

The CTBT: Science and Technology 2015

Keynote speech

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Thank you very much for the kind introduction. It is a pleasure to be back in Vienna, and I am delighted to be in the company of Secretary-General Linhart, Minister Pandor and Director-General Üzümcü in opening this important conference. I am always pleased to share a stage with my good friend, the extraordinarily capable leader of the CTBTO, Lassina Zerbo. Dr. Zerbo and I have worked together on security issues for a number of years, and I can say from experience that he is a true visionary and creative thinker – and I know we are all grateful to have him at the helm of the CTBTO.

I look forward, as well, to hearing from this afternoon's speakers on the topics of Collaboration on Nuclear Test Monitoring Science and Enhancing Governmental, Industry and Scientific Engagement on Nuclear Non-proliferation and Disarmament.

This year's conference comes at an important time.

On the eve of the 70th anniversary of the bombings of Hiroshima and Nagasaki, we have recently concluded a 2015 NPT Review Conference which was marked by discord and dysfunction, raising troubling questions about the very future of the regime.

Twenty-five years after the end of the Cold War, the Euro-Atlantic region is in turmoil and President Putin is sending troubling messages about his nuclear intentions.

Meanwhile, President Obama's once-robust nuclear agenda appears to be on ice, and regional tensions between nuclear powers, arsenal modernization plans, lurking cyber threats and terrorist organizations bent on mass destruction all are serving to undermine stability and threaten global security.

It is most certainly a time to reflect and re-evaluate how best to proceed across a range of challenges to long-term nuclear security, non-proliferation and disarmament.

Amid all this trouble, however, there are hopeful signs – including that important groundwork has been laid for a deal with Iran.

Of course, there are many hurdles ahead on that front – but I raise it to offer encouragement.

The very fact that negotiations have been possible in the current environment shows that progress is **always** possible.

Nowhere has that been made more clear than here at the CTBTO. Yes, we are approaching the 20th anniversary since the Comprehensive Test Ban Treaty was opened for signature – and I know we are all frustrated that it is not yet in force. But the CTBTO has a remarkable story to share, and I'd like to talk today about why it's so important that you – the scientists and the technical experts who have written much of that story of success – work just as diligently *outside* of your labs and workshops as you do inside of them in order to share that story.

As Dr. Zerbo has so aptly said, – “Science should support diplomacy.” In this case, there's no question that it can because yours is not a difficult story to tell.

You could begin back in 1997, when France and the UK, among other early adopters, were taking the necessary steps to ratify the Treaty. In introducing the ratification measure in the UK House of Lords, Baroness Symons of Vernham Dean, then serving as the minister for the government, made clear the level of commitment the UK government had to the CTBT. She went into some detail to explain the central importance of an international monitoring system (IMS). Indeed, this dominated her short speech. Clearly, this was the most important factor in the UK's consideration of the Treaty, and in a few carefully chosen words, the minister described what the CTBTO would have to put together to satisfy the monitoring and verification challenges.

So the UK – and other ratifying states parties as well – set out a significant challenge: to build a regime that would allow for monitoring and verification of compliance with the Treaty, while at the same time governments developed the complimentary science and technology to ensure the reliability of their existing nuclear stockpiles. Let's just say there were skeptics galore – and to be fair, no matter how confident some were that a workable verification system could be built, governments were at the time taking a leap of faith in signing on and ratifying the Treaty. A necessary leap of faith for some, as part

of holding up their end of the bargain on the Nuclear Nonproliferation Treaty, but a leap of faith nonetheless.

Now – let's examine what has happened since that time. The bottom line is that we have 183 signatories and 163 ratifications of what is now one of the world's most broadly supported arms-control treaties.

How has this come to pass? How has this Treaty won such broad support – and now what must we do to bring it into force?

The fact is that the scientists and technical experts behind the Treaty – you – have delivered, and the organization established to prepare it for entry into force has executed. The CTBTO quite simply has passed every test it has ever been given and delivered a working global verification system with more than 300 stations in 89 countries that monitor for signs of nuclear tests every minute of every day. It is a robust system, supported by a global communications infrastructure, and it has exceeded every expectation and then some – with important life-saving applications for humanitarian purposes, such as tsunami warning and scientific research. The system also contributes to nuclear safety. Following the Fukushima accident in 2011, the CTBTO's systems provided information on emissions from the damaged plant. You have every reason to be enormously proud of your work.

So I think we can all agree that governments set out a challenge and you have more than met it. Today, because of the confidence that you have built, with limited exceptions, we have a verifiable de facto global moratorium on testing; we have a robust, well-led organization in the CTBTO; and we have effective cutting-edge technology in play. In fact, those at work to build the underpinnings of the Comprehensive Test Ban Treaty have delivered a far better verification and monitoring system than anyone expected.

And, in addition, your professional and expert colleagues, where necessary, have developed the technology to ensure the safety and efficacy of reduced nuclear arsenals, where that confidence was also demanded.

So why, with all that support and no states but North Korea having tested now for 17 years, do we need final entry into force? Why is it necessary to take that last legal step? What is the sense of expending a huge amount of time and effort and political capital to take the final step?

Because I believe that final step is crucial – and here’s why: Without it, all that we have worked so hard to accomplish – a system around the Treaty that is integral to the global nonproliferation and disarmament regime – remains at risk every day that passes without entry into force.

As I see it, the danger is that those who have made the tough decision to ratify will run out of patience as they watch the countries that have failed to act continue to drag their feet and make promises that go unfulfilled year after year. In Russia, in particular, I would think it would come as no surprise if some begin to ask: “Why are we in this treaty if other nuclear-armed states are not? Why should we be hemmed in? Where is the collective good faith?”

Adoption of the Comprehensive Test Ban Treaty in 1996 represented a high-water mark for multilateralism. It led to the creation of this world-class organization in Vienna and to the development of powerful and promising new technologies. It established the de facto global moratorium on testing. Do we want to risk losing the progress we’ve made? I know we don’t.

So how do we get the job done? We must act together. We do it with a concerted, coordinated effort by political leaders, governments, civil society and the international scientific community.

At the political and government level, we do it with the delivery of a clear and compelling message that can convince those who are hesitant and those who oppose the Treaty outright that it is in their best security interests – and in the best security interests of the world – if the Treaty is legally binding.

At the scientific and technical level, we turn to you to tell the CTBTO’s story of success.

What does that mean? It means that scientists from India and other countries that have not signed the Treaty should engage with the CTBTO and work with scientists from countries that have. It means that those of you who have built this amazing structure must share the story of how it was built and what it can do. It means that when you return home from Vienna, you should consider briefing your peers in the scientific community so that they can help the cause. Collectively, you must then brief politicians, who in turn can talk to your foreign ministries. You can all, politicians and scientists together, inform government officials. Let them know about last year’s successful five-week field exercise in Jordan, the most sophisticated exercise of its kind ever

undertaken. Make the case that the Treaty must enter into force, because as long as it isn't in force, it will remain vulnerable.

Those of us from countries that have signed and ratified have a special obligation and responsibility to work to bring the Treaty into force. If we don't, what does it say about our ability in the future to enter into negotiations of any kind in good faith? As scientists, you can help us make the arguments to move forward.

So I hope you will work with us – both to prepare to face the perennial arguments against progress and to engage with political leaders around the globe by making a convincing case that joining the test ban treaty doesn't leave their countries more vulnerable – it *enhances* their security.

The United States should be a particular focus of all of our efforts as it can serve as a trigger for others to sign and ratify. In my new role as vice chairman of the Nuclear Threat Initiative in Washington, D.C., I am of late getting a closer view of U.S. politics – and the level and quality of the partisanship in the capital city is simply debilitating. It's difficult to know how and when that situation will change – but I am confident it will.

The CTBTO has proven the concept that a system of verification could be built and that it could work – which was the basis many countries signed onto the Treaty in the first place. Those who haven't ratified should not be granted the political cover offered by any suggestion that the system isn't ready. So at the very minimum, I believe we need to create a coalition of governments and political leaders – backed by scientists – to deny those who oppose the Treaty. We mustn't let those voices go unanswered; we must push back every time. I urge you to use this amazing technical creation of the 20th Century – the Internet – to issue rebuttals that are instantaneous, comprehensive and effective.

In 1999, when ratification of the CTBT came before the United States Senate, then-senator Richard Lugar – a partner to the Nuclear Threat Initiative on so much of our work – issued a statement opposing ratification. Here's what he said, quote: “The goal of the CTBT is to ban all nuclear explosions worldwide: I do not believe it can succeed. I have little confidence that the verification and enforcement provisions will dissuade other nations from nuclear testing. Furthermore, I am concerned about our country's ability to maintain the integrity and safety of our own nuclear arsenal under the conditions of the treaty.”

Last month, former Senator Lugar signed a statement by NTI and a set of global leadership networks that called for, among many other things, prompt ratification of the

Treaty. Minds can be changed – particularly with proof now that the science is solid and a system exists that, as Lassina recently wrote, “monitors the Earth’s crust, listens in the atmosphere and in the oceans, and sniffs the air for traces of radioactivity.”

Today, U.S. Secretary of State John Kerry understands what you know as well. Last fall, in a speech at the United Nations, he called the verification regime you have built, quote, “one of the great accomplishments of the modern world.”

So help him out. Help supporters in other countries take action as well. I admire you for what you have accomplished and I implore you: don’t lose heart, don’t relax, and don’t allow the politicians and diplomats to get away with letting the de facto moratorium stand. We *all* have an obligation to work for ratification – and entry into force. For the victims of Hiroshima, Nagasaki and the legacy of 2,000 nuclear tests. For the safety and security of our individual countries. For the future of the planet.

Thank you.