya Farmakologis & Legalitas Penyalahgunaan Zat" Di SMK Muhammadiyah Cilacap', *Kreativitas Pada Pengabdian Masyarakat (Krepa)* 7, no. 10 (June 2026): 2, https://doi.org/10.5281/zenodo.21015401.

[3] Leila Muhelni, Nanda Pariza, and Indah Febri Annisa, 'The Impact of Hazardous and Toxic Waste (B3) Transportation on the Environment at the West Pasaman General Hospital', *TOFEDU: The Future of Education Journal* 3, no. 4 (November 2024): 1114, https://doi.org/10.61445/tofedu.v3i4.213.

[4] Sipto Dwi Laksono, Nandang Sambas, and Hadi Purnomo, 'Implementasi Pasal 54 Undang-Undang Nomor 35 Tahun 2009 Tentang Narkotika Dalam Melakukan Tindakan Rehabilitasi Medis dan Rehabilitasi Sosial', *Iustitia Omnibus: Jurnal Ilmu Hukum* 5, no. 2 (June 2024): 165, https://jurnal-pasca.unla.ac.id/iustitiaomnibus/article/view/101.

[5] Ihwanul Hakim and Lilik Mulyadi, 'Pelaksanaan Penyidikan Terhadap Pengedar Psikotropika Dengan Resep Dokter Di Satuan Resesre Narkoba Polresta Yogyakarta Dan Polres Sleman', *Kajian Hasil Penelitian Hukum* 4, no. 1 (May 2020): 536, https://doi.org/10.37159/jmih.v4i1.1221.

[6] Frederick Vinckenbosch et al., 'Recreational Nitrous Oxide Dosing and Administration and Its Use in Traffic: An Online Survey', *Journal of Drug Issues* 55, no. 4 (October 2025): 495, https://doi.org/10.1177/00220426241233193.

[7] Plinio M. Ferreira et al., 'A Comparative Study of the Harms of Nitrous Oxide and Poppers Using the MCDA Approach', *Drug Science, Policy and Law* 8 (January 2022): 1, https://doi.org/10.1177/20503245221127301.

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enforcement and creates legal loopholes.[8] Several previous studies have examined the health risks, criminalization, and law enforcement related to nitrous oxide (N_2O), but none have specifically addressed criminal law policies regarding the misuse of nitrous oxide (N_2O) in Indonesia through a comparison with the Netherlands. Rapidly evolving social, technological, and criminal dynamics are not always matched by adequate regulations, creating a legal vacuum; thus, this study aims to address this legal vacuum and contribute to the formulation of criminal law policies regarding the misuse of nitrous oxide (N_2O).

The urgency of this research stems from the fact that the misuse of nitrous oxide (N_2O) is beginning to show clear signs in Indonesia, particularly among young people who use it in the form of whip pink to experience a euphoric sensation or "high. The National Narcotics Agency has stated that the misuse of nitrous oxide (N_2O) has become a cause for concern because it poses a potential threat to public health and opens up new avenues for the misuse of hazardous substances. In April 2026, the Directorate of Narcotics Crimes at the Indonesian National Police's Criminal Investigation Agency also uncovered the illegal production and distribution of whip pink brand nitrous oxide (N_2O) in Jakarta through an inter-city distribution network, indicating that this phenomenon has evolved into a national issue.[9] From a social and public health perspective, the misuse of nitrous oxide (N_2O) affects not only individuals but also the social environment, public order, and the burden on health care services. Therefore, policies are needed that are not only repressive but also preventive, through education, monitoring, and rehabilitation.

The focus of this study stems from the absence of specific regulations regarding the misuse of nitrous oxide (N_2O) in the Indonesian legal system, as in practice this substance is misused for recreational purposes that endanger health. The absence of such specific regulations creates a legal vacuum that has the potential to hinder law enforcement efforts against the distribution and misuse of N_2O. Meanwhile, the Netherlands, as a country with a civil law system, has taken decisive action by classifying nitrous oxide under list II of the Opium Act (Opiumwet) since 2023, in order to limit its misuse and mitigate the resulting health impacts and public order

[8] Lisa Lisa, Deassy Jacomina Anthoneta Hehanussa, and Yonna Beatrix Salamor, 'Penegakan Hukum Terhadap Peredaran Narkotika Jenis New Psychoactive Subtance Di Indonesia', *TATOHI: Jurnal Ilmu Hukum* 3, no. 3 (June 2023): 289, https://doi.org/10.47268/tatohi.v3i3.1594.

[9] Rumondang Naibaho, 'Bareskrim Bongkar Pabrik Whip-pink Ilegal Beromzet Miliaran di Jakarta', detiknews, accessed 20 July 2026, https://news.detik.com/berita/d-8445200/bareskrim-bongkar-pabrik-whip-pink-ilegal-beromzet-miliaran-di-jakarta.

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disturbances.[10] Based on the above discussion, this study examines legal policies regarding the misuse of nitrous oxide in Indonesia, compares regulations on nitrous oxide in Indonesia and the Netherlands, and formulates policy recommendations that can be implemented in Indonesia to regulate and prevent the misuse of nitrous oxide in the future.

This study employs a normative legal research method, focusing on the examination of legal norms as a system that encompasses principles, laws and regulations, and legal arguments relevant to addressing the issues that are the subject of this study.[11] The approaches used include a legal approach, which examines Law No. 35 of 2009 on Narcotics and the Dutch Opium Act to identify applicable regulations. The conceptual approach examines the concepts of criminal law policy, criminalization, and criminal and non-criminal approaches to crime prevention, while the comparative approach compares regulations in the Netherlands with those in Indonesia.[12] Legal materials are collected through library research by examining primary, secondary, and tertiary legal sources relevant to the research topic. The analysis of legal materials was conducted using logical legal arguments and qualitative methods through inventory, classification, systematization, and legal interpretation grammatical, systematic, and teleological to develop a comprehensive approach to addressing legal loopholes and legal uncertainty.

This study aims to analyze Indonesia's legal policies regarding the misuse of nitrous oxide (N_2O) from a criminal law perspective, particularly with regard to regulations on new psychoactive substances that have not yet been specifically addressed in national legislation. This study aims to identify gaps in legislation that have limited efforts to monitor, prevent, and enforce laws prohibiting the misuse of nitrous oxide outside of medical or industrial contexts,[13] as the scientific literature confirms that the increasing use of nitrous oxide for recreational purposes necessitates the strengthening of control policies. In addition, this study aims to compare the regulatory framework regarding nitrous oxide in the Netherlands under the Opium Act as a basis

[10] L. Hondebrink et al., 'Incidents with Recreational Nitrous Oxide Use before and after Legislation: Poisonings and Police Incidents in the Netherlands between 2020 and 2025', *The International Journal on Drug Policy* 149 (March 2026): 105170, https://doi.org/10.1016/j.drugpo.2026.105170.

[11] Yati Nurhayati Irfani Irfani, and M. Yasir Said, 'Metodologi Normatif Dan Empiris Dalam Perspektif Ilmu Hukum', *Jurnal Penegakan Hukum Indonesia* 2, no. 1 (July 2026): https://ojs.bdproject.id/index.php/jphi/article/view/14.

[12] Rinda Philona and Awaludin Awaludin, 'Constitutional Values and Restorative Justice: A Critical Analysis in the Indonesian Context', *KARSA Journal of Social and Islamic Culture* 33, no. 1 (June 2025): 248, https://ejournal.uinmadura.ac.id/index.php/karsa/article/view/20264.

[13] Stephen J. Kaar et al., 'Up: The Rise of Nitrous Oxide Abuse. An International Survey of Contemporary Nitrous Oxide Use', *Psychopharmacol* 30, no. 4 (April 2016): 397, https://doi.org/10.1177/0269881116632375.

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for evaluation and learning in the formulation of national legal policy.

RESULTS AND DISCUSSION

Indonesia's Legal Policy on the Misuse of Nitrous Oxide (N_2O)

Legal policy is a state instrument for regulating social life and ensuring order, legal certainty, and legal protection for the public interest.[14] Legal policy serves not only as a means of enforcing the law, but also as an instrument for preventing actions that could potentially disrupt public health, safety, and public order.[15] Over time, various new psychoactive substances have emerged that were initially used legally in the medical and industrial fields but were later abused for recreational purposes. Nitrous oxide (N_2O) has become a concern because, while it is primarily used for legitimate medical and industrial purposes, over time it has come to be used to achieve a temporary euphoric effect.[16]

Historically, in 1800, nitrous oxide (N_2O) was classified as an anesthetic and was known for its anti-anxiety effects, although its use was limited. Nitrous oxide (N_2O) is also known as "laughing gas" because of its euphoric and hallucinogenic effects, which are temporary.[17] In Indonesia, this substance is also used for medical purposes as an anesthetic and analgesic gas. In Minister of Health Regulation No. 4 of 2016 concerning the use of medical gases and medical vacuum systems in healthcare facilities, Article 2, paragraph (2), classifies dinitrogen oxide/nitrous oxide (N_2O) as a pure medical gas, and its use is further regulated in detail through the annex to the regulation and further reinforced in the National Formulary for healthcare services and hospitals.

The legal status of nitrous oxide (N_2O) abuse is currently in a legal vacuum. Although its use is permitted for legitimate medical and industrial purposes, the recreational use of N_2O has not been explicitly addressed within the existing regulatory framework, and nitrous oxide (N_2O) has not been specifically classified as a narcotic or psychotropic substance. Law No. 35 of 2009 on Narcotics and Law No. 5 of 1997 on Psychotropic Substances do not list nitrous oxide as a specifically regulated substance. However, in practice, the use of nitrous oxide (N_2O) for non-medical or

[14] Sayid Anshar and Netrivianti Netrivianti, 'The Essence of Legislation in Realizing a Legal State Based on Justice and Welfare', *Jurnal Ilmiah Ekotrans & Erudisi* 4, no. 1 (June 2024): 110, https://doi.org/10.69989/pw0yem58.

[15] Sulastri Sangadji et al., 'Politik Hukum Dalam Perumusan Undang-Undang Nomor 1 Tahun 2023 Tentang Kitab Undang-Undang Hukum Pidana', *Jurnal Legislasi Indonesia* 22, no. 1 (May 2025): 55, https://doi.org/10.54629/jli.v22i1.1301.

[16] Emeline Gernez et al., 'Nitrous Oxide Abuse: Clinical Outcomes, Pharmacology, Pharmacokinetics, Toxicity and Impact on Metabolism', *Toxics* 11, no. 12 (November 2023): 4, https://doi.org/10.3390/toxics11120962.

[17] Shaeraine Raaj et al., 'An Episode of Psychosis After Nitrous Oxide Abuse During a Pandemic: A Case Report', *Cureus* 16, no. 5 (May 2024): 3, https://doi.org/10.7759/cureus.60634.

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recreational purposes particularly among adolescents and adults seeking pleasure is on the rise. Studies show that the use of new psychoactive substances is often influenced by a perception of low risk and easy access to these substances.[18]

Inhaling N_2O without medical supervision can cause nerve damage, balance disorders, and weakness; these risks indicate that N_2O abuse not only poses public health problems but also has legal implications because it potentially threatens individual safety and social order. Improper use can also alter hemoglobin levels in the blood, leading to a decrease in oxygen levels in the body and potentially resulting in death. The National Narcotics Agency of the Republic of Indonesia stated that the trend of using laughing gas as a recreational substance is on the rise and has become a serious problem. The National Narcotics Agency of the Republic of Indonesia Chief Suyudi Ario Seto also shared this observation in light of emerging patterns of substance abuse. He further explained that The National Narcotics Agency of the Republic of Indonesia has received reports of the substance being used in combination with alcohol. Such a combination is considered to significantly increase health risks and has the potential to lead to severe or even fatal consequences. This phenomenon highlights the existence of a legal vacuum in the regulation of new psychoactive substances in Indonesia. This legal vacuum results in the legal system's inability to respond quickly to social dynamics, leading to legal uncertainty for both law enforcement officials and the public.

The misuse of nitrous oxide (N_2O) raises legal issues regarding the state's limited ability to effectively respond to the rise in the misuse of new psychoactive substances. This situation requires a legal assessment to determine whether the misuse of nitrous oxide warrants regulation and the imposition of criminal sanctions through criminalization policies. Such an assessment is relevant given that criminal law is fundamentally a last resort (ultimum remedium), the application of which must be based on rational considerations and the interest in protecting society. In the context of criminalization, Moeljatno formulates three criteria for criminalization: first, the act must cause harm to society; second, criminalization must be the primary means of preventing the prohibited act; and third, the government, through its state apparatus, must be capable of implementing and enforcing criminal penalties against those who commit the

[18] Fajrul Haq, 'Urgensi pengaturan pembatasan penggunaan Nitrous Oxide sebagai bahan tambahan pangan perspektif Sadd Al-Dzari'ah' (Thesis, Universitas Islam Negeri Maulana Malik Ibrahim, 2026), 5, http://etheses.uin-malang.ac.id/86392/.

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prohibited act.[19] These three criteria can also be referred to as the criteria of danger, subsidiarity, and effectiveness.

This means that, based on the criteria formulated by Moeljatno, first, an act can be criminalized if it causes harm and endangers public safety. However, an act is not criminalized solely based on the extent of the harm, but also on the extent to which the act interferes with legal interests and the public interest.[20]

Criminalization is not automatically used to classify an act as a criminal offense; rather, one must first consider whether criminal law is the most appropriate primary means of addressing and preventing such prohibited acts. This criterion is also known as subsidiarity, meaning that criminalization must be based on the principle of subsidiarity. The principle of subsidiarity positions criminal law as a last resort (ultimum remedium) in crime control,[21] so that criminal instruments are not used as the primary response to criminal problems. The application of the principle of subsidiarity must be carried out strictly and selectively to ensure the effectiveness and proportionality of the use of criminal law in crime control.[22]

Third, criminalization depends on the ability of state institutions to enforce criminal sanctions for prohibited acts. In other words, an act should not be criminalized if law enforcement authorities are unable to enforce it effectively. Moeljatno also states that if an act that has been criminalized is not followed up in accordance with the proper legal process, is not brought before the court, or the perpetrator is not punished proportionately to the seriousness of the offense, then the law merely becomes a formal norm that fails to have the intended impact on society.[23] On the other side, if too many acts are classified as criminal offenses without due consideration for the current legal needs of society, this situation can be described as "criminal inflation".[24] This situation causes criminal law to lose its authority and effectiveness, thereby preventing it from functioning optimally as a means of social control.

Based on this, the misuse of nitrous oxide (N_2O) has been shown to cause adverse health effects, such as nerve damage,

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[19] Dion Valerian, 'Kriteria Kriminalisasi: Analisis Pemikiran Moeljatno, Sudarto, Theo De Roos, dan Iris Haenen', *Veritas et Justitia* 8, no. 2 (December 2022): 416, https://doi.org/10.25123/vej.v8i2.4923.

[20] Moeljatno, *Fungsi dan Tujuan Hukum Pidana Indonesia dan Rencana Undang-Undang Tentang Asas-Asas Dan Dasar-Dasar Pokok Tata Hukum Indonesia* (Bina Aksara; Jakarta, 2021), 52.

[21] Pande Komang Surya Mahesa and Ayu Putu Laksmi Danyathi, 'Prinsip Subsidiaritas Menempatkan Hukum Pidana Sebagai Upaya Terakhir (Ultimum Remedium) Dalam Pengendalian Kejahatan', *Jurnal Media Akademik (JMA)* 3, no. 9 (September 2025): 3, https://jurnal.mediaakademik.com/index.php/jma/article/view/2858.

[22] Zulkifli Ritonga, Siti Arifah Syam, and Fauziah Lubis, 'Kebijakan Kriminalisasi dan Dekriminalisasi KUHP Baru', *Innovative: Journal of Social Science Research* 4, no. 4 (July 2024): 3957, https://j-innovative.org/index.php/Innovative/article/view/13530.

[23] Ritonga, Syam, and Lubis, 3957.

[24] Valerian, 'Kriteria Kriminalisasi', 420.

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hypoxia, and neurological disorders caused by vitamin B12 deficiency, even death if used excessively and continuously. Various studies have also shown that recreational use of nitrous oxide (N_2O) has the potential to lead to addictive behavior. This is reflected in patterns of repeated use, users' limited ability to control their use, and a tendency to continue using N_2O despite being aware of its negative consequences.[25] However, to date, Indonesia has not enacted regulations that explicitly classify the misuse or distribution of nitrous oxide (N_2O) as a criminal offense.[26] Meanwhile, several other countries, such as the Netherlands, the United Kingdom, Australia, and other European nations, have addressed this phenomenon through stricter laws that restrict the distribution and sale of nitrous oxide (N_2O) as part of efforts to control its misuse. Regulatory developments in various countries indicate that nitrous oxide (N_2O) has become the subject of increasing legal scrutiny due to concerns regarding its use as a new psychoactive substance.

A Comparison of Nitrous Oxide Laws in Indonesia and the Netherlands

Nitrous oxide (N_2O), or "laughing gas," is currently a substance often used for recreational purposes. This is because the substance is very popular among young people thanks to its ease of access and availability, not to mention its affordable price. However, the reality is that the abuse of nitrous oxide (N_2O) has serious consequences for health, psychological, and social. In 2014, the European Supreme Court ruled that nitrous oxide (N_2O) products that are not used as drugs are no longer regulated by the Medicines Act. Following this decision, the sale and use of nitrous oxide (N_2O) in the Netherlands is regulated under the Commodity Act.[27] However, these regulations only regulate production and distribution, not recreational or intoxicating use. This situation creates regulatory loopholes and presents challenges for law enforcement officials in dealing with the misuse of nitrous oxide (N_2O) for recreational purposes.

The Netherlands became the first country to report an increase in health cases, especially poisoning and severe neurological disorders due to the use of nitrous oxide (N_2O). There have been more than 100 reports

[25] Lutfia Alydia, 'Penegakan Hukum terhadap Penyalahgunaan Nitraous Oxide', *Jurnal Hukum Lex Generalis* 6, no. 10 (October 2025): 15, https://ojs.rewangrencang.com/index.php/JHLG/article/view/3156.

[26] Kesya Nur Aulia Fernanda and Emmilia Rusdiana, 'The Criminalization of Nitrous Oxide Abuse: A Comparative Study of Indonesian and Dutch Law', *ARBITER: Jurnal Ilmiah Magister Hukum* 8, no. 1 (April 2026): 75, https://jurnalmahasiswa.uma.ac.id/index.php/arbiter/article/view/7057.

[27] L. Hondebrink, J. J. Nugteren-van Lonkhuyzen, and I. S. Van Den Hengel-koot, 'International Journal of Drug Policy Incidents with Recreational Nitrous Oxide Use before and after Legislation : Poisonings and Police Incidents in the Netherlands between 2020 and 2025', *International Journal of Drug Policy* 149, no. January (2026): 2, https://doi.org/10.1016/j.drugpo.2026.105170.

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of poisoning cases that have entered the Dutch Poison Information Center (DPIC), with symptoms of nerve damage due to consuming very high doses.[28] In addition, in the same year, Dutch police also reported around 5,000 traffic accidents related to the use of nitrous oxide (N_2O).[29] To limit and reduce these negative impacts, the Dutch government has enacted regulatory changes related to the misuse of nitrous oxide (N_2O).

The dutch legal policy on Nitrous Oxide (N_2O) is contained in the *State Secretary for Health* in 2019: The Government of the Netherlands announces a ban on the production, distribution, sale, and possession of nitrous oxide (N_2O).[30] Then in 2023, the dutch government officially classified Nitrous Oxide (N_2O) as a prohibited substance for recreational use and categorized such acts as criminal acts. As stated in the Opium Act, which is still in force today, it is stated that distickstoff monoxide, lachgas, or better known as nitrous oxide (N_2O), is included in List II of substances prohibited from being produced, possessed, stored, controlled, sold, transported, imported, or exported. The criminal penalty imposed is imprisonment for a maximum of one month, as stipulated in Article 11 paragraph (1), which reads:[31]

> "Whoever acts in breach of a prohibition laid down in Article 3 shall be punished by imprisonment for a term not exceeding one month or a fine of the second category".

Several other countries have also started to take steps, consider and have even implemented similar policies. For example, South Australia regulates the sale of nitrous oxide under the Controlled Substances Act (1984), which was updated in 2019 to include provisions regarding penalties for the sale of nitrous oxide in both physical and online stores.[32] In 2023, the United Kingdom officially classified nitrous oxide as a group C drug based on a regulation officially published by Belgium in 2024 "*Arrêté royal relative à l'usage détourné du protoxyde d'azote"* or a royal decree on the abuse of *Nitrous Oxide* (N_2O).[33] Comparison between countries are essential to assess whether a policy

[28] A. J. H. P. van Riel et al., 'Alarming Increase in Poisonings from Recreational Nitrous Oxide Use after a Change in EU-Legislation, Inquiries to the Dutch Poisons Information Center', *International Journal of Drug Policy* 100 (February 2022): 103520, https://doi.org/10.1016/j.drugpo.2021.103519.

[29] Government of the Netherlands, 'Opium Act (Opiumwet)', Staatsblad, 2026, https://wetten.overheid.nl/BWBR0001941/2026-01-28#Artikel11.

[30] Hanqin Tian et al., 'A Comprehensive Quantification of Global Nitrous Oxide Sources and Sinks', *Nature* 586, no. 7828 (October 2020): 248, https://www.nature.com/articles/s41586-020-2780-0.

[31] 'Opium Act — Drugs: Schedules I and II, Prohibitions', Hodak.Nl, accessed 20 July 2026, https://hodak.nl/legislation/en/opiumwet/.

[32] Attorney-General's Department, 'Nitrous Oxide Regulations', Text, Attorney-General's Department, Attorney-General's Department, 9 December 2021, South Australia, https://www.agd.sa.gov.au/law-and-justice/legislation/nitrous-oxide-regulations.

[33] '11 MARS 2024. - Arrêté Royal Relatif à l'usage Détourné Du Protoxyde d'azote', accessed 20 July 2026, https://refli.be/fr/lex/2024002967.

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is truly effective in reducing negative impacts. Here are some comparisons between Indonesia and the Netherlands:

Table 1:
Comparison of Nitrous Oxide Laws in Indonesia and the Netherlands

Appearance	Indonesia	Netherlands
Legal Basis	Nitrous oxide (N_2O) is not listed in Law Number 35 of 2009 concerning Narcotics and Law Number 5 of 1997 concerning Psychotropic Substances.	Nitrous oxide (N_2O) has been classified in List II of the Opium Act since January 1, 2023
Recreational Use Status	The recreational use of Nitrous Oxide (N_2O) has not been specifically regulated in laws and regulations.	Use for pleasure is expressly prohibited under Article 11 paragraph (1) of the Opium Act and is punishable by imprisonment for a maximum of one month.
	There are no specific criminal provisions yet, but such activities have been restricted through administrative supervision.	Production, sale, distribution, import, and export without a permit are prohibited and may be subject to criminal sanctions.
Legal Consequences	Currently, there are no special criminal sanctions. General provisions apply if other consequences arise.	Sanctions can be in the form of imprisonment, fines, and confiscation.
Policy Model	Administrative and reactive supervision.	Preventive, repressive, and integrated into criminal law
Basis of Policy Thinking	Nitrous oxide (N_2O) is still mainly known as a substance used in the medical, industrial, and food fields. The rise of abuse for recreational purposes has not caused special criminalization, thus creating regulatory loopholes.	The government classifies N_2O under the Opium Act due to the increased misuse for recreational purposes, public health risks, traffic accidents, and disturbance of public order associated with the non-medical consumption of the substance.

Source: Compiled from primary sources

The comparison shows that the Netherlands already has a clearer and more responsive legal policy in regulating the misuse of nitrous oxide (N_2O) through a special legal basis as well as the provision of criminal sanctions for recreational use and illegal distribution. On the other hand, legal policies in Indonesia are still lagging behind in responding to efforts to counter the abuse of nitrous oxide (N_2O), so more adaptive and responsive legal reforms are needed to bridge the gap between the sein and the sollen water in the positive legal system in Indonesia. This gap can be seen from the social reality about the abuse of nitrous oxide (N_2O) in the community, while legal instruments have not provided clear arrangements regarding the status, restrictions, supervision and legal consequences of its misuse. The Netherlands reflects the integration between criminal law policy and public health policy. In this case, criminalization is carried out not just as a form of repression but as a form of reprenty which is part of the risk control strategy for the impact caused.

Legal Reform Efforts to Prevent the Abuse and Distribution of Nitrous Oxide in Indonesia

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Law and society are closely related and affect each other.[34] Law is a product embraced by the community while the community plays a role in the process of forming and changing the law The Law is the main instrument in encouraging the progress of the nation and should develop in line with the needs of the community.[35] The dynamic character of the Law encourages changes to the emergence of new forms of evil acts and deviations that have not previously been accommodated in existing legal provisions. Any act that is socially considered detrimental or harmful requires reform steps through legal policy. These policies can be realized in the process of criminalization, decriminalization, or reformulation of norms so that the law remains effective and develops in society as a means of community protection and social control as well as efforts to prosper the community.[36]

According to Sudarto, legal politics is an effort to realize good laws and regulations and in accordance with the needs and circumstances of the community at a certain time through institutions that are authorized to set rules that are considered appropriate and achieve a goal.[37] Meanwhile, according to Barda, Nawawi Arief emphasized that criminal law policy can be understood in three senses. In a narrow sense, criminal law policy is a whole set of principles and methods that are the basis for reaction to violations of the law in the form of criminal law. In a broad sense, the policy covers all functions of law enforcement apparatus, including the police and courts. As for the broadest sense, criminal law policy encompasses all policies taken through laws and regulations and official institutions to enforce fundamental norms in society.[38]

In the context of the legal vacuum for the abuse and circulation of nitrous oxide (N_2O) in Indonesia, the government is required to immediately make efforts to establish a law that is in accordance with today's needs. The main objectives of the regulation are to reduce and prevent the misuse of Nitrous Oxide (N_2O), control its circulation, and protect public health. To achieve these goals, legal policy reform can be carried out by classifying Nitrous Oxide as a substance regulated in Law Number 35 of 2009 concerning Narcotics or based on the

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[34] Muhammad Aini, 'Hubungan Hukum dan Masyarakat', *Jurnal Riset Multidisiplin Edukasi* 2, no. 8 (August 2025): 145, https://doi.org/10.71282/jurmie.v2i8.802.

[35] Renaldi Pratama Jaya, 'Interaksi Timbal Balik Antara Hukum dan Struktur Sosial Dalam Masyarakat Modern', *Sultam Adam: Jurnal Hukum dan Sosial* 3, no. 2 (July 2025): 179–80, https://doi.org/10.71456/sultan.v3i2.1405.

[36] Ritonga, Syam, and Lubis, 'Kebijakan Kriminalisasi Dan Dekriminalisasi KUHP Baru', 3967.

[37] Ismaidar I, Tamaulina Br Sembiring, and Elisabeth Saragih, 'Pengaruh Politik Hukum Dalam Pembentukan dan Penegakan Hukum Di Indonesia', *Media Hukum Indonesia (MHI)* 2, no. 4 (November 2024): 347, https://ojs.daarulhuda.or.id/index.php/MHI/article/view/890.

[38] Tri Astuti Handayani and Andrianto Prabowo, 'Analisis Hukum Pidana Adat Dalam Hukum Pidana Nasional', *Jurnal Hukum Ius Publicum* 5, no. 1 (April 2024): 89, https://doi.org/10.55551/jip.v5i1.95.

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Regulation of the Minister of Health Number 15 of 2025 concerning the reclassification of narcotics. In addition, Indonesia can learn from and, if necessary, adopt regulatory practices from other countries, such as the Netherlands, which have dealt with this phenomenon. The country's experience shows that the handling of nitrous oxide (N_2O) does not necessarily require criminalization, but can be achieved through a combination of administrative supervision, selective criminal sanctions, as well as public health or rehabilitation policies.

In addition to the normative aspect, effective control also requires strengthening strict supervision of distribution channels through increased monitoring of the chemical and pharmaceutical sectors, courier and logistics services, and digital transactions that have the potential to be used for the circulation of controlled substances. The supervisory authority can be carried out in an integrated manner by various institutions. The Ministry of Health has the authority to supervise the use and distribution of substances related to health services. The Indonesian Food and Drug Authority plays a role in supervising the production and distribution of certain ingredients that have the potential to affect public health. Ministry of Trade of the Republic of Indonesia has the authority to supervise the trading activities and distribution of goods, while the Ministry of Communication and Digital is responsible for overseeing transactions and promotions carried out through digital platforms. In addition, the Indonesian National Police and the National Narcotics Agency have the authority to enforce the law if there are indications of abuse, illegal distribution, or other criminal acts related to the use of nitrous oxide (N_2O). Effective supervision requires inter-agency coordination to ensure that distribution control and abuse prevention measures can be implemented optimally and integrated.

The strategy carried out by the Indonesian National Police in tackling the abuse and illicit circulation of narcotics is divided into three forms of efforts, namely Pre-emptive Efforts, Repressive Efforts and Preventive Efforts. Pre-emptive efforts are the first step oriented towards fostering and legal awareness of the community about the dangers of narcotics so as to avoid abuse and illicit circulation of narcotics. Pre-emptive efforts are carried out in an educational manner in the form of activities, including legal counseling, socialization of the dangers of narcotics in schools, campuses, work environments, and community development. Then the second is preventive efforts, preventive efforts are preventive measures taken to close the opportunity for narcotics crimes. These activities include routine patrols in vulnerable areas, raids on nightlife venues, supervision of distribution channels, inspections at terminals, ports, airports, and

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cyber patrols against narcotics transactions through digital media. Preventive efforts function to reduce the chances of crime through supervision and the presence of law enforcement officials in the field. And lastly, repressive efforts, repressive efforts are legal action against perpetrators of narcotics crimes who have committed unlawful acts. The form includes investigation, investigation, arrest, search, confiscation of evidence, detention, and transfer of cases to the prosecutor's office and court. In narcotics control, repressive measures are mainly aimed at smugglers, traffickers, manufacturers, and organized crime networks to prevent illegal activities and break the supply chain of illegal narcotics trafficking.

From some of the above efforts, it is hoped that the government can take firm steps in tackling the abuse and illicit circulation of narcotics through consistent law enforcement and the provision of proportional sanctions for the acts committed, because if not followed up immediately, it can threaten public health and the future of the nation's generation because narcotics crimes are serious crimes. However, the application of strict sanctions alone is not enough to overcome the problem, it must consider a non-penal approach, especially for users who are addicts and victims of abuse. The state needs to prioritize medical and social rehabilitation as a form of recovery, not immediately through criminal punishment. This is in line with article 54 of Law No. 35/2009 which prioritizes rehabilitation for abusers and victims of narcotics abuse.

CONCLUSION

Based on the research findings, the legal frameworks in Indonesia and the Netherlands regarding the misuse of nitrous oxide (N_2O) show significant differences. To date, Indonesia has not established provisions that explicitly regulate or classify nitrous oxide (N_2O) as a controlled substance, resulting in a legal vacuum and uncertainty in efforts to prevent and enforce laws against its misuse. This situation creates a legal vacuum and uncertainty that hinders the effectiveness of responses, both in terms of law enforcement and the protection of public health. The urgency of such regulation is all the more pressing given that the misuse of nitrous oxide (N_2O) has the potential to cause various negative impacts, such as health problems, traffic accidents, and public order issues that affect public health and safety. In contrast, the Netherlands has adopted a more responsive approach by including nitrous oxide (N_2O) in the provisions of the Opium Act since 2023. This policy reflects a regulatory strategy in response to the emergence of new psychoactive substances and demonstrates that robust legal frameworks can strengthen both prevention and enforcement. Based on this comparison, a viable legal policy for Indonesia would involve updating regulations by including

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nitrous oxide (N_2O) in the Narcotics Act or establishing specific regulations governing its distribution, sale, use, and oversight. Furthermore, the implemented policy needs to integrate penal and non-penal approaches by strengthening law enforcement against illegal distribution, increasing public education, implementing preventive measures, and providing rehabilitation for users to offer more effective protection of public health and order.

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