



ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

The 17th Asian Chemical Congress

Keynote Address by Ambassador Ahmet Üzümcü, OPCW Director-General

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REMARKS AS DELIVERED

Professor John Webb,
Distinguished participants,
Ladies and gentlemen,

It gives me great pleasure to address you today at the 17th Asian Chemical Congress. I am indeed grateful to the Federation of Asian Chemical Societies (FACS) and Professor David Winkler for this opportunity to speak to you about our work.

I also take this as an opportune moment to solicit your support in our endeavour to strengthen the moral authority of the global ban on chemical weapons and for us to work together to contribute to the promotion of peace. In your vocation, this is best realised through ensuring that chemistry remains dedicated for the betterment of mankind.

This is a landmark year for the Organisation for the Prohibition of Chemical Weapons (OPCW) as we mark the 20th anniversary of the entry into force of the Chemical Weapons Convention and the founding of the Organisation. I am very pleased to be here in Australia to mark another important anniversary, as the Royal Australian Chemical Institute (RACI) celebrates its centenary year. These are important milestones. They provide an occasion to reflect on our progress as a world civilization in which the science of chemistry has been a major catalyst.

Every science holds the potential for great progress, but also great destruction. One needs only reflect on the brutality unleashed by chemical weapons to confront this difficult truth. When the scientific revolution introduced into the military arena products and weapons that contravened generally accepted rules of warfare, a search commenced for a durable solution to the problem of chemical weapons. But every legal remedy either fell short or receded into the background while chemistry continued to fuel new and increasingly lethal products.

Chemical weapons were used on a massive scale during the First World War. In all 1.3 million casualties resulted with nearly 100,000 dead. Never before had the world seen carnage of this nature and on this scale.

In 1925 the Geneva Protocol was adopted with the hope of that it will bring an end to chemical warfare. It did in fact ban the use of chemical and biological weapons. But it did not prohibit their

production, development or stockpiling. This proved to be a major loophole. Several countries continued to amass huge quantities of chemical weapons.

They have been used most recently in the ongoing civil war in Syria. And before that by the Saddam regime in its war against Iran and against its own people in Halabja in 1988. In fact, there have been too many instances of use of chemical weapons during the last century.

At its core, the issue is one of peace and security where nations represented by their governments bear the responsibility for concerted action. At the same time, it is also an issue of a conflicted relationship between science and ethics. And this can only be dealt with by people like you. I will address our efforts at engagement, education and outreach later in my remarks.

As regards the legal framework for achieving the long sought goal of a comprehensive prohibition on chemical weapons, the conclusion of the CWC and its entry into force in 1997 marked a watershed. The Convention is the first multilateral treaty that bans an entire class of weapons of mass destruction. It establishes rights and obligations of far-reaching scope. The Convention is comprehensive and non-discriminatory. It prohibits the development, production, stockpiling, transfer, retention and use of chemical weapons by States Parties, under conditions of strict international verification. The Convention makes no exceptions in prohibiting the possession of chemical weapons. All States Parties have equal rights and obligations, and those who possess chemical weapons must destroy their stockpiles. States Parties are also required to ensure that, within their jurisdiction, chemistry is only used for peaceful purposes.

The CWC constitutes nothing less than a permanent defence against chemical warfare, today, and for generations to come. It has become firmly established as an essential component of the international legal and security system.

Today, our civilization is advancing at a pace unprecedented in human history. Emerging technologies, divergent business models, and an increasingly connected world are all changing the shape of the global marketplace, and the way we live. In a time that is so singularly forward-looking, it seems time is scarce for reflection. But historical lessons and moral imperatives must not be forgotten. They constitute the foundations for an equitable and humane global order.

The Convention is part of a body of international rules meant to save humanity from the most dangerous and inhumane weapons created by man. It is a complex treaty. But at its heart lies a simple and compelling objective; to ensure that no human being will ever be subjected to the cruelty of chemical weapons. Similarly, the OPCW, which is responsible for implementing this treaty, has a mission that is captured clearly and simply in its organisational motto: ‘Working together for a world free of chemical weapons’.

The founders of the Convention provided its States Parties with a four-pillared foundation. First of all, is the goal of destruction of all chemical weapons stockpiles under international verification. Second, is to guard against the re-emergence of chemical weapons. To this end, the OPCW operates a comprehensive global industry inspection programme. Third, States Parties agree to provide each other with assistance and protection against chemical weapons. The fourth and final pillar is the promotion of peaceful uses of chemistry through international cooperation.

Over the last twenty years, progress has been made across the board. There are currently 192 States that have accepted the total ban on chemical weapons codified in the Convention. With regard to destruction, over 95% of 72 000 tons of declared chemical warfare agents have been destroyed under

verification by the OPCW. This is an historic achievement and a contribution recognised by the Nobel Committee, which awarded the Nobel Peace Prize to the OPCW in 2013. The two largest possessor States, namely Russia and the United States, are both progressing steadily towards the end goal of complete destruction of their stockpiles. This is expected to be completed by the year 2023. Equally important to chemical disarmament is the complementary objective of ensuring the non-proliferation of chemical weapons. To this end, the OPCW has established a verification regime with a global reach, conducting round-the-year inspections of industrial facilities which produce chemicals of relevance to the Convention. To date, nearly 3500 inspections have been conducted in the chemical industry to ensure that all products and activities are solely for peaceful purposes.

Together with disarmament and non-proliferation, international cooperation represents a crucial component of our work. Assistance and protection is an area of growing interest, especially in light of the threat of non-state actors using chemical weapons. Under Article X of the Convention, State Parties can request the OPCW or other States to provide assistance and protection against the use, or threat of use, of chemical weapons. This alarming and evolving threat of terrorism has led the OPCW to increase its capacity to deliver emergency assistance to States Parties.

The OPCW offers, in this area, capacity building and training opportunities for relevant authorities such as civil defence organisations and first responders. Assistance may include the provision of defensive equipment, such as chemical agent detectors, protective clothing, or decontamination equipment. It may also take the form of medical assistance and equipment, including antidotes, or offering of advice on defensive measures. In case of a chemical weapons attack States Parties can also call upon the OPCW's newly established Rapid Response Assistance Mission (RRAM). The RRAM can be deployed at short notice, upon request, to States Parties under chemical terrorist attack.

Dealing with the threat of international terrorism, creates other demands as well. The international legal framework offers several avenues for greater cooperation and coordination between international organisations in the context of counter-terrorism. The OPCW's open-ended working group on terrorism regularly reviews such mechanisms and opportunities for enhanced interaction and coordination. At the same time, our Member States have stressed that the Chemical Weapons Convention already has a sound legal framework.

Effective enforcement of this framework would serve to criminalise the development, production, stockpiling and transfer of chemical weapons or the use of toxic chemicals as weapons by all natural or legal persons under the jurisdiction of individual States Parties. In other words, the full and effective implementation of the Convention under the domestic laws of all 192 of our Member States and greater controls over substances of concern is the best prescription to prevent acts of chemical terrorism.

A legal framework through legislation and the means to enforce it create the domestic capacity to monitor, to report, and to guide activities involving chemicals along peaceful and productive lines. We assist our States Parties in this important area through training programmes, information-sharing and capacity-building activities. We encourage them to share best practices in legal processes and enforcement.

Similarly, Article XI of the Convention is designed to promote international cooperation in peaceful uses of chemistry. In this context, a major focus of our programmes relates to building capacities in our States Parties. These include courses to develop analytical skills, support for research projects and placement of interns at various institutions around the world. One of our well known training programmes, namely, the Associate Programme attracts talented chemists and chemical engineers and is designed to enhance their skills through both academic exposure as well as placements with

chemical industry.

Other international cooperation programmes range from sponsoring chemical research to developing and improving laboratory capacity, to specialised internships and training, and safe chemical management. As a result of these programmes, thousands of people from across the world are contributing to the implementation of the Convention, to the betterment of their societies.

Amid our progress over the past twenty years, the OPCW has been tested. Our work in Syria, is one such challenge. When Syria joined the Convention in 2013, the Organisation was mandated to eliminate the country's chemical weapons programme with the logistic and security support by the United Nations. This involved both the removal and destruction of Syria's chemical weapons, and dismantling Syria's ability to produce chemical weapons in the future. This was a mission without parallel, requiring the support of dozens of States Parties, including Australia, who provided technical, financial and political support. It relied on the commitment and dedication of OPCW staff, who like many of you, are experts and scientists, not military personnel familiar with working in an active warzone. 1300 metric tonnes of chemical weapons material was removed from Syria and destroyed outside its territory.

This was an impressive achievement. Unfortunately it did not mark the end of our work in Syria. In the face of persistent and credible allegations that chlorine was being used in Syria as a chemical weapon, I established a Fact-Finding Mission (FFM) in April 2014. Since that time, the Fact-Finding Mission has examined a significant number of incidents and substantiated several cases of the use of toxic chemicals as weapons and an incident involving sulfur mustard.

The FFM operates under the most difficult circumstances and uses procedures that are suited to those conditions without compromising on the integrity of evidence collection in the form of information, witness testimonies and forensic data. It conducts interviews of carefully selected individuals who may be affected or otherwise witnesses, treating physicians or first responders. It collects all pertinent information, and where applicable secures biomedical and environmental samples. The samples gathered in the course of these investigations are transported to the OPCW Laboratory, and then further distributed to our designated labs for sampling and analysis. Since 2013, these laboratories have collectively conducted over 1000 analyses.

In early April, credible reports emerged of another brutal attack in Khan Shaykhun area of Idlib province. The FFM has confirmed this as an attack with Sarin, a nerve agent and Category I chemical weapon. With the norms of the Convention accepted globally, we would all have hoped and wished that the ugly legacy of use of chemical weapons had been finally buried; that a dark chapter of history had been forever closed. We were and remain committed as stated in the preamble of the Convention 'to exclude completely the possibility of the use of chemical weapons.' This is behaviour that flies in the face of every civilized norm and cannot be tolerated. The Organisation not only has the mandate but an absolute responsibility to do everything within its capacity to confront this situation.

I strongly condemned the use of chemical weapons by anyone under any circumstances. I also urged that the perpetrators of this horrific attack be held accountable for their crimes. In this context, the work of the Joint Investigative Mechanism which has the mandate to identify the perpetrators assumes high importance.

Not too long ago, the strong support for the global ban on chemical weapons - evident in the rapid growth in the membership of the OPCW - had seemed to preclude any further instances of aggression involving chemical weapons. We know from recent developments that there is, however, no room for complacency. Chemical weapons have continued to be used. It is difficult to comprehend the perverse mentality that shows such blatant disregard for human life. But that tragically remains the reality; a reality that serves a cold reminder. Human progress for all its achievements is not in itself a

guarantor of peace.

We have to continually and consciously work for peace. And this cannot be accomplished without concerted efforts, without rising above narrow national interests and without continually strengthening the global institutions that are indispensable to this endeavour.

Despite the existence of one of the most successful disarmament treaties ever, the violation of its fundamental prohibitions is a matter of serious concern. Getting the world to agree on a norm requires hard work; to make that norm truly universal and enduring it is even more challenging.

Going forward, the Convention must maintain its strength as a permanent prohibition against chemical weapons. To achieve this, we must work together as an international community of governments, educators, scientists and citizens to preserve the global norm against chemical weapons. It is this shared sense of duty that drives our continuing endeavours to expose any use of chemical weapons anywhere, and to ensure that the Convention remains a strong and effective ban.

In the near future, the last of the world's declared chemical weapons will be destroyed. Although this is a remarkable achievement which will contribute greatly to peace and security, it is very clear that the work of the OPCW is far from complete. Rather, this milestone will mark a new and challenging era for the Organisation.

As we approach this goal, our efforts are shifting focus to preventing the re-emergence of chemical weapons, which will remain our long term objective. In an age of continuing advances in science and technology as well as new security challenges, this will be a complex task. Our operating landscape has changed significantly since we began our endeavour, and we must adapt to meet this new challenge.

Science and technology will continue to play an especially important role in guarding against the re-emergence of chemical weapons in the post-destruction phase. As a multilateral organisation, the OPCW's membership ranges from the leading chemical producers in the world, to industry newcomers, to those without industry at all. The Organisation's wide range of training and capacity building programmes, including, for instance, the training of young chemists in industrial best practices, must keep pace with changing needs.

Rapid growth is occurring here in the Asia-Pacific region and this trend will continue. Since the inception of the Convention, over 50% of the chemical industry has become concentrated in this region. In addition to growth in the industry, advances in chemistry, chemical technology and engineering are rapidly transforming the industry which will impact the Convention's verification regime.

While these advances drive progress, they also introduce the possibility of misuse. The OPCW must therefore be able to detect new chemicals and establish if they are relevant to the Convention. Similarly, we need to acquire a deeper understanding of the growing interaction between chemistry and biology which also gives rise to the ability to produce potentially dangerous chemicals through new techniques and methods. We cannot, of course, hope to control every new chemical – nor should we try to. Accordingly, it is imperative that our work strikes a balance between prevention and promotion in relation to applications that have malevolent and beneficial uses.

The OPCW Scientific Advisory Board (SAB), comprising eminent experts from 25 different States Parties, helps to keep us abreast of these developments. The SAB is a statutory body of the OPCW mandated to assess relevant scientific and technological developments and advise the OPCW of their

potential impacts. The SAB's terms of reference also include: assessing the scientific and technological merit of a present or proposed methodology for use in verification; and, assessing and reporting on emerging technologies and new equipment which could be used in verification activities. The 25 members of SAB are leading scientists from research institutions, universities, chemical industry companies, defence and military organisations with expertise in a discipline relevant to the implementation of the Chemical Weapons Convention.

The SAB provides scientific input on issues related to the Convention, which can then be translated into policy by States Parties. The Board's work has been invaluable in offering advice on monitoring progress on science, evaluating its impact for the Convention, and how the OPCW can prepare itself for the future. A temporary working group on investigative science and technology was recently formed to specially examine the capabilities necessary to remain fit-for-purpose to prevent the re-emergence of chemical weapons. Dr Veronica Borrett, a distinguished Australian expert serving on the Board, is to lead the Group.

Science and chemistry in particular, is organically linked to our treaty objectives of permanently eliminating the threat of chemical weapons. At this time of rapid change and advances, we are seeking to further strengthen cooperative relations with the global chemical industry, and scientific and academic institutions. Over the years, the scientific community has remained an essential and reliable partner for the OPCW. It is my hope that through this cooperation, we will be able to better understand the changes, trends and advances, and to bring them to the attention of our States Parties.

Critical to non-proliferation is the OPCW's ability to detect the presence of chemical warfare agents through effective sample collection and analytical methods. The cornerstone of this capability is the OPCW Laboratory and our network of designated labs. OPCW-Designated Laboratories are a lynchpin of the Organisation's verification regime and its capacity to investigate possible violations of the Convention.

These laboratories perform off-site analysis of chemical samples collected by OPCW inspectors. This practice applies to our routine verification activities in which case a site could be a chemical production facility, a storage site or another relevant installation. On the other hand, in such instances of investigations of alleged use, sampling and analysis is used in order to provide the forensic evidence for the case being investigated.

The laboratories offer the necessary assurance to our States Parties that the chemical analyses needed to make determinations, or to clarify issues competently and with unambiguous results. As far back as 1996, the OPCW Laboratory began conducting Official Proficiency Tests to assure that designated laboratories meet the highest standards of chemical sampling and analysis capabilities. Twenty three laboratories in 17 States Parties currently meet these rigorous standards and are now part of the network of OPCW-Designated Laboratories.

As we shift focus away from destroying chemical weapons to preventing their re-emergence, augmenting the capabilities of the OPCW's own Laboratory and our network will remain paramount. The OPCW Laboratory must be positioned to fully address the demands of the future not just in terms of its investigative function but also as a source contributing to capacity development and keeping fully abreast with the science and the technology for protective purposes. We will work with States Parties to ensure that the Laboratory plays a much bigger part in our efforts to make the Organisation a repository of knowledge and expertise in the context of chemical weapons. We are launching an initiative to upgrade the laboratory to a Center for Chemistry and Technology in order to enhance its scientific and technical capabilities and to serve as a global centre of excellence. A fundamental goal

is to ensure that the Center not only stays fully informed about the latest developments in science and technology but is also able to make a contribution in improving diagnostic methods and protection capabilities.

Progress in science offers opportunities for improving verification and protection measures but it also creates the imperative of promoting ethical practices through awareness raising and education. To this end, the OPCW has established an Advisory Board on Education and Outreach. This body guides the development of new activities and teaching tools to increase awareness of the dangers posed by the possible misuse of dual-use technology. They also help us to disseminate our message to universities and schools in order to nurture a culture of responsible science. The goal is to promote professional ethics that support the aims of the CWC.

Asia will have a prominent role to play in this respect for a variety of reasons. Increasingly, scientists and engineers in the region are at the cutting edge of technological developments and industrial applications. The region is already a major production base for chemical materials and technologies. Furthermore, the regions' role as a hub for global trade is set to further expand in the future.

To promote ethics in Science, The Hague Ethical Guidelines were developed in 2015 to guide the responsible practice of chemistry under the norms of the Convention. The Guidelines are the end result of a process facilitated by the OPCW involving more than 30 scientists and chemistry professionals from over 20 countries. In the course of their development, some 140 codes of conduct and codes of ethics for chemistry relevant organisations from all regions of the world were collected. This represented over a thousand pages of text. Codes drafted by chemical industry showed differences from those of chemical societies and National Academies of Science which in turn were distinguishable from the chemical societies. But within a group, the content of the codes was very similar. This underscores the need for more effective engagement and communication between stakeholders. Aligning these codes to the object and purpose of the CWC offers an effective avenue for harmonising their content. On our part, we will continue to offer a forum for such an endeavour.

The purpose of The Hague Ethical Guidelines is not to be a code in itself, but to be a set of elements to allow others to develop a final version they would want to adopt. In fact, The Hague Ethical Guidelines have already served as the basis for codes produced by others, most notably the Global Chemists Code of Ethics, produced at a workshop in Malaysia by a group of international chemists in 2016. In December 2015, the OPCW's Conference of the States Parties to the CWC acknowledged The Hague Ethical Guidelines as vital to advancing the understanding of responsible and ethical norms for scientific research and development. IUPAC has endorsed the guidelines and agreed to promote them. In the final analysis, what is important is for all scientists to be aware of their responsibilities given the power that their special knowledge confers on them. We need only look to the past to see the terrible consequences when such power is abused. This is evident in the tragic history of chemical warfare that has for far too long brought untold suffering to people across the world.

The value of Organisations such as the FACS and the RACI cannot be overemphasized. Your members are the stewards of chemistry's powerful contribution to scientific advancement and economic growth. Chemistry is a critical ingredient in achieving sustainable development, and meeting the leading challenges of the 21st century. Yet its advancements must be rooted at all times in ethical practice, and your members are also the guardians of such proud professional ethics.

The aspiration to apply chemistry for the good of mankind and to further sustainable development is noble and achievable. During this conference, you will hear from leading experts about the many ways pioneering research and development is already fulfilling on this promise. However, progress rests on a necessary foundation of peace and security. Maintaining its integrity relies not just on governments, but on industry and civil society as well.

The OPCW, together with its partners and stakeholders, is working to secure this foundation, and ensure that all are able to realize the benefits of chemistry. Our technological world is delicately balanced. On the one hand we have the means to bring about universal prosperity. On the other, we also possess the tools that can cause great harm. We can never become complacent of this reality and must therefore continually strive for a better world.

In closing, I would like to reiterate that scientists provide the backbone of multilateral disarmament efforts. Through their work, we are made aware of emerging trends and threats. When breaches of the norm occur in ways unexpected, we seek to benefit from their insights. In short, their participation and contribution is indispensable to our endeavours to promote global peace and security through the implementation of the Convention. The OPCW truly values its relationships with scientists and their representative bodies.

I look forward to the outcomes of this congress, as they will indeed contribute towards pooling our energies, talents, and resources in promoting peaceful applications of chemistry for the benefit of humanity.

I thank you for your attention.
