

Keynote Speech

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Minister Pandor,

Secretary General Linhart,

Executive Secretary Zerbo,

Lord Browne,

Excellencies,

Distinguished guests,

Ladies and gentlemen,

It is an honour to address this year's Science and Technology Conference organised by the CTBTO.

At the outset, I wish to note my appreciation to Executive Secretary Zerbo for his friendship and kind invitation to this important event.

There is much that the CTBTO and the OPCW have in common – both in their origins and their missions.

Both organisations were born of science-based treaties, and are based on verification and monitoring provisions of unprecedented rigour.

Nearly twenty years later, both treaties continue to attract a high degree of consensus on their strategic goals and working methods.

And the tangible results we have been able to achieve depend first and foremost on our highly credible verification regimes.

Indeed, it is these regimes that make us role models in disarmament and non-proliferation – they are the foundation of our efforts to build trust and confidence among our Member States.

Intense international scrutiny of our work tests every aspect of these regimes, and requires us to maintain the highest possible operational standards.

To this end, the credibility of our verification regimes relies on closely informed partnerships with science.

These partnerships were vital in establishing verification techniques and methodologies during the negotiations for these treaties.

And they will be ever more important in preventing future misuses of science and technology.

For this, we need to be at the vanguard of the latest advances in science and technology – not only to anticipate challenges, but also to convert them into opportunities to strengthen our regimes.

And we must do so amid rapid developments in information technology – and in an increasingly tight fiscal environment.

We have no choice, in this regard, but to pursue new avenues of cooperation between organisations like our own, and the scientific and research community.

We need this to be at the heart of our game plan in preventing new weapons of mass destruction from emerging, and ensuring that old ones are destroyed.

Let me expand on our experience at the OPCW.

Science is at the very core of our work at the OPCW, for it is the use of chemistry for hostile purposes that gives rise to our existence.

Misuse of chemistry is made all the more complex by its dual-use nature.

Take the widely traded industrial chemical chlorine, for instance.

The same chemical used to purify municipal water supplies can be used as a poison gas to suffocate and kill, as we have recently seen in Syria.

George Bernard Shaw once said, “Science is always wrong. It never solves a problem without creating ten more.”

The fact of the matter is that it is people, not science, who create problems.

This speaks to the importance of our work in promoting the peaceful uses of chemistry, while building on our verification regime to hinder malevolent uses.

And at a time when we are witnessing leaps and bounds in science and technology.

In our case, we are seeing increasing convergence in the fields of biology with chemistry – a development not foreseen when the Convention was being drafted.

Application of new production technologies could also present challenges for inspection methodology.

The global expansion of the chemical industry likewise stretches the scope of our inspection regime.

While these are developments that augur well for increasing prosperity and innovation, they can also potentially test the resilience of our efforts to prevent the re-emergence of chemical weapons.

Carrying out industry inspections, collecting relevant data and tracking transfers of sensitive chemicals is only half the task.

We cannot hope to control and track every development, when no fewer than 15,000 new chemical substances are listed on the chemical abstracts database every day – nor should we try to.

This is where the promotion of responsible science comes in.

This is where outreach to universities, research institutes and schools comes in.

And this is where encouragement of ethical applications of science comes in.

At the OPCW, we are enhancing our efforts across all these areas.

We have invested major effort to increase our engagement with universities and schools with a new suite of interactive tools and materials.

And we are benchmarking these efforts with those of other international organisations to arrive at, and maintain, best practice. The OPCW has greatly benefitted from the experience of the CTBTO in this area.

An international conference was hosted by the OPCW last September on “Education for Peace: New Pathways for Securing Chemical Disarmament.”

The OPCW is now considering establishing an Independent Advisory Board on Education and Outreach to better inform and coordinate our efforts in this area.

We have also facilitated efforts by the scientific and industry community to prepare a code of ethics for professionals engaged in the chemistry field, following an initiative taken by Germany at our last Conference of the States Parties.

Further afield, we actively promote research initiatives in chemistry, fostering new projects that can demonstrate the benefits of chemical sciences – in agriculture, in medicine and environmental management.

We are deepening engagement with our network of laboratories, especially with a view to expanding the number and geographical reach of the current 21 OPCW designated laboratories.

To join, and remain, in this network, aspiring laboratories must pass a rigorous accreditation process before being designated by the OPCW as competent to analyse on-site samples.

Following initial accreditation, these laboratories must undergo stringent proficiency tests on an annual basis, ensuring the very highest of scientific standards in our verification work.

Recently I unveiled a new training facility at our laboratory in Rijswijk near The Hague that will help increase the proficiency ratings of some of our members' laboratories in chemical analysis.

To further extend our technical capabilities, we are also considering purchase of nuclear magnetic resonance equipment.

At the same time, we are running training courses around the world, aimed at enhancing chemical analytical capacity, as well as measures for effective response to chemical attacks or incidents.

In all of this, we are striving to emphasise the proactive role that science and technology can play in security – a role we want more scientists around the globe to engage in.

The OPCW is engaged in verifying disarmament, as well as guarding against proliferation.

Allow me to update you on our progress to this end.

Since the Chemical Weapons Convention entered into force in 1997, 190 States Parties have signed on to the treaty.

Of these, eight States Parties have declared possession of chemical weapons, six of which have now completed full destruction of their stocks of Category 1 weapons.

Amid challenging circumstances, Libya and Iraq have finalised plans for destroying some Category 2 component chemicals and remnants of chemical weapons, respectively.

Russia and the United States, both of which amassed enormous chemical arsenals, have committed to complete destruction of their stockpiles early next decade.

In less than a year after the OPCW Executive Council's decision on a destruction plan, all of Syria's declared Category 1 chemical weapons were destroyed, and only a small amount of hydrogen fluoride remains to be destroyed at a facility in the United States.

To date, 90% of all declared chemical weapons worldwide have been eliminated. And by 2023, all declared stocks of chemical weapons will have been eradicated.

This will represent a historic achievement for multilateral disarmament.

It should infuse the international treaty regime with renewed confidence in the power of diplomacy.

And its tangible outcomes should motivate new efforts to achieve comparable results in other areas of disarmament.

As partners in the pursuit of global security, we all have a stake in this accomplishment.

This entails obligations that are sensitive to the need for continuity and change in a shifting strategic environment.

Obligations that will continue to be informed by a collaborative international approach underpinned by best practices in science and technology.

Our recent efforts in Syria were highly instructive in this regard.

They benefitted from technical innovation in response to unforeseen challenges, and from political will in response to a broader situation strewn with obstacles.

Let me explain what I mean by this.

In the absence of a land-based option for getting chemical weapons removed from Syria, stores of sulfur mustard and a sarin precursor were loaded onto the *Cape Ray*, a US maritime vessel.

Two mobile systems aboard the *Cape Ray* neutralised these materials using a process of hydrolysis to break down the agents with hot water and a caustic compound – the first such operation ever conducted at sea.

This operation was verified by specially-trained OPCW inspectors on board the vessel.

The effluents that resulted from this process were then stored aboard the ship and later transported to other industrial facilities for safe disposal, that has just been completed in Germany and Finland.

Additional facilities in the United Kingdom and United States have worked to destroy other components of the Syrian stockpile.

Another technical innovation is related to monitoring sites in a conflict situation.

To reach sites inaccessible due to the conflict, we deployed GPS-mounted cameras to monitor remotely some sites in Syria.

Finally, our analytical chemistry capability has played a crucial role in investigating alleged use of chemical weapons in Syria.

I mentioned also political will, without which this mission would not have been possible.

The Russian Federation and the United States played an instrumental role in this regard by laying the foundations for the OPCW Executive Council's decision on a programme for eliminating Syria's chemical weapons.

The resolve demonstrated by these two States, and the generous in-kind and financial contributions of other countries to the mission not only affirmed the well-established legal norm of the Chemical Weapons Convention – it also significantly extended our capability in chemical demilitarisation through innovative applications of science and technology.

The Syrian disarmament mission represents one of the few bright spots in what continues to be an otherwise brutal conflict.

With no fewer than 30 countries involved in the operation to destroy Syria's chemical weapons programme, this experience speaks to the importance of partnerships to achieve practical gains in disarmament and non-proliferation.

The fact that we were able to achieve a mandate from the UN Security Council to remove chemical weapons from Syria lays clear testimony to the strength and effectiveness of such partnerships.

Our organisations traverse a common path.

As we stand today, the verification regimes of the OPCW and CTBTO have accumulated nearly two decades of experience – with proven results.

With this specialised experience and knowledge, we see value in reaching out and collaborating in key areas.

In the past, our organisations have exchanged best practices particularly in relation to inspection activities.

In recent years, the CTBTO and OPCW have participated in one another's field exercises.

At the OPCW, we took particular note of the success of the Integrated Field Exercise (IFE14) in Jordan as a significant milestone for the CTBT's on-site inspection regime.

Whether through joint participation in OPCW challenge inspection exercises or field exercises such as Jordan, these occasions represent valuable moments where our operational readiness is tested and verification practices are shared.

Our mutual involvement in such activities provides a window into best practices for inspections, including in logistics and planning.

We must now look to build greater cooperation in these efforts and expand them to new areas.

Our Scientific Advisory Board and associated Technical Working Groups, which provide specialised advice in science, technology and related issues to our Member States, provide excellent forums for cross-fertilizing innovation.

Given the highly sensitive nature of the data we manage, ensuring the secure exchange of information in real time has always been a priority for our organisation.

This applies to communication from our Member States to the OPCW, and from our inspectors in the field back to headquarters.

For its part, the CTBTO maintains an impressive global communication system that requires a similarly high level of security and data authentication.

And as our Syria mission has shown, the OPCW has had to make a special effort not to compromise the outcomes of our verification activities undertaken in the field.

The security of information exchange and employment of remote monitoring techniques are clearly areas where we could usefully pursue exchange of best practices.

The CTBTO's international monitoring system (IMS) is widely recognized as a marvel of modern science.

Apart from serving as a bulwark of the CTBTO's global verification regime, the scientific data generated by the IMS is impressively wide-ranging in its potential applications from tsunami warnings to radionuclide detection.

For our part, the OPCW employs a wide range of scientific tools in support of our verification regime.

Sharing information on the various technologies and methods that we employ for our verification activities may open new horizons for partnership.

Training of our inspectors is another area where we could expand our collaboration.

Though our technologies and operational parameters for inspections differ, there are a number of common issues facing our inspectors in the field that warrant further discussion.

Capturing the know-how of our inspectors and experts, is critical to retaining the effectiveness of our verification efforts over generational change.

Whether we talk of a possible nuclear detonation or an OPCW challenge inspection, knowledge management is essential, if we are to ensure readiness for the next moment of crisis.

A final yet critical common challenge confronting our organisations is achieving universality.

Six states currently sit outside the Chemical Weapons Convention, three of which we expect to soon join the treaty – namely Angola, Myanmar and South Sudan.

The three other states remaining outside the Convention – Egypt, Israel and North Korea – represent more daunting challenges for their joining the global chemical weapons ban.

For its part, the CTBTO is extending every effort to facilitate entry-into-force of the CTBT.

As stewards of these efforts within the international disarmament and non-proliferation regime, we should seek to partner in efforts to impress the urgency of reaching universality to these treaties at every occasion – in front of every audience.

Ladies and gentlemen,

Within eight years, we will have eliminated all declared stocks of an entire category of weapons of mass destruction.

Reaching this milestone, however, will not be the sole determinant of our success.

As Winston Churchill once said, “Success is not final, failure is not fatal: it is the courage to continue that counts.”

This must be the basis of how we approach post-destruction challenges – for, preventing the re-emergence of chemical weapons is a much harder, and less visible task.

Yet, we do not stand alone in this effort, and we count on the endeavours of scientists and innovations in technology in this regard.

The CTBT and the Chemical Weapons Convention stand among the most tangible, most scientifically informed human undertakings towards ensuring a world free of weapons of mass destruction.

Through partnership and collaboration, we can strengthen these undertakings – and further strengthen the norm against weapons that threaten our collective future.

Let us build on the scope of what we have already achieved to realise a world at peace, a more peaceful world for future generations.

Thank you for your attention.