



62nd Pugwash Conference on Science and World Affairs

“Confronting New Nuclear Dangers”

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His Excellency Mr Kassym-Jomart Tokayev, Chairman of the Senate of the Republic of Kazakhstan

Dr Paolo Cotta Ramusino, Secretary General of Pugwash

Ambassador Jayantha Dhanapala, President of Pugwash

His Excellency Mr Mikhail Bocharnikov, Ambassador of the Russian Federation to the Republic of Kazakhstan

Excellencies, ladies and gentlemen

It is a pleasure to be here today. I am well aware of the historic role Pugwash has played in seeking a world free of nuclear weapons, and of the ongoing collaboration with the United Nations.

I would also like to thank the Government of Kazakhstan for hosting this conference. Next Wednesday we will commemorate the International Day against Nuclear Tests, which also coincides with the anniversary of the closing of the Semipalatinsk test site. The institution of the International Day is a signature example of Kazakhstan's commitment to nuclear disarmament.

I am very humbled to speak in the presence of three of my predecessors: Ms Kane, Mr Dhanapala and Mr Duarte.

The theme of this conference is highly pertinent. Our world, as described by Secretary-General Guterres, is one "of new and old conflicts woven in a complex, interconnected web."

This mix of old and new is also true for nuclear disarmament and non-proliferation. As an international community, we've made great strides since the darkest days of the nuclear era. We have seen massive arsenal reductions, global moratoria on nuclear testing and fissile material production, states renouncing nuclear weapons programmes, and the institution of a near-universal non-proliferation regime. Above all, there has been consensus on the goal of a world free of nuclear weapons.

Ultimately, however, the same danger that has haunted us for over seventy years still exists: Thousands of nuclear weapons that could cause mass casualties, environmental devastation, or worse – mass extinction.

At the same time we face a range of new challenges to the global disarmament and non-proliferation regime. From deteriorating security conditions and shifting global balances, to a suite of new technologies that are rapidly overhauling the status quo of our world's economy, society and security, these new challenges complicate and exacerbate traditional concerns.

This is what I want to talk about today: the twenty-first century proliferation and arms race challenges; challenges that are a confluence of the old and the new.

Let me be clear, when I say 'proliferation' I mean both vertical and horizontal. The former being the continued qualitative and quantitative improvements to nuclear arsenals, the latter being the ongoing concern about the spread of nuclear weapons.

The cessation of both horizontal and vertical proliferation is at the core of the "grand bargain" enshrined in the Nuclear Non-Proliferation Treaty, the NPT. Non-proliferation and disarmament are the two sides of the same coin under the NPT. It is a bargain that needs to be preserved and honored. Its erosion will not benefit anyone.

First, the issue of vertical proliferation. As I noted, the world has made significant progress in the last three decades, much of it under the leadership of the two States with the largest arsenals, the Russian Federation and the United States.

However, I think it is inarguable that in recent years that progress has ground to a halt. All nuclear-armed States are engaged in the qualitative improvement of their arsenals through expensive modernisation campaigns that are expected to last for decades. Several continue to expand their stockpiles. Alarming, we have seen heightened rhetoric about the utility of nuclear weapons and hundreds still remain ready to launch at a moment's notice. Even the significant arms control achievements of the Cold War, such as the Intermediate Nuclear Forces Treaty, are under threat.

Disappointingly, the deep divisions that have beset our efforts to eliminate nuclear weapons remain.

On a far more positive note, just last month one hundred and twenty-two States joined together to adopt the historic Treaty on the Prohibition of Nuclear Weapons. The treaty represents an important step and contribution towards the common aspiration of a world without nuclear weapons.

This treaty is historic for two reasons: One, it places nuclear weapons on the same level as chemical and biological weapons, which were deemed in 1925 as incompatible with the principles of humanity. Two, it is the first multilateral treaty on nuclear disarmament in more than twenty years.

It is also a manifestation of the frustration that many non-nuclear weapon States continue to feel about the slow pace and opaque manner in which commitments made under Article VI of the NPT are being implemented. As key member states who made the new Treaty emphasized, the Prohibition Treaty aims to reinforce and complement the NPT, and to push the implementation of its Article VI.

No matter where you fall regarding the Prohibition Treaty, it is now an element of the framework of mutually reinforcing treaties that make up the disarmament and non-proliferation regime. It will reinforce the global norm against nuclear weapons.

But the most important point to emphasize is that it is past time for our shared disarmament norm to be implemented through concrete actions.

There are several different ways to take these concrete actions. The High Level Panel on a Fissile Material Cut-off Treaty and the Group of Governmental Experts on disarmament verification are two useful initiatives.

The 2020 NPT Review Conference, which will mark the fiftieth anniversary of the treaty's entry into force, will be another critical opportunity to take concrete steps. And it is less than three years away. I believe that if we are to truly make further strides towards a world free of

nuclear weapons, there is an onus on the nuclear-weapon States to reassume the mantle of leadership and take actual practical steps.

First of all, they should return to dialogue. The argument that security conditions are not right for further disarmament is to me specious if you are not prepared to at least sit down and talk. We cannot expect a reduction in tensions without the necessary confidence-building measures and transparency that dialogue provides.

A resumption of the P5 dialogue through a ministers' level meeting, for example, would be a good place to start. They could aim to hash out an agreed approach to the Review Conference based, at a minimum, on how to implement the agreed 2010 action plan.

The Russian Federation and the United States still possess some ninety percent of the world's nuclear weapons. Dialogue between the two on how to approach further reductions and other arms control issues is essential. More than any other States, these two have a responsibility to show the way.

Secondly, we should think about what near-term risk reduction, transparency and confidence-building measures can be implemented. Based on the 2010 action plan and the 2015 President's working paper, a first step should be to continue lowering the operational status of nuclear weapons and working to insure non-nuclear weapon States against their accidental use. A second step should be for nuclear-weapon States to fully implement the transparency measures called for in 2010 related to reporting on nuclear disarmament-related undertakings.

Neither of these is a substitute for irreversible reductions in weapons, but they would help improve the current climate and are useful first steps. And they can be done with political will.

Thirdly, the nuclear-weapon States should work together to head off what is looming as a qualitative arms race. They could make a genuine contribution to global stability by agreeing to curtail the development of new nuclear weapons, especially those designed for first strikes.

I want to move now to the second set of twenty-first century challenges, those related to horizontal proliferation.

The non-proliferation regime designed around the NPT is robust. But it was also designed in the 1960s for a treaty that was intended as a stop gap on the way to the elimination of nuclear weapons.

We have had incredible successes in non-proliferation since the NPT entered into force, as States have shown near universal commitment to the Treaty and their undertakings.

Unfortunately, the example of the Democratic People's Republic of Korea and its illicit, destabilising and dangerous actions are a pointed reminder of the need for constant vigilance when it comes to nuclear proliferation. The introduction of nuclear weapons into already volatile regional conflicts adds an existential level of danger.

The world of the twenty-first century is one of open borders and global markets. People and goods move with unprecedented ease. So, we must ask some fundamental questions. Do we have the standards necessary to guard against proliferation when confronted with modern communications, transportation and business practices? Do we have the highest standards for our safeguards system? What other tools do we have at our disposal to improve the efficacy of the non-proliferation regime? What else might we need?

The United Nations might not be the forum to address such questions, but as experts in science and technology, I pose the questions to you. The international community will somehow have to tackle these questions soon.

The third issue I want to raise today relates to the global wave of technological revolution that is washing over us. The gains in information and communications technology made over the last two decades, coupled with more recent explosions in artificial intelligence capacity, as well as leaps in areas such as sensor technology, are impacting the global economy and international society.

Combined with concurrent developments in military technology, they will have radical implications for peace and security. They will also pose significant nuclear proliferation challenges.

For vertical proliferation, advanced new weapons such as long-range conventional missiles may induce fear in nuclear-armed States that their nuclear arsenals are being undermined and spur them to seek greater offensive or defensive capabilities, leading to destabilizing arms races, or to double down on nuclear weapons as the guarantor of their security, leading to their increased entrenchment in military postures.

Moreover, warfare that is guided by information technology and artificial intelligence will dramatically increase the speed of battle, leading to problems such as attribution, accidental launch and escalation control – a worrying prospect for nuclear-armed States.

Concerns have repeatedly been raised about cyber vulnerabilities of nuclear weapons, from the hacking of command and control to actually launch a weapon, to the ‘spoofing’ of early warning systems to thinking they are under attack.

For horizontal proliferation, States that are unable to match technological advances may seek nuclear weapons as asymmetric counters or to undermine nuclear weapons through lower cost technology such as cyber capabilities. The portability of much of the new technology means it will become increasingly available to non-state actors, further muddying issues such as attribution.

I am not sure if the international community fully understands the risks posed by these emerging technologies, especially when it comes to the proliferation and even use of nuclear weapons, largely because their effects cannot be judged individually but must be seen as a matrix of cross-cutting implications.

Consequently, there is an urgent need to develop such an understanding, as well as the necessary measures and mechanisms to ensure international peace and stability. In doing so, we need to assemble the coalitions needed for the twenty-first century. This necessitates doing a better job of incorporating industry – from where much of this technology is emanating – but also bringing civil society and academia onto the same page as States.

I appreciate that the picture I have drawn today is a complex one that poses many challenges. But there will also be many opportunities to realise the shared vision of a world free of nuclear weapons. The key is getting to work immediately in a constructive, comprehensive

and cooperative fashion. This entails building bridges and seeking out the common ground that characterised so many of the achievements of the last three decades.

We can start by reaffirming our united and solid commitment to nuclear disarmament and engaging in the inclusive dialogue necessary to make it happen. As new UN High Representative for Disarmament Affairs, I would like to think through, with your help, how to re-energise the cause of disarmament, and re-establish the political and thought-leadership of the United Nations in support of its member states.

Thank you.