

ORGANIZATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

UNDER SECRETARY GENERAL

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PARENTAL ADVISORY EXPLICIT CONTENT

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1. Welcoming Letters

1.1. Letter from the Secretariat

The Most Esteemed Participants of YETRAIN'26,

As the Secretary General of YETRAIN'26, I would like to welcome you all to the 1st edition of Ye Model United Nations Train Conference. It is an honor and pleasure to be able to present to you all what we have been preparing for months. Me, our excellent academic team and the wonderful organisation team have worked really hard to give you the best mun experience of your entire life.

We want to foster diplomatic deliberations and foster constructive solutions that will affect the nations for one and all. As a delegate your YETRAIN'26 journey begins here with our study guide that our committee secretariat worked really hard for. Your participation in this conference will improve your diplomatic debating skills and find solutions to global matters. Also apart from all the academic gains you will have a wonderful time with the chance of socializing with other people who share the same passion with you.
I hope that every participant has an exquisite time in YETRAIN'26 I can’t wait to see you all!

Doruk Sapmaz
Secretary General of YETRAIN'26

1.2. Letter from the Under-Secretary General

Dear Delegates,

It is my greatest pleasure to welcome you all to this committee. My name is Esmanur Çapraz, and I will have the honor of serving as your Under Secretary General throughout this conference. On behalf of the entire academy of this committee, I would like to express how excited we are to meet each and every one of you and witness the insightful debates that will take place during our sessions.

Before anything else, I would like to extend my sincere gratitude to the Secretariat, the Academic Team, and the Organization Team for their dedication and hard work in making this conference possible. I would also like to thank my dearest Academic Assistant, Berrak Esba, for all of her greatest support for the preparation of the committee. Most importantly, I would like to thank you, our delegates. Your enthusiasm, preparation, and willingness to engage in meaningful discussion are what truly bring this committee to life. Whether this committee was your first choice or not, I sincerely hope that you will find the experience both intellectually stimulating and enjoyable.

This study guide has been prepared to provide you with a strong foundation for your research and preparation. However, it should only serve as a starting point. It is your responsibility as delegates to further investigate your assigned country's policies, previous actions, and perspectives regarding the agenda. Thorough research and a clear understanding of your country's position will be key to your success in committee.

Should you have any questions during your preparation process, please do not hesitate to contact me. I would be more than happy to assist you in any way possible.

I wish all of you the best of luck in your preparations and look forward to an engaging, productive, and memorable conference.

Best regards,

Esmanur Çapraz
Under Secretary General of Organization for the Prohibition of Chemical Weapons committee

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1.3. Letter from the Academic Assistant

Precious delegates of the Organization for the Prohibition of Chemical Weapons committee,

As the academic assistant of the OPCW committee of YETRAIN'26, it's a huge honour to welcome you all. First of all, I would like to begin by expressing my gratitude to the secretariat for giving me the opportunity to be a part of this prestigious conference. I would also like to thank my Under Secretary General Esmanu Çapraz with all of my heart for making this wonderful honor and experience possible and for believing in me. And lastly I would like to thank our delegates for their existence, hardwork and efforts for the committee.

Although this guide covers in detail the basic parts that you need to know for the progress of the committee, it is your responsibility to investigate and act according to the policies of the country you represent in accordance with the agenda item, to conduct research that will adopt their point of view. Being in this equipment is one of the key points for your progress in the committee.

Please do not hesitate to contact me at any time during your preparation process if anything comes to mind. It's an honor to guide you in this process.

I wish you success and productive work, and hope you have an unforgettable, beneficial and excellent conference.

Best Regards,

Berrak Esba

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2. Introduction To The Committee

Organisation for the Prohibition of Chemical Weapons (OPCW) is an international organisation that oversees the complete elimination and prohibition of chemical weapons worldwide. OPCW is divided into three internal bodies as Conferences of the States Parties (CSP), Executive Council (EC) and Technical Secretariat (TS) in terms of its authority and operations. Conferences of the States Parties is responsible for determining the organisation's general policies and serves as the organisation’s highest decision making body and general assembly. The Executive Council serves as the organization’s governing and executive body. It oversees the effective implementation of the agreement and the technical secretariat. The Technical Secretariat, meanwhile, oversees the organization’s field operations and scientific research. It inspects the chemical facilities and industrial plants declared by countries.

2.1. History of the Committee

The OPCW was established on April 29,1997, with the entry into force of the Chemical Weapons Convention, the world's first multilateral treaty. In 1993 the signatory states in Paris recognised that thorough preparatory process would be necessary for the treaty to enter into a

force, so a Preparatory Commission (PrepCom) was established prior to the treaties enter into force. The treaty then officially entered into force on April 29, 1997.

2.2. Mandate and Enforcement Capabilities

The OPCW is responsible for implementing the provisions of the Chemical Weapons Convention and eliminating chemical weapons worldwide. The OPCW's authority stems from the Chemical Weapons Convention and it has jurisdiction over the chemical activities of its 193 member states. It has the authority to monitor distraction of all chemical weapons stockpiles and production facilities belonging to member states to monitor the military and civilian chemical industries and inspect their facilities to investigate allegations of chemical weapons use by conducting on site inspections and laboratory analyses in areas where chemical weapons production is alleged to have taken place, and following the expansions made in 2018 has right to identify those engaged in the production of chemical weapons.

3. Introduction to the Agenda Item

Today, advancements in the medical field continue to expand and increase. These chemicals, which are developed in laboratories and used in the treatment of diseases such as stroke, Alzheimer's, Parkinson's, and nerve damage, are utilized not only for the benefits and convenience they provide but also as chemical weapons for terrorist and military purposes.The use of these substances as chemical weapons can result in permanent physical and mental damage to individuals in cases of excessive exposure, leaving them caught between the need for treatment and the risk of manipulation; at the societal level, they can lead to prolonged anxiety and distrust, the destabilization of healthcare systems in the event of potential chemical attacks, and, when politically weaponized as a weapon of mass destruction, they can result in unstable waves of migration. In this committee, delegates will

discuss chemical weapons produced under the guise of medical research and synthetic neuroagents, as well as those that pose a risk of being produced.

3.1. Definition of Pharmaceutical-Based Agents (PBAs)

Drug-based agents are chemical substances based on pharmaceutical compounds that may or may not have legitimate medical uses, but may cause serious illness, incapacity or death if abused. PBAs present not only a national security concern, but can also have severe and even fatal health effects. These dual-purpose chemicals are often used for medical and veterinary purposes, but can also be weaponized for offensive goals.

In this context, Pharmaceutical-Based Agents PBAs cover a wide and dangerous range of substances, including powerful synthetic opioids, muscle relaxants, anesthetics, and mind-altering drugs. Although they are created to protect or treat human and animal health under normal conditions, these compounds can turn into deadly chemical threats if they fall into the wrong hands or are used in malicious attacks. The substances in this group, which vary depending on which body systems they affect, include strong synthetic opioids like fentanyl and its derivatives (normally used to treat severe pain, but able to cause rapid death by paralyzing the breathing center even at very tiny doses); powerful alpha-2 adrenergic agonists like medetomidine and dexmedetomidine (used in veterinary medicine to sedate large animals, but able to cause a loss of consciousness and severe heart issues in humans); and cholinesterase inhibitors (used in medicine to cause unconsciousness and muscle relaxation, but able to cause respiratory muscle failure at high concentrations). The main reasons why PBAs pose such major military and security risks include the fact that finding raw materials and hidden laboratories is harder compared to traditional chemical weapons, because they are widely produced and traded within the legal pharmaceutical industry; the fact that even microgram amounts are enough to incapacitate or kill, making it easy to spread them as sprays or powders; and the challenge of making sure enough antidotes are available in cases of accidental exposure or intentional attack. For these reasons, the threat posed by PBAs is among the top priorities addressed in both national border protection and global biosecurity and chemical security strategies.

3.2. Synthetic Neuro-Agents and Fentanyl Analogs

Nerve agents are highly toxic chemical compounds, including both naturally derived organophosphates and synthetic agents, commonly used as chemical weapons or in agriculture.
Prolonged exposure is associated with long-term neurologic and psychological effects, including insomnia, anxiety, impaired memory, and vision disturbances.
Opioid is a powerful narcotic painkiller that relieves significant pain due to special receptors in the brain and nervous system. Opioids have historically been used for medical purposes, due to their analgesic and sedative effects, and in the management of chronic and severe pain. They have also been used non-medically and for recreational purposes to induce relaxation, euphoria, and a sense of well-being. Synthetic opioids include fentanyl, its analogs, and newly emerging non-fentanyl opioids. Their popularity is associated with factors such as changes in criminal markets, pricing, potency, availability compared to classic opioids, ease of transport and use, rapid effect, and inability to detect with traditional testing technologies.
Fentanyl was synthesized in 1960 on the grounds that the synthesis of a highly effective drug with increased receptor specificity would exhibit a better safety profile compared to morphine. Fentanyl and its main analogues alfentanil, sufentanil, and remifentanil are used in surgery as adjuncts to anaesthesia, for sedation and the treatment of acute and chronic pain.
Sufentanil is a phenylpiperidine synthetic opioid. It is highly selective for the mu-receptor site and is 5-15 times more potent than fentanyl.
Although alfentanil is not as strong as entanil, it is about 30 times stronger than morphine. 95 Compared to fentanyl and sufentanil, it has the fastest analgesic onset and peak action time, the shortest distribution and elimination half-life, small volume of distribution, greater binding to plasma proteins, and less lipid solubility.
Remifentanil has an analgesic effect similar to fentanyl, it is metabolized directly in plasma by nonspecific esterases, an active group of enzymes found in blood and tissues throughout the body, resulting in an ultra-short duration of action.
Carfentanil and ocfentanil are two potent synthetic opioids that have been implicated in the international opioid overdose crisis, particularly in the United States and some European countries.
Carfentanil is a member of the illegal fentanyl analogs. It is one of the most potent opioids and is approved for use in veterinary medicine only as a general anaesthetic agent or as a tranquillising agent for large animals such as elephants, as its extreme potency makes it inappropriate for use in humans. It has a quantitative potency approximately 10,000 times that of morphine and 100 times that of fentanyl.
Ocfentanil has been found to be 2.5 times more potent than fentanyl and approximately 200 times more potent than morphine. Ocfentanil was never developed for pharmaceutical use.
Acetylfentanyl shows some similarities with heroin, such as color, consistency and pharmacological activity, and is about 15 times more potent than morphine, but has a 3-fold lower effect than fentanyl.
Furanilfentanyl has a similar effect to fentanyl. A study of deaths related to fentanyl and its analogues in five boroughs in New York between 2013 and 2017 found that 417 cases of death were reported, this number increased from 10 cases in 2013 to 184 cases in 2017, and furanyl Decentanyl was one of the most commonly used drugs in these deaths.

4. Key Challenges

4.1. Aerosolized Neuro-Agents and Delivery Methods

Aerosol is the state in which very small solid particles or liquid droplets are suspended in a gas.
Chemical agents are all kinds of solid, liquid and gaseous toxic chemicals used for the purpose of killing, injuring, incapacitating people, polluting and destroying plant and animal food sources, food stocks, rendering economically important targets inoperable, causing chaos and panic, which are used due to their direct toxic effects on humans, animals and plants.
G Series agents (Sarin - GB, Soman - GD, Tabun - GA)
These highly volatile agents, when aerosolized, are absorbed very rapidly both through inhalation via the respiratory tract and by contact with the eyes and mucous membranes. the V-agents, as more stable versions of the “G” agents, were developed.
V-Series Agents (VX, VE, VM)
Thus VX, a sulfur-containing OP, is more potent than sarin, is more stable, less volatile and less water-soluble, acting through direct skin contact, and persisting in the environment up to several weeks after release. Nerve agents are more toxic than the other reported CW agents. They are highly toxic and can cause death within a few minutes to a few hours after exposure, depending on the concentration.
Novichok Agents (Fourth Generation) are difficult to detect binary chemical formulations that can be emitted as dust or very fine solid particle aerosols.
In order for chemical agents to remain aerosolized and reach the respiratory tract, they must reach very small particle sizes. Aircraft, helicopters or unmanned aerial vehicles flying at low altitude can spread the agent by spraying in the form of an aerosol cloud over large areas through pressurized sprayers mounted under them. With backpack type generators or mechanisms similar to industrial agricultural sprays, closed areas such as subways and tunnels or local open areas can be targeted. In addition, liquid agents carried in the warheads of long-range missiles are detonated at a certain height above the target, creating deadly aerosol rains that collapse down under the influence of gravity and wind.

4.2. The Law Enforcement Loophole (Article II.9.d Debate)

I of the Chemical Weapons Convention. Article 5. The clause states: "The contracting parties undertake not to use chemicals used in riot control as weapons of war."
Article 7 of the second article. In October, the paragraph defines the “riot control substance “as chemicals that are not included in the Tariffs attached to the contract, whose effects disappear soon after exposure, irritate people's senses quickly or interfere with human physical activity.”
Article 9 of the second article, titled "Purposes Not Prohibited by This Agreement". In subparagraph (d) of its paragraph, it excluded "the use of force by law enforcement agencies, including domestic insurgency control" from the scope.
“Purposes Not Prohibited Under this Convention” means:
Industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes;
Protective purposes, namely those purposes directly related to protection against toxic chemicals and to protection against chemical weapons;
Military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare;
This provision includes law enforcement activities and the monitoring of social developments within the country among activities that are not prohibited. The debate revolves around this scope and how it can be reconciled with the prohibition of chemical weapons. Law enforcement including domestic riot control purposes. The exception concerns riot control agents (RCAs), which are chemical agents used to disperse crowds, temporarily incapacitate human targets or block access to protected areas. In drafting the convention, countries sought to protect their right to use chemical agents, such as those used in tear gas, for law enforcement purposes. Some countries have also sought to justify the use of RCAs overseas where civilians and combatant are intermixed in situations such as terrorist attacks, riots, attacks on peacekeepers, and hostage crises. Unfortunately, the treaty’s legal language is sufficiently vague on the definitions of “riot control agents” and “law enforcement,” that countries might believe they are legally permitted to use toxic chemical agents as battlefield weapons.
The Chemical Weapons Convention (CWC) defines RCAs as "Any chemical not listed on a Schedule that can cause rapid sensory irritation in humans or crippling physical effects that disappear soon after the end of exposure." This definition consists of several functional clauses that are cumulative in terms of their legal consequences. The first point is that RCAs must be chemicals not included in the schedules published by the CWC and the Organization for the Prohibition of Chemical Weapons. These charts aim to prevent the use of chemicals as weapons by classifying them primarily according to their toxicity and dual-use applicability. The second important point is that the effects of chemicals not included in the program and used as weapons must be temporary. A conventional chemical substance such as tear gas seems to fit this definition well, but it is more lethal under the Chemical Weapons Convention other chemicals may also fall into this category. Unfortunately, the second important aspect is that the effects of chemicals not included in the program and used as weapons must be temporary.

4.3. Inspection and Verification Challenges

The OPCW’s Verification Division works towards achieving chemical disarmament and preventing the re-emergence of chemical weapons through participation in the planning and oversight of inspections at both military and chemical industry facilities. The division also manages declarations while maintaining and strengthening the scientific capabilities of the Organisation, especially its laboratory component. The division also conducts Technical Assistance Visits at the request of States Parties.The Division is responsible for the day to day operation of OPCW’s verification regime.

The Inspection Unit (INS) implements the on-site verification activities of the Technical Secretariat, ensuring the efficient and effective deployment of inspection teams to both military and industrial facilities around the world in accordance with the Chemical Weapons Convention (CWC). The INS is prepared to respond to and investigate allegations of the use of toxic chemicals as weapons, and in the event of a chemical incident, at the request of States Parties, the X of the CWC. Conducts Investigation and Inquiry Inspections Related to the Alleged Use in accordance with the Article.

The 1993 Chemical Weapons Convention provides for various mechanisms and procedures for addressing the problems of non-compliance by States Parties. However, challenge inspection, a mechanism often seen as the most aggressive form of investigation, has never been used – this is because the mechanism has historically been seen as too harsh, technically complex and politically polarizing. At the same time, the global community has witnessed the emergence of small-scale chemical weapons use over the past fifteen years, and this situation has not been addressed by the challenge control mechanism. A key element of the CWC's verification regime is the declaration to be submitted by each State Party to the contract. On site inspections, which are the other key element of the verification regime of the Contract, except for special cases such as “Challenge Inspection”, are,

confirmation of the accuracy of these statements. In the developing chemical industry, the difficulty of separating substances that can be used for peaceful industrial and medical purposes as well as in the production of chemical weapons, the monitoring and inspection of new generic organic chemicals (OCPF) creates a large volume, the detection of new generation toxic substances requires the continuous updating of OPCW laboratories and analysis methods. According to the Convention, any member state may request an inspection at the facility of another state that it deems suspicious "at any time, at any place" without seeking rights. However, no member state has officially triggered this mechanism to date due to fear of political reprisals and diplomatic costs.The authority granted to the OPCW in the past to report whether chemical weapons were used in attacks was transformed into the power to "identify those responsible behind" the attack with the extension of the authority in June 2018. This situation has increased the Decriminalization and polarization of the organization among the great powers. In addition, the technical complexity of the industrial declarations submitted by the member states makes it difficult to analyze the data completely and

accurately. The monitoring of more than 5,000 industrial facilities imposes a serious data management burden.

As reports of continuing uses of chemical weapons in Syria (Sarin as well as improvised devices using chlorine) emerged in early 2014, the OPCW needed to respond to these reports to protect the norm against chemical weapons use yet no State Party invoked the formal fact-finding mechanisms of the CWC. In this situation, the Director-General, using the authority vested into his office by the CWC, and subsequently endorsed by the Executive Council, negotiated with Syria the modalities for the OPCW deploying a Fact-finding Mission (FFM) to investigate these reports. At the same time, the Director General also set up a Declaration Assessment Team (DAT) to clarify inconsistencies and gaps in the Syrian CW declaration Both mechanisms are still operational at the time of writing.

The mandate of the FFM was to investigate reports of alleged uses of chemical weapons in Syria by collecting factual evidence about these incidents; it did not have a mandate to investigate who was responsible for these incidents. As the FFM began confirming that chemical weapons had indeed been used in Syria on a number of occasions, with claims and counterclaims appearing about the perpetrators, the UN Security Council agreed to set up a Joint Investigative Mechanism (JIM) of the United Nations and the OPCW to gather factual evidence to attribute responsibility for chemical weapons uses confirmed by the FFM. The mechanism worked between 2015 and 2016, submitting seven reports and identifying the Islamic State and Syrian armed forces as responsible for specific incidents. The JIM's continuation was blocked by a veto by the Russian Federation, which disagreed with the findings attributing certain cases of chemical weapons uses to the Syrian armed forces. This left a gap in the international fact-finding system to investigate responsibility for such acts, and the OPCW took a decision in June 2018 that addressed these and other threats of chemical weapons use. This decision requested the Director-General to establish a dedicated investigative mechanism known today as the Investigation and Identification Team (IIT) to collect and analyze factual evidence to allow, if possible, the attribution of responsibility for chemical weapons uses in Syria. The IIT has submitted four reports since its inception in 2019. After having provided evidence to conclude on reasonable grounds that the Syrian armed forces had used chemical weapons in March 2017 Ltamenah and April 2018 in Douma, the IIT submitted its fourth report in February 2024. Therein, it identified the Islamic State in Iraq and the Levant (ISIL) as the perpetrator of a sulfur mustard attack in Morea, Aleppo Province in Syria in September 2015.

4.4. Regulatory Gaps for Emerging Chemicals

Regulatory gaps are the possible consequences of the international Legal framework prohibiting the operation, production, acquisition, storage and prohibition of chemical weapons are their shortcomings or inadequate regulations of new technologies.

According to the Convention, States Parties are obliged to appoint or establish a national point of contact responsible for the implementation of the Chemical Weapons Convention and a National Authority to communicate with other States Parties. However, this does not mean that the appointed National Authority is the sole enforcer of Chemical Weapons Convention obligations at the national level. On the contrary, it has a key role in the national implementation process, as it is expected to coordinate the efforts of other local stakeholders.

The Convention does not contain any provisions on how the National Authority will be appointed or established, nor does it provide guidance on the structure of the National Authority and stakeholder coordination mechanisms. States Parties are free to decide on these issues in accordance with their specific national context and thematic priorities for the implementation of the Chemical Weapons Convention. In order to be effective, National Authorities must be equipped with appropriate financial and human resources, as well as knowledge, in order to perform the function of national coordination for the implementation of the Chemical Weapons Convention.
Rapid advances in AI across science, industry, and government are creating both new opportunities and new challenges for the implementation of the Chemical Weapons Convention. When used responsibly, artificial intelligence can strengthen the organization's ability to predict emerging chemical threats, analyze complex scientific information, and prepare its staff for tasks. At the same time, the speed and accessibility of these tools means that some technologies that speed up legitimate research can also reduce the expertise and time required to design harmful chemicals that can be turned into weapons.
The implementation of the Chemical Weapons Convention is not the same in every State Party. While the Convention provides for some specific implementation measures common to all States Parties, it also allows each State Party to determine what is necessary to fulfill certain obligations set out in the Convention, depending on the national context of the State. National implementation measures that have already been put into force should be taken into account. As national contexts may change over time, States Parties should also regularly analyze whether existing implementation measures are adequate. Depending on the national and regional context, the results of the deficiency analysis and the available resources, each State Party may prioritize different objectives and tasks for the implementation of the Chemical Weapons Convention for a certain period of time. When prioritizing, States Parties may take into account social, political, environmental and macroeconomic factors affecting the implementation of the Convention at the national level, as well as relevant factors arising from the regional context. Imbalances in priority and national implementation may cause difficulties in tracking developing chemicals and therefore regulatory gaps related to them.
Traditionally, chemical weapons are associated with missiles, artillery shells or aircraft bombs. However, the use of commercially easily accessible drones and agro-spraying platforms for the purpose of modifying and spreading chemicals may fall outside the current limitation and early warning definitions of the OPCW and may create regulatory gaps.
Emerging technologies are reshaping the field of chemical safety, and unmanned aerial vehicles (UAV) technologies, commonly referred to as drones, are one of the most prominent examples of this. Drones are widely used in many security fields, including border

surveillance, critical infrastructure monitoring, disaster response and law enforcement operations, but they are also used in other areas of life, such as agriculture, industry, logistics and tourism. As these systems become cheaper, more capable and more widespread, they pose new challenges in preventing the misuse of toxic chemicals.

5. Supply Chain Security and Chemical Industry Oversight

5.1. Monitoring Dual-Use Precursors and Pre-Precursors

Any chemical that has legitimate peaceful uses but which may also be used to make chemical weapons is a dual-use chemical.Thiodiglycol, for example, is both an ingredient in pen ink, as well as a precursor to mustard agents. Equipment in certain chemical production facilities can even be considered dual-use in the sense that it may be converted to produce chemical weapons or their precursors.
“Precursor” means any chemical reactant which takes part at any stage in the production by whatever method of a toxic chemical. This includes any key component of a binary or multicomponent chemical system.
Pre-precursor substances are chemical inputs at an earlier stage that can be used in the production of precursor substances. Their inspection aims to assess the earlier stages of the supply chain that may be linked to the production of chemical weapons.
The OPCW both in legitimate civilian industry (pharmaceuticals, agriculture, plastics, etc.) conducts monitoring of dual-use substances that are legally used and that pose a risk of being used in the production of chemical weapons with strict control mechanisms. Within the scope of the Chemical Weapons Convention (CWC), this inspection is carried out through 3 basic lists, in which substances are divided according to the degree of risk.

Schedule 1 - High Risk are critical precursor chemicals that are used directly as chemical weapons (such as Sarin, VX, mustard gas) or are involved in the final stage of the production of these gases. Commercial and industrial uses are almost non-existent. Its production is subject to extremely limited quotas for research or medical purposes.

Schedule 2 - Dual-Use Precursors are substances that are important reactants (precursors) in the production of chemical weapons, but also have a limited amount of commercial/civilian industrial use. They are substances that are important reactants (precursors) in the production of chemical weapons, but also have a limited amount of commercial/civilian industrial use.

Substances in this group and their close derivatives (some phosphorus compounds that can be considered pre-precursors) are subject to strict monitoring.

Schedule 3 - Common Dual-Use Substances are chemicals that are produced by tons in the commercial field (plastic, paint, textile sector) but have been used as chemical weapons in the past or serve as a pre-precursor (basic building block) in the production of Schedule 1-2 substances.

5.2. Know Your Customer (KYC) Protocols

Indicative Guidelines on Know Your Customer in the Chemical Supply Chain (KYC) have been published to provide guidance to stakeholders throughout the chemical supply chain on evaluating who they are doing business with and to help ensure that dual-use or toxic chemicals are not sold for illegal activities.

Experts and industry stakeholders came together in Nairobi, Kenya, for a workshop entitled Know Your Customer (KYC) guidelines in the chemical industry.Dec. The event, organized within the framework of the Chemical Safety and Security Tools Development Program initiated by the Organization for the Prohibition of Chemical Weapons (OPCW), focused on developing new guidelines to help prevent the illegal use of dangerous chemicals, especially their misuse for terrorism or other illegal activities.
The concept of KYC (Know Your Customer), which is widely used in the banking and financial sector, is also applied to the chemical sector in order to help manufacturers and distributors verify the legitimacy of their buyers. This is especially critical for dual-use chemicals, which can be traded legally but can also be used for illegal activities, including terrorist attacks.
When these Customer Recognition (KYC) guidelines are completed, they will help chemical manufacturers, distributors and regulatory agencies, especially in resource-limited countries, to prevent unauthorized sales of hazardous chemicals and reduce risks. By sharing best practices on due diligence in chemical sales, it enhances global security, fights chemical terrorism and supports efforts to prevent the proliferation of nuclear weapons.

5.3. Supply Chain Vulnerabilities in Pharmaceutical Manufacturing

Supply chain vulnerabilities in pharmaceutical production, control of dual-purpose (dual-use) chemicals, prevention of mass weapons proliferation and global chemical security/vulnerabilities are discussed from the perspective of the Example of the Prohibition

of Chemical Weapons (OPCW). Pharmaceutical supply chains, which are critical for civilian public health under normal conditions, are included in the OPCW's inspection and monitoring radar due to the raw materials and production technologies they contain.
It is concentrated in certain geographical centers such as China and India. This opaque and complex global distribution network increases the risk that precursor chemicals ordered for legal drug production fall into the hands of malicious actors (get out of the legal chain).
While multipurpose plants are designed for the production of drug molecules, they can be made suitable for the rapid production of toxic chemical agents for various reasons. The OPCW keeps track of the white powers and on-site inspection times of such facilities.
Inspection deficiencies in the warranty chain may pave the way for the dimensions of these advanced equipment for illegal laboratories or construction applications.
Pharmaceutical supply chains are dependent on end-to-end digital logistics networks and formulation databases, from raw material tracking to distribution. Cyber attacks on production execution systems and industrial control systems can lead to the theft of critical chemical formulas or sabotage by changing production parameters. The OPCW considers the protection of digital assets (cyber-chemical security) as a critical vulnerability in chemical security legislation.
Due to the blockage of logistics lines, pharmaceutical companies may have to turn to alternative chemical suppliers that are substandard or whose reliability has not been verified. These rushed procurement processes lead to the relaxation of chemical security and quality control protocols, leading to the risk of unregulated chemicals leaking into the system.

6. International Rules and Past Actions

6.1. Key Chemical Weapons Convention (CWC) Provisions

The Chemical Weapons Convention entered into force on 25 April 1997 which is governing by OPCW. According to this agreement; Developing, using, producing, acquiring, stockpiling or storing chemical weapons by other means, or transferring chemical weapons directly or indirectly to anyone, engaging in any kind of military preparation for using chemical weapons is contrary to the agreement.
It is contrary to this Agreement to assist, encourage or direct in any way any activity prohibited for a State Party under this Agreement.
Each State Party undertakes, in accordance with the provisions of this Convention, to destroy chemical weapons that it possesses or possesses, or that are located anywhere under its authority or control.
In accordance with the provisions of the Convention, it undertakes to destroy all chemical weapons abandoned on the territory of another State Party. in accordance with the provisions

of this Agreement, it undertakes to destroy chemical weapons production facilities that it owns or maintains, or located at any location under its authority or control.
It applies to all chemical weapons owned or possessed by a State Party in accordance with the procedure for the destruction of chemical weapons, or located in any place under its jurisdiction or control. All locations where chemical weapons are stored or destroyed shall be subject to systematic verification through on-site inspection and on-site instrument monitoring. Each State Party shall immediately after the submission of the declaration grant access to chemical weapons for the purpose of systematically verifying the declaration through on-site inspection. From now on, each State Party shall not remove any of these chemical weapons except to transport them to a chemical weapons disposal facility. It will provide access to the chemical weapons in question for on-site systematic verification purposes.Each State Party shall provide access to chemical weapons destruction facilities and storage sites owned or maintained or located at any place under its authority or control for the purpose of systematic verification through on-site inspection and monitoring with on-site instruments. Each State Party shall destroy all chemical weapons in accordance with the agreed destruction rate and sequence.

6.2. The 2021 OPCW Decision on Aerosolized CNS Chemicals

The decision considered by the OPCW in 2021 is the use of aerosolized chemicals that act on the central nervous system (CNS) by law enforcement agencies. The Decision provides more clarity on the Conference's understanding under the CWC on the aerosolised use of Central Nervous System (CNS)-acting chemicals for law enforcement purposes, drawing on the extensive work of the OPCW's Scientific Advisory Board (SAB). The SAB recognised that chemicals that selectively modify CNS functions, such as the opioid fentanyl and its analogues, which are considered to be safe when used under controlled medical conditions, can have a very low safety margin when delivered as an aerosol. The SAB has noted that CNS-acting chemicals differ from Riot Control Agents (RCAs) as they act primarily on the central nervous system and their effects are not usually confined to sensory irritation of a temporary nature. The Decision only addresses the aerosolised use of CNS-acting chemicals in conjunction with law enforcement purposes and does not address the use of CNS-acting chemicals for other purposes not prohibited under the Convention.

6.3. Connections to the Biological Weapons Convention (BWC)

One of the first comprehensive regulations aimed at limiting biological weapons under international law was the I. The Geneva Protocol of 1925 was prepared following the widespread use of chemical weapons during World War I. This Protocol prohibited the use of asphyxiating and poisonous gases, as well as bacteriological methods of warfare, but did not contain provisions on the development, production and stockpiling of biological weapons. Marches April 10, 1972 The Biological Weapons Convention, prepared as a result of negotiations conducted between 1969 and 1972 to remedy this deficiency, was opened for signature on Dec 10, 1972 and entered into force on March 26, 1975 and formally known as "The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction". By prohibiting not only the use of biological and toxin weapons, but also their development, production, acquisition, stockpiling and storage, the Convention has marked an important milestone in the international disarmament regime. The Biological Weapons Convention (BWC) is a cornerstone of the multilateral disarmament regime intended to rid the world of biological and toxin weapons. The Convention effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons.The BWC has established a strong norm against biological weapons. The Convention has reached almost universal adherence, with 183 States Parties and four signatory States.Considered a descendant of the 1925 Geneva Protocol, which banned the use of chemical and biological weapons, the BWC was the first multilateral treaty to outlaw an entire category of weapons of mass destruction. The main provisions BWC are as follows;

Article 1: Never under any circumstances to develop, produce,stockpile, acquire or retain biological weapons.

Article 2: To destroy or divert to peaceful purposes biological agents, toxins, weapons, equipment and means of delivery prior to joining.

Not to transfer, or in any way assist, encourage or induce anyone else to acquire or retain biological weapons.

To take any national measures necessary to implement. the provisions of the BWC domestically.

To consult bilaterally and multilaterally and cooperate in solving any problems with the implementation of the BWC.

To request the UN Security Council to investigate alleged breaches of the BWC and to comply with its subsequent decisions.

To assist States which have been exposed to a danger as a result of a violation of the BWC.

To facilitate the fullest possible exchange of equipment,materials and information for peaceful purposes.

7. Questions to Be Addressed

1) What measures can the OPCW take to prevent the misuse of pharmaceutical-based agents while allowing their use for medical purposes?
2) How can chemical companies improve their customer checks to prevent the illegal sale of dangerous chemicals?
3) How can the OPCW adapt its regulatory framework to address emerging chemical threats associated with artificial intelligence and other rapidly developing technologies?
4) How can the OPCW and its Member States develop a coordinated international strategy to regulate the potential misuse of commercially available drones and other emerging technologies for the dispersal of toxic chemicals?
5) What improvements can be made to international information-sharing systems and laboratory capabilities to facilitate the identification of newly emerging chemical agents and strengthen early-warning mechanisms?

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