



**ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS**

**Statement by the Director-General of the OPCW  
Ambassador Ahmet Üzümcü**

**American Chemical Society – National Meeting and Expo**

**New Orleans, the United States of America**

**17 March 2018**

---

*REMARKS AS DELIVERED*

Distinguished members of the ACS International Activities Committee,  
Ladies and Gentleman,

It is my great pleasure to address you here at this week's meeting of the American Chemical Society. The membership of the ACS includes some of the most elite scientific minds in the world. Your collective contribution to the advancement of chemical science, technology, and engineering are truly remarkable.

The OPCW last had the opportunity to address this prestigious scientific society in 2015 in Denver, when we were honoured to receive recognition from the ACS Board of Directors for contributing to the promotion of Peaceful Uses of Chemistry. This commendation recognises the shared aims of the ACS and the OPCW, which bend towards promoting chemistry for the betterment of humankind.

The ACS has been steadfast and vocal in its support for the Chemical Weapons Convention (CWC) and the OPCW. I wish to express my appreciation to the ACS for using its status as the world's largest scientific society to encourage international cooperation and champion the norms of the CWC.

There can be no doubt that scientific advancements have transformed the world, the way we live, and the quality of life we may expect. As a simple, but profound example, at the beginning of the 20th Century, the average life expectancy of an American citizen was just 48 years.

As a result of rapid science and technology-driven advances in sanitation, public health, and medicine, an American born today could expect to enjoy an additional three decades of life.

In the coming days, the modern advances in chemical science and technology that are shaping the future will be showcased and explored. We will hear how chemistry is being applied to the inter-related and critical goals of achieving water, food, and energy security. New scientific discoveries capture the imagination and hold the potential for human progress and prosperity. However, we are also sadly confronted with the darker side of science.

History has repeatedly shown that the transformative power of science can be twisted to do harm. This is particularly and tragically true in the case of chemistry. The use of chemicals as a weapon presents a lingering threat to life in a peaceful and civilised world. Chemical weapons strike fear into the hearts of everyone; as we have seen in the past few years in Syria, Iraq, Malaysia and more recently in the United Kingdom.

The CWC was developed in response to this universally held abhorrence against the use of chemical weapons. It represents the commitment of the international community to work together to completely eliminate an entire category of weapons of mass destruction. The OPCW was established to oversee its implementation and ensure its enforcement.

Ensuring that chemistry is only used for peaceful purposes and realising the potential of the advances discussed at this conference, requires the concerted effort of us all. This includes not only governments, but also academia, scientists, industry, civil society, and all those in the international community who believe that we, and the generations to come, deserve to live in a world free from chemical weapons.

In 1997, the Chemical Weapons Convention came into force, backing the moral imperative to stamp out chemical weapons with the legal weight of an international treaty and the power of a thorough verification regime. To date, 192 countries are States Parties to the Convention and 98% of the world's population lives under its protection.

Since its inception, the OPCW has been working tirelessly with our member countries to eliminate their stocks of chemical weapons. To date, over 96% of declared stockpiles have been destroyed. Last year, a major milestone was reached when the Russian Federation announced the completion of its demilitarisation process. The United States continues to make steady progress towards the destruction of its arsenal. Thus far, more than 90 percent of the US stockpiles have been destroyed and it is on track to completing this process by 2023.

To monitor progress towards the completion of destruction, as well as to ensure the Convention's core prohibitions, the CWC created one of the most extensive verification systems devised for a disarmament instrument. Since the Convention's entry into force, OPCW inspectors, in addition to their permanent presence in destruction facilities, have undertaken nearly 3,500 industrial inspections in over 80 countries. Importantly, we have established good practices in several areas relevant to preventing the re-emergence of chemical weapons. These include the monitoring of transfers, assistance and protection against chemical weapons, engaging the global public, capacity building, and promoting the peaceful uses of chemistry.

As we grow ever closer to our founding goal of eliminating the world's chemical weapons stockpiles, our work must now turn to safeguarding the gains we have made. This will mean shifting our focus to the complicated task of preventing the re-emergence of chemical weapons.

Simultaneously, we must continue to promote international cooperation in the peaceful applications of chemistry. Achieving these dual goals will require engagement, collaboration, and partnership-building with a range of stakeholders from across scientific communities, industrial sectors, and civil society. This is a formidable task; however, in its relatively short history, the OPCW has demonstrated its capacity to fulfil its primary objective of overseeing the implementation of the CWC, as well as its adaptability to new circumstances.

For the most part since its creation, the OPCW has conducted its important work quietly out of the international limelight. This changed in 2013 when the Organisation was awarded the Nobel Peace Prize. We were honoured to be recognized for our progress in eliminating the world's chemical weapons and our contribution to the goals of international peace and security. However, at the same time as the OPCW was receiving its award, it was also embarking on its most challenging mission. This mission would bring our work to the forefront of what has become an unfolding tragedy in Syria.

In 2013, following Syria's accession to the Chemical Weapons Convention, the OPCW began an unprecedented and perilous task of dismantling a chemical weapons programme in an active conflict zone. Despite daunting challenges, the OPCW succeeded in facilitating the removal and destruction of 1,300 metric tonnes of declared chemical warfare agent from Syria. Unfortunately, this achievement did not mark the end of our work in that country. In the face of persistent and credible allegations of chlorine being used as weapons in Syria, in April 2014 I established a Fact-Finding Mission (FFM) to assess these incidents. Today, the FFM, as we call it, continues to investigate ongoing credible allegations of the use of chemical weapons in Syria.

Over the past four years, it has confirmed the use of chlorine as a weapon and last year of sarin in attacks on the towns of Khan Shaykhun and Ltamenah. These brutal attacks are horrifying. Any violation of the global legal norm against chemical weapons is wholly unacceptable and those that do must be held accountable for their actions. This sentiment was shared by the international community and led to the Security Council forming the OPCW-UN Joint Investigative Mechanism, otherwise known as 'the JIM', to identify those who were responsible for these gross violations in Syria. The JIM has further investigated the allegations of the use of chemical weapons in Syria and submitted its reports to the Security Council in 2016 and 2017.

We are aware that the use of chlorine in many of the incidents investigated, and confirmed by the JIM is not only a concern to the OPCW and the CWC States Parties, but also to the scientific community. I wish to thank the ACS for co-organising a workshop last year on chlorine chemistry and use at OPCW Headquarters in The Hague. I am also grateful to the ACS for your joint letter of support with the American Chemistry Council and your offer of assistance. The vast reach and resources of the American chemical enterprise are welcomed as we endeavour to realise the aims of the Convention.

Fundamentally, the Convention is a science-based treaty. As such, scientific literacy is critical to its implementation. The OPCW Scientific Advisory Board, comprising eminent experts from 25 different States Parties, helps to keep us abreast of new developments in science and technology. The Board's work has been invaluable in offering advice on monitoring progress in science, evaluating its impact for the Convention, and recommending how the OPCW can prepare itself for the future.

Since its establishment in 1998, the SAB and its working groups have included experts from over 40 countries, informing the OPCW's work with scientific research, expertise, and different perspectives. In order to tap evolving scientific expertise from around the world, the SAB also invites leading scientists to provide briefings on relevant topics which inform their work. In 2015, the SAB was fortunate to hear about the ACS's activities from Dr Bradley Miller, Chief International Officer & Director of International Activities.

Chemistry is one of the most important fields of science, and its knowledge base is extensively drawn upon by other disciplines in the endeavour of scientific and technological development. This cross-disciplinary nature of science leads to innovation. How the results of these scientific advances are then applied is where science, industry and disarmament intersect.

Advances in chemical science, technology, and engineering are having a profound impact on the OPCW. Some of these changes may make our work easier. The growing use of green chemistry has the potential to reduce access to hazardous chemicals and materials, which could be used to do harm. Better tracking of chemical inventories will help to improve security in the chemical industry, which may prevent precursor chemicals being diverted into black markets where they may be purchased by terrorists.

The OPCW and its members are keenly aware of the danger of chemicals falling into the wrong hands. Unfortunately, the use of chemical weapons by non-state actors, such as terrorist groups or criminal enterprises, is not a distant shadow on the horizon, but rather a real and immediate threat. This threat introduces a new level of complexity to our work.

Keeping abreast of scientific and technological change and predicting the impact it may have on the implementation of an international treaty is a difficult task. The volume of new science and the rate at which it is being generated is staggering – each year more than 2.5 million scientific papers are published and nearly 1.6 million patent applications are filed. In the circumstances, preventing the re-emergence of chemical weapons will require seizing opportunities to develop technologies that raise an alarm when something chemically unusual, and potentially malevolent, is occurring. For example, technology could be applied to recognise chemical signatures that might be resulting from a clandestine laboratory where chemical agents are being produced.

Preventing re-emergence will also rely on reaching into the scientific community to present our work and to leverage your vigilance. To this end, in 2015 and 2017, scientists from the OPCW addressed ACS National Meetings, speaking on topics that included the intersection of science and chemical disarmament and the analytical chemistry of treaty implementation.

The diffuse and unpredictable danger posed by chemical terrorism makes it difficult to mount an effective defence against it. Violent and extremist non-state actors, do not respect international law. Nonetheless, full and effective implementation of the provisions of the CWC by all members has the power to constrain unauthorised access to hazardous chemicals.

Within the OPCW, we have established an Open-Ended Working Group on Terrorism and a Sub-Working Group on Non-State Actors. These groups are tasked with exploring the legal, prevention, and response aspects of chemical terrorist threat. Recognising that in the case of a chemical weapons attack, our States Parties may need support, the OPCW established a Rapid Response and Assistance Mission (RRAM). The RRAM as we refer to it, can be dispatched at short notice to assist a requesting State Party.

In June of this year, the OPCW will host a Conference on Countering Chemical Terrorism to raise awareness of the threat posed by non-state actors and discuss measures that the international community can consider. The conference will be open to government officials, international and regional organisations as well as scientists, academics and industry representatives with a special interest in this field.

Moving from eliminating the world's declared chemical weapons stockpiles to preventing their re-emergence represents a seismic shift for the OPCW. We do not underestimate the complexity of this task, as both science and technology evolve and new security challenges are presented. We will need to rely on our partners particularly the scientific community and industry to assist us in transitioning to meet this new challenge.

The chemical industry is an essential partner for the OPCW. In October last year, I attended a meeting of the Board of Directors of the International Council of Chemical Associations (ICCA) in Vienna, where I presented my views on industry cooperation. In fact, this is an area where the Organisation made great strides in recent years.

In 2015, the OPCW and the ICCA established a Joint Steering Committee and a Chemical Industry Coordination Group (CICG) to better manage engagement on matters of mutual interest. A key issue amongst these is industrial verification.

New methods and technologies developed by industry can be applied to improve our verification regime. Sampling and analysis have been crucial in our recent missions to determine the validity of allegations of use of chemical weapons. The OPCW Laboratory has played a critical role in this regard.

The Laboratory is a hub for an international network of laboratories and acts as a platform for science collaboration in support of the OPCW. To further enhance our analytical capabilities and to serve our goals of boosting capacity building in States Parties, I have launched a new initiative to upgrade the OPCW Laboratory into a Centre for Chemistry and Technology. A fundamental aim of this initiative is to ensure that the Centre not only stays fully in touch with the latest developments in science and technology, but is also able to make a contribution to improving diagnostic methods through research and protection capabilities.

While progress in science offers opportunities for improving verification and protection measures, it also creates the imperative of promoting ethical practices. To support this goal, in 2015 the OPCW provided a platform to develop and launch The Hague Ethical Guidelines.

We hosted two workshops involving a group of more than 30 scientists and chemistry professionals from over 20 countries, to discuss and draft key elements of responsible practice of chemistry under the norms of the Convention. An important lesson from this exercise was the necessity of fostering a sense of ownership among professionals for these ethical principles in order to gain their wider acceptance and legitimacy. We have seen aspirational codes from many organisations and scientific societies which shared similar concepts and content. As such, The Hague Guidelines are not prescriptive, but they rather provide a set of components that can be used to start a process, allowing others to build and take ownership of their own professional code.

The ACS has embraced this and used The Hague Guidelines as the basis for developing the Global Chemists Code of Ethics. Your fellow esteemed ACS member, Dr Kabrena Rodda, was a significant contributor to The Guidelines. Through this process, the ACS has put both the spirit and the purpose of the Hague Guidelines into action. Indeed, this is in line with the ACS Code which encourages the global chemistry enterprise to adopt internationally recognized practices for chemical safety and security, as well as to ensure compliance with arms control and non-proliferation commitments.

To further raise awareness, 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 risks posed by the possible misuse of scientific knowledge and technology.

The ABEO also helps us to disseminate our message to universities and schools in order to nurture a culture of responsibility for all stakeholders of the Chemical Weapons Convention, from both within and outside the sciences. The goal is to promote ethics that also support the aims of the CWC.

The value of organisations such as the ACS cannot be overemphasized. Your members are the stewards of chemistry's powerful contribution to scientific advancement and economic growth.

The aspiration to apply chemistry for the good of mankind and to further sustainable development is noble and achievable. This conference, will showcase pioneering research and development that is already fulfilling this promise.

For its part, the OPCW is working together with partners like the ACS to ensure that all are able to realize the benefits of chemistry, and not live in fear from it.

In closing, I would like to reiterate that science provides the backbone of multilateral disarmament efforts. Through scientists, we are made aware of emerging trends, potential new threats and opportunities. When breaches of the norm occur in ways unexpected, we seek to benefit from your insights. Your participation and contribution will only grow more important as we shift our focus from destroying chemical weapons to preventing their re-emergence.

By channelling our collective commitment and energy to promoting the peaceful uses of chemistry, we will achieve together a world free of chemical weapons.

Thank you for your attention.

\*\*\*\*\*