



Speech by the OPCW Director-General, at the Spiez Convergence Workshop on Scientific and Technological Developments with a Potential Impact on Arms Control Issues

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Ladies and gentlemen,

It is a pleasure to attend this fifth edition of the Convergence Workshop. I am honoured to be in the company of so many distinguished experts from a broad range of fields.

I wish to seize this opportunity to thank the Government of Switzerland for supporting this gathering and to acknowledge the role of our host, Spiez Laboratory. The OPCW has long enjoyed a close and constructive partnership with Spiez Laboratory. This workshop, which has been organised since 2014, is a continuation of discussions that began in the OPCW's Scientific Advisory Board (SAB) over 10 years ago.

Spiez Laboratory is a model for how science can directly contribute to arms control and international peace and security, through excellence in research and analysis. It has been well trusted for its high analytical proficiency, as an OPCW designated laboratory, and has been a prolific contributor to the OPCW Central Analytical Database, the Organisation's reference library of chemical data. In addition, Spiez Laboratory is a valuable supporter of our common efforts to develop the capabilities of other laboratories, by hosting training courses and workshops for building analytical skills.

Ladies and gentlemen,

Scientific collaboration of this kind is an integral part to the OPCW's success in its core mission to oversee the implementation of the Chemical Weapons Convention. Over the past twenty-five years since its entry into force, those efforts have produced tangible, lasting, and positive results for global security. 193 countries are States Parties to the Chemical Weapons Convention, which means that 98% of the world's population lives under its protection. More than 99% of all declared chemical weapons stockpiles have been verifiably destroyed. And with the United States set to complete its chemical demilitarisation process next year, the OPCW is on the verge of the elimination of all declared chemical arsenals. In a world beset by challenges and reversals in multilateral diplomacy and specifically in arms control, this will be a historic disarmament accomplishment and a victory for multilateralism.

It will also be a defining moment for the OPCW. Yet, this milestone occurs at a time when the global peace and security environment is facing serious threats and confrontations.

The OPCW is not isolated from these developments. The use of chemical weapons by both State and non-State actors over the past decade, demonstrates that preventing the re-emergence of chemical weapons is an agenda with an open-ended timeframe.

Today, there are fears and threats of the use of weapons of mass destruction, including chemical weapons, in Ukraine. The OPCW has been closely following this serious situation. I recall that all 193 States Parties to the Convention, including the Russian Federation and Ukraine, have solemnly and voluntarily committed, never under any circumstances, to develop, produce, acquire, stockpile, transfer or use chemical weapons.

The norm against the use of chemical weapons remains strong and the taboo is very solid and universal. Today, no State admits to having used chemical weapons, even if the use has been evident and proven by independent expert bodies at the OPCW and the United Nations. At the same time, the collective task to protect the commitment against chemical weapons is a challenging one. Because, without any doubt, they have been used and subsequently trust has been eroded.

As we assess the future of the OPCW, cooperation with the scientific community will remain instrumental to the Organisation's mission. Our partnership with Spiez Laboratory is indicative of the broad range of activities and areas in which the OPCW engages with various scientific entities.

This collaboration is most clearly manifested in the analytical capabilities that support our verification regime. In this endeavour, the designated laboratory network constitutes an indispensable tool to that regime and its effective operation. Over the past two and a half decades, it has grown substantially.

The network started in 1998 with seven laboratories, including Spiez Laboratory, located in seven States Parties. Today, this network has spread, and comprises 29 designated laboratories in 21 States Parties. All continents in the world except Africa, count a laboratory certified by the Organisation. The Secretariat and several designated laboratories are providing support to the African continent to ensure that it will also be represented in the network soon.

Achieving accreditation is a significant accomplishment for any laboratory. Spiez Laboratory has consistently maintained its top status in the network, which is a testament to its impressive level of professionalism and expertise.

Going forward, the designated laboratories will remain crucial for maintaining our ability to detect the presence of chemical warfare agents through sample collection and analysis. This network is essential to our capability to investigate possible violations of the Convention. Sustaining and bolstering it will safeguard the OPCW's ability to conduct non-routine missions, such as challenge inspections, investigations of alleged use, and technical assistance visits.

Our proficiency testing is rigorous, and it must continue to maintain the highest possible standards of chemical analysis among all accredited laboratories. This provides the necessary

assurances to our States Parties that the chemical analyses produce trustworthy, unambiguous, and unquestionable results.

The scope of our network has also been expanding. The OPCW's missions in the Syrian Arab Republic highlighted the need for an additional network of laboratories for the analysis of biomedical samples. In 2016, new biomedical proficiency testing was launched. In the past six years, 20 laboratories in 14 States Parties have received accreditation for such samples.

This network will increase in importance due to the new responsibilities of the Technical Secretariat of the Organisation, that require more and more modern tools to fulfil those responsibilities, as the Member States expect.

Ladies and gentlemen,

In the quarter century since the Convention entered into force, all areas of scientific endeavour have advanced rapidly, including the chemical sciences. Expansion of the global chemical industry, likewise, has been breath-taking in its pace and reach. It has brought countless human and material gains across the globe.

At the same time, however, these developments need to be monitored to ensure that toxic chemicals, equipment, and know-how are not misused, at any stage of the chemical life-cycle. The OPCW's robust verification regime is our primary tool in ensuring that chemicals are being produced and used exclusively for peaceful purposes. With 4,304 industry inspections to date, in more than 80 countries, it has proven to be a successful mechanism for promoting confidence in the Convention.

For verification to remain effective though, the OPCW and its Member States must stay fully abreast of relevant trends and discoveries across many scientific disciplines. The OPCW's Scientific Advisory Board continues to play its role in advising the Director-General on prominent developments in science and technology.

Likewise, OPCW Member States have taken action to ensure that chemistry remains a force for good. In 2018, a modern military grade chemical weapon, a nerve agent, from the so-called Novichok family, was used in Salisbury and Amesbury in the United Kingdom. Following these events, in November 2019 the schedules of chemicals listed in the Convention were amended by the Conference of the States Parties, adding several chemicals belonging to the family of Novichok nerve agents. This was the first time the schedules of the Annex on Chemicals was amended. In doing so, the States Parties proved that they are able to update the treaty to respond to new challenges and risks.

Yet, in August 2020 a Russian national, Mr. Alexei Navalny, was poisoned by a chemical nerve agent. This agent had similar structural characteristics to the Novichok family, which were added to the Annex on Chemicals. This event has unfortunately demonstrated that new methods of chemical warfare represent a persistent challenge that requires all our collective attention. When I refer to all our collective attention, I include the scientific perspective, as it is the only way to ensure that the international community remains equipped to face such challenges. In this endeavour, the role of the Scientific Advisory Board, the SAB, is central. Last year, for instance, drawing on the extensive work of the SAB, the Conference of the States Parties adopted a decision on some uses of central nervous system-acting chemicals. The decision is a

statement addressing the inconsistency of the aerosolised use of these chemicals with law enforcement purposes under the Convention. The need for States Parties to remain vigilant on this matter is incontestable.

Keeping track of every significant development, new piece of information, or breakthrough, is a monumental task. It is not one that the OPCW, nor anyone else, can accomplish alone. In this vein, I note that in 2021 the Chemical Abstract Service (CAS, American Chemical Society) registered its 250 millionth unique chemical. Every day, more than 15,000 new substances are listed in its database.

Technical and cross-cutting meetings, such as this workshop, are essential for identifying risks to chemical and biological disarmament and non-proliferation. In this respect, I am certain that your discussions on automated chemical synthesis, synthetic biology, deep learning, and drug delivery will enhance understanding of these subjects and their security implications.

They will also complement the deliberations that are ongoing in the OPCW. The SAB is currently examining the potential impacts on the Convention of artificial intelligence-assisted chemistry, central-nervous system acting chemicals, and other topics. This will undoubtedly dovetail with presentations here.

Such synergies enable us to gain deeper knowledge of these complex issues and better manage their consequences. Scientific exchange and cooperation, not only among scientists, experts, but also with policymakers, diplomats, and the military, is critical for continued efforts to prevent the use of chemical and biological weapons.

The Fifth Review Conference of the CWC will convene in May 2023 to consider, amongst other things, any relevant scientific and technological developments. The continued contribution of the SAB will be essential to the Convention's review process.

Ladies and gentlemen,

Looking ahead, our new Centre for Chemistry and Technology, located near the Hague, will play an additional and essential role in strengthening our partnerships with the scientific community and other stakeholders. It will be a platform for the promotion of expert dialogue, exchange, and collaboration.

This facility will provide a new, high-quality toolbox for the Organisation to oversee chemical research, analysis, and enhanced training to support and reinforce the OPCW's verification regime, including its inspection capabilities. It will facilitate the delivery of a variety of capacity-building programmes for our Member States, with a view to strengthening the implementation of the Convention. With this new facility, the OPCW will be better equipped to face the challenges arising from the exponential growth of science and technology and global political instability.

Construction of the Centre is on time and respecting budget, and is to be completed by the end of this year. In particular, the enhanced capacity of the ChemTech Centre, will enable the OPCW to accelerate the process of bolstering and enlarging the designated laboratory network. In addition, it will also enable the overall development of the analytical techniques, required to address new and emerging chemical weapon threats.

The Centre will promote research collaboration including with our designated laboratories, in such areas as toxin attribution and provenance studies. Accordingly, the ChemTech Centre opens new possibilities to increase scientific cooperation, and drive our collective understanding of the benefits and risks associated with the development of the chemical sciences. Once it is operational next spring, we will look to our partners in academia, institutes, and all other relevant stakeholders, including Spiez Laboratory, to help exploit the potential this new facility will provide us.

Ladies and gentlemen,

Our world is reliant on science and technology to overcome our greatest challenges and advance prosperity for all in a sustainable way. At the same time, this progress also implies the possibility to cause immense harm. We can never be complacent of this fact. We must always remain vigilant.

The burden of this responsibility belongs to everyone, but it is particularly heavy on experts like yourselves, and disarmament organisations, such as the OPCW. I hope that your interaction over the coming days will contribute to our collective and difficult undertaking.

I thank you.
