ICM

INDEPENDENT COMMISSION ON MULTILATERALISM

POLICY PAPER

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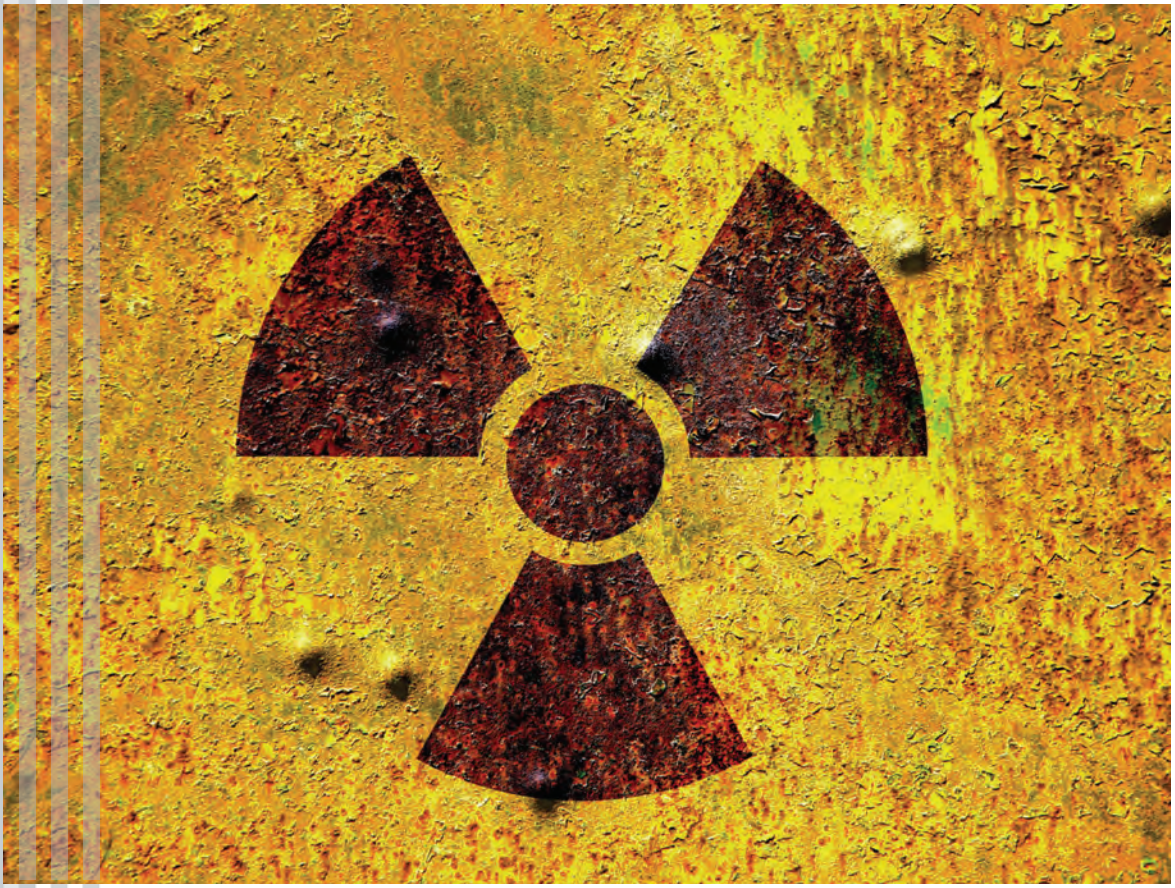
Weapons of Mass Destruction: Non-proliferation and Disarmament



INDEPENDENT COMMISSION
ON MULTILATERALISM

ABOUT THE INDEPENDENT COMMISSION ON MULTILATERALISM

The Independent Commission on Multilateralism (ICM) is a project of the International Peace Institute (IPI). It asks: How can the UN-based multilateral system be made more "fit for purpose"?

In answering that question, the ICM has analyzed fifteen topics. These include armed conflict, humanitarian engagements, sustainable development, and global public health, among others (see complete list in Annex 2). The goal of the ICM is to make specific recommendations on how the UN and its member states can improve responses to current challenges and opportunities.

The ICM undertook simultaneous tracks of research and consultation for each issue area on its agenda. The Commission initially launched in New York in September 2014, followed by subsequent launches in Vienna, Geneva, and Ottawa. In February 2015, the ICM briefed delegates from the five UN Regional Groups in New York. The Commission also convened meetings with Ambassadorial and Ministerial Boards in New York, Vienna, and Geneva. Global outreach included briefings to officials in Addis Ababa, Berlin, Brasilia, Copenhagen, New Delhi, London, Madrid, Montevideo, and Rome. Civil society and private sector outreach and engagement also constituted an important component of the ICM's consultative process, including a briefing specifically for civil society in June 2015.

The research process began with a short "issue paper" highlighting core debates and questions on each of the fifteen topics. Each issue paper was discussed at a retreat bringing together thirty to thirty-five member state representatives, UN officials, experts, academics, and representatives from civil society and the private sector. Based on the inputs gathered at the retreats, each issue paper was then revised and expanded into a "discussion paper." Each of these was uploaded to the ICM website for comment and feedback, revised accordingly, and presented at a public consultation. The public consultations were webcast live on the ICM's website to allow a broader audience to take part in the discussions.

This paper is one of the fifteen final "policy papers" that emerged from this consultative process. A complete list of events taking place as part of consultations on this specific issue area and of those involved is included in Annex 1. The recommendations from all the policy papers are summarized in the ICM's September 2016 report "Pulling Together: The Multilateral System and Its Future."

The ICM thanks the three sponsoring governments for their financial support for its operations: Canada, Norway, and the United Arab Emirates. Without their support, the ICM would not have been possible.

Contents

Abbreviations

BMD	Ballistic missile defense
BWC	Biological Weapons Convention
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CWC	Chemical Weapons Convention
Euratom	European Atomic Energy Community
FMCT	Fissile Material Cut-off Treaty
IAEA	International Atomic Energy Agency
ICBM	Intercontinental ballistic missiles
NPT	Non-Proliferation Treaty
NWFZ	Nuclear-weapon-free zones
OPWC	Organisation for the Prohibition of Chemical Weapons
OSCE	Organization for Security and Co-operation in Europe
PAROS	Prevention of an arms race in outer space
SLBM	Submarine-launched ballistic missiles
UNDC	UN Disarmament Commission
UNIDIR	UN Institute for Disarmament Research
UNODA	UN Office for Disarmament Affairs
WMD	Weapons of mass destruction

Executive Summary

While the threat of weapons of mass destruction (WMD) may seem antiquated and unlikely to materialize, the mere existence of WMD remains one of the paramount threats to mankind. Nuclear weapons remain the biggest existential threat, as well as the biggest gap in the multilateral disarmament and non-proliferation architecture. While many important baseline tools to counter the threat of WMD and prevent their proliferation already exist—including chemical and biological weapons conventions, export control regimes, and monitoring, verification, and safeguard systems—few of these address nuclear weapons, and even fewer deal with future threats. It is within this context that this paper explores key challenges and developments in the field of non-proliferation and disarmament of WMD, with an emphasis on nuclear arms.

In theory, the UN system has a strong multilateral non-proliferation and disarmament machinery to control WMD. But in practice, this machinery has yielded few new normative outcomes for nearly two decades. The strict "ruling by consensus" in the Disarmament Commission and Conference on Disarmament has largely resulted in gridlock. The Non-Proliferation Treaty, the cornerstone of the non-proliferation regime, has proven resilient but faces numerous challenges, and other sought-after non-proliferation treaties have yet to be agreed on or to enter into force. While the UN General Assembly's First Committee has regularly adopted resolutions on WMD, these often lack the support of nuclear-weapon states, or their implementation is blocked.

Nonetheless, there have been policymaking achievements over the years, including the Chemical and Biological Weapons Conventions, which remain landmark agreements. More recently, in December 2016 the UN General Assembly approved a resolution to launch negotiations in 2017 on a new treaty prohibiting nuclear weapons. Moreover, several initiatives outside the UN system have sought to force movement in the UN or circumvent the UN altogether, including the Iran nuclear deal, the Humanitarian Pledge for the Prohibition and Elimination of Nuclear Weapons, and President Obama's Nuclear Security Summits, as well as regional, inter-organizational, government, and civil society initiatives. Many of these initiatives, however, have met with resistance from nuclear-weapon states and their allies, and few have yielded concrete results.

The debate about how to address WMD going forward is characterized by disenchantment and polarization. This debate has focused on containing and restraining possession of nuclear weapons, while silos have made it difficult to broaden the discussion to include human rights, humanitarian consequences, transparency, and accountability. Moreover, despite a number of successful initiatives, civil society remains marginalized in debates on non-proliferation and disarmament. At the center of discussions on WMD is the question of whether certain types of weaponry can keep a country safer. Disagreement over this question has led to divisions on how to contain a nuclear arms race, how to back down from the high-alert status of nuclear weapons, what role deterrence should play in contemporary security doctrine, how to prevent the militarization of outer space, and how to address rising tensions resulting from ballistic missile defense. These disagreements, combined with a lack of inclusiveness and rigid organizational procedures, have contributed to the lack of progress on disarmament.

While the formal structures of the UN disarmament and non-proliferation machinery cannot and should not be replaced, they are in need of serious revitalization. This paper offers a number of recommendations for a secretary-general willing to lead an effort at revitalization:

1. **Strengthen the UN disarmament machinery.** The secretary-general should reinstate the UN Office for Disarmament Affairs (UNODA) as a UN department, request that UNODA or the UN

Institute for Disarmament Research (UNIDIR) look into the management and doctrine of nuclear weapons, and propose strengthening UNIDIR's mandate and providing core funding.

2. **Support the IAEA's increasing responsibilities.** Member states should consider providing the IAEA the resources it requires. The IAEA, for its part, should create a science and technology advisory board.

3. **Implement Security Council Resolution 1540 and other paths to innovative multilateralism.** UNODA should identify links between this resolution and WMD, and the secretary-general, through UNODA, should build on the resolution to improve the UN's image.

4. **Assess the role of new technologies.** The UN General Assembly should mandate the secretary-general to report on new technologies and WMD. In addition, the UN, through the IAEA and implementation of Resolution 1540, could help provide affordable access to counter-proliferation technologies.

5. **Engage civil society.** The secretary-general should support NGOs in mobilizing funding through multiple sources.

Introduction

When considering current threats to peace and stability, many are more concerned with the effects of climate change and regional conflicts than with weapons of mass destruction (WMD), especially nuclear weapons. While the possession of WMD figures as one of the top risks to global security, the public generally considers their use unlikely.[1]

The threat of WMD evokes both existential concerns and sentiments of disillusionment and missed opportunities—opportunities to make nuclear tests a thing of the past, to achieve complete nuclear disarmament, and to contain proliferation. This is not to say that nothing has been achieved in these fields, but rather that the multilateral system has not been able to deliver on its promises of non-proliferation and disarmament dating back to 1946. This in part results from the tension between the need to fill the legal gap in the non-proliferation and disarmament framework and the efforts of the permanent members of the UN Security Council (P5) and their allies to maintain the nuclear world order.

Why focus on non-proliferation and disarmament of WMD when small arms and light weapons create much greater havoc around the world?[2] For one, if the threat of WMD seems antiquated and unlikely to materialize, the mere existence of WMD remains one of the paramount threats to mankind. WMD "pose some of the greatest contemporary security challenges, in part because they are often characterized by rapid evolution and a tendency to increase in urgency with little warning time."[3] Nuclear weapons remain the biggest existential threat, as well as the biggest gap in the multilateral disarmament and non-proliferation architecture. And if many important baseline tools to counter the threat of WMD and prevent their proliferation already exist—including chemical and biological weapons conventions, export control regimes, and monitoring, verification, and safeguard systems—few of these address nuclear weapons, and even fewer deal with future threats, such as the miniaturization of WMD.[4]

Based on extensive consultations with representatives of states, various UN entities, and civil society, as well as subject-matter experts, this paper explores key challenges and developments in the field of non-proliferation and disarmament of WMD, with an emphasis on nuclear arms (see Annex 1 for an overview of the consultative process). It first gives an overview of the state of the non-proliferation and disarmament machinery at the multilateral and bilateral levels. It then explores the key elements of and recent developments in current debates on non-proliferation and disarmament, as well as gaps and opportunities. The paper concludes with recommendations for strengthening the non-proliferation and disarmament machinery and unblocking its gridlock.

1 World Economic Forum, *The Global Risks Report 2016*, available at www3.weforum.org/docs/Media/TheGlobalRisksReport2016.pdf .

2 The UN General Assembly has defined the UN Charter's principles on "disarmament" and "regulation of armaments" as two distinct yet related concepts, one referring to the general and complete elimination of all WMD and the other to the limitation and/or control of small arms and light weapons.

3 Andy Weber and Christine L. Parthemore, "Innovation in Countering Weapons of Mass Destruction," Arms Control Association, 2015, available at www.armscontrol.org/ACT/2015_0708/Features/Innovation-in-Countering-Weapons-of-Mass-Destruction .

4 Ibid.

The Non-proliferation and Disarmament Machinery: A Multilateral Ice Age

In theory, the UN system has a strong multilateral non-proliferation and disarmament machinery to control WMD. But in practice, this machinery has yielded few new normative outcomes for nearly two decades. The UN disarmament machinery includes three main components: the UN General Assembly's First Committee; the UN Disarmament Commission (UNDC); and the Conference on Disarmament, created in 1979 following the General Assembly's first special session on disarmament. The Non-Proliferation Treaty (NPT) is the foundation of this machinery, ensuring verification and review mechanisms are in place for implementation and compliance.

In the UN Disarmament Commission and Conference on Disarmament, strict "ruling by consensus" results in gridlock, with individual states' security interests trumping the collective security of all states. The General Assembly's First Committee, which adopts resolutions by majority vote, regularly adopts landmark resolutions on WMD (e.g., calling for negotiation of a Fissile Material Cut-off Treaty, creating an open-ended working group on the elimination of nuclear weapons, and adopting the Humanitarian Pledge for the Prohibition and Elimination of Nuclear Weapons). However, these resolutions often either lack the support of states with nuclear weapons, or their implementation is blocked by one or two member states in the Conference on Disarmament.

This translates into a normative framework that, as of 2016, has made little progress in the multilateral system, though some developments on the policy-making front have taken place over the years. The 1992 Chemical Weapons Convention (CWC) has made it possible to envisage an identified timeframe for the global elimination of the declared stockpile of chemical weapons, and the 1972 Biological and Toxin Weapons Convention (BWC) remains a landmark agreement that condemns any use of biological agents or toxins other than for peaceful purposes.[5] More recently, the General Assembly passed a resolution in December 2016 "to negotiate a legally binding instrument to prohibit nuclear weapons, leading towards their total elimination.[6]

Non-proliferation and Disarmament in the UN System

Nuclear Weapons

Gauging concrete progress in the non-proliferation and disarmament of nuclear weapons requires balancing shifts in the number of weapons with the overarching policies and norms governing those weapons. The overall number of nuclear weapons has decreased drastically since the Cold War, but this decrease has stagnated, with the great majority of nuclear weapons still held by the two largest possessor states. In terms of policies, the UN machinery has failed to measure how much nuclear

5 As of May 2016, the CWC has been ratified by 192 states and the BWC by 173 states.
6 UN General Assembly Resolution 71/258 (January 11, 2017), UN Doc. A/RES/71/258

weapons material there is in the world, making it difficult to agree upon a set of metrics for assessing progress. This lack of metrics adds to the opacity of the disarmament debate and complicates the development of any action plan to deal with nuclear weapons material. Not knowing how many weapons exist is also a greater vulnerability when it comes to questions of terrorism.

Non-Proliferation Treaty (NPT): Regarding the governance of nuclear weapons, the cornerstone of the non-proliferation regime, the NPT, has proven resilient, despite the fact that four (or five) of its nine review conferences failed to reach consensus (1980, 1990, [1995], 2005, and 2015).[7] With 190 parties, including the five recognized nuclear-weapon states, the NPT is based on three pillars:

1. Non-proliferation: Countries without nuclear weapons will not acquire them.
2. Disarmament: Countries with nuclear weapons will move toward disarmament.
3. Peaceful use: All countries have the right to peacefully use nuclear technology.

The role of the International Atomic Energy Agency (IAEA) in ensuring that the NPT safeguard system is respected has proven crucial in enforcing non-proliferation and allowing for the peaceful use of nuclear energy. Despite the failure of half (or nearly half) of the NPT review conferences, some have estimated that the existence of the NPT may have helped contain an increase in the number of nuclear-armed states by up to three or four times.[8] However, while undeniably a multilateral disarmament achievement, there are concerns that the weak implementation of the NPT's final documents, the repeated failure of its conferences, and stalemate on the other nuclear disarmament processes (the Comprehensive Nuclear-Test-Ban Treaty and the proposed Fissile Material Cut-off Treaty) will undermine its future credibility.

Comprehensive Nuclear-Test-Ban Treaty (CTBT): The CTBT is probably the "longest-sought, hardest-fought non-proliferation goal,"[9] but twenty years after its adoption in 1996, it still has not entered into force. Nonetheless, perhaps some solace can be found in the CTBT's International Monitoring System. With support from civilian and military networks, this system is capable of effectively detecting any nuclear test and thereby precluding any CTBT violator from escaping detection.[10] If China and the US were to ratify the CTBT, this could create a snowball effect toward its entry into force. Until then, there is little hope for its entry into force anytime soon.

Fissile Material Cut-off Treaty (FMCT)**:** The CTBT is frequently viewed as one side of the nuclear control regime "coin," the other side being the proposed FMCT. A large amount of fissile material, including directly weapons-useable highly-enriched uranium and separated plutonium, still exists in the world today. A ban on the production of fissile material for anything other than verified peaceful use, alongside a prohibition of nuclear tests, would provide the foundation for eventual nuclear disarmament. Unfortunately, the negotiations on an FMCT have yet to start in the Conference on Disarmament due to different priorities among the P5 and their inability to persuade all member states to agree to these negotiations.

UN General Assembly resolutions: The UN General Assembly, through its First Committee, has tried to break the stalemate in the Conference on Disarmament by creating groups of experts that would identify concrete ways forward (e.g., the FMCT and a convention on eliminating all nuclear weapons). At its seventieth session, the General Assembly adopted fifty-seven resolutions and decisions, of

7 Technically, the 1995 NPT Review Conference did not reach an agreement on a final review document, but many consider it one of the most "successful" conferences as it permitted the indefinite extension of the treaty.

8 Torbjørn Graff Hugo, "On Builders and Blockers: States Have Different Roles to Play to Complete the Nuclear Disarmament Puzzle," ILPI-UNIDIR NPT Review Conference Series, paper no. 4, 2015.

9 Daryl G. Kimball, "Reconsidering the Test Ban Treaty," Arms Control Association, 2015, available at www.armscontrol.org/ACT/2015_11/Focus/Reconsidering-the-Test-Ban-Treaty .

10 Ibid.

which twenty-three were on nuclear weapons.[11] Several of these resolutions emphasized the catastrophic humanitarian consequences that would result from the use of nuclear weapons:

- Resolution 70/47 on the "Humanitarian Consequences of Nuclear Weapons," a new resolution, declared that the only way to guarantee nuclear weapons would never be used again is to totally eliminate them. It called on all states, as part of their shared responsibility, to prevent the use of nuclear weapons and their vertical and horizontal proliferation.[12]

- Resolution 70/48 on a "Humanitarian Pledge for the Prohibition and Elimination of Nuclear Weapons," also a new resolution, requested all states possessing nuclear weapons to take concrete measures, pending the total elimination of nuclear weapons, to reduce the risk of detonations. These steps include reducing the operational status of nuclear weapons (de-alerting), moving them away from deployment and into storage, and diminishing their role in military doctrines.[13]

- Resolution 70/50 on "Ethical Imperatives for a Nuclear-Weapon-Free World" also touched on the humanitarian impact and ethical aspects of nuclear weapons. It declared that there is a shared responsibility to act with urgency and determination to take the necessary measures, including legally binding measures, to eliminate and prohibit all nuclear weapons, "given their catastrophic humanitarian consequences and associated risks."[14]

Two other resolutions in December 2015 aimed for complete nuclear disarmament. Resolution 70/57 on a "Universal Declaration on the Achievement of a Nuclear-Weapon-Free World," adopted by 133 member states (28 against), was a declaration by non-nuclear-weapon states calling on nuclear-weapon states to take steps toward a nuclear-weapon-free world.

Most notably, Resolution 70/33 on "Taking Forward Multilateral Nuclear Disarmament Negotiations" expanded the mandate of the existing open-ended working group to identify substantial legal measures and norms to help take forward negotiations on a treaty for the elimination of nuclear weapons. It also mandated the governmental working group to "formulate recommendations on other measures that could contribute to taking forward multilateral nuclear disarmament negotiations, including but not limited to transparency measures,... measures to reduce and eliminate the risk of accidental, mistaken, unauthorized or intentional nuclear weapon detonations, and additional measures to increase awareness [of] the wide range of humanitarian consequences that would result from any nuclear detonation."[15]

Following the preparatory work of this open-ended working group, in October 2016 the First Committee passed a draft resolution "taking forward multilateral nuclear disarmament negotiations."[16] The General Assembly subsequently adopted Resolution 71/258 in December 2016.[17] This resolution called upon all nations participating in the negotiating conference "to make their best endeavours to conclude as soon as possible a legally binding instrument to prohibit nuclear weapons, leading towards their total elimination."

This resolution formally launched negotiations in 2017 on a treaty prohibiting nuclear weapons. Although strongly opposed by nuclear-weapon

11 "On Recommendation of First Committee, General Assembly Adopts More than 50 Drafts, Including New One on 'Ethnical Imperatives' for Nuclear Disarmament," coverage of UN General Assembly, available at www.un.org/press/en/2015/ga11735.doc.htm .

12 UN General Assembly Resolution 70/47 (December 7, 2015), UN Doc. A/RES/70/47.

13 UN General Assembly Resolution 70/48 (December 7, 2015), UN Doc. A/RES/70/48.

14 UN General Assembly Resolution 70/50 (December 7, 2015), UN Doc. A/RES/70/50.

15 UN General Assembly Resolution 70/33 (December 7, 2015), UN Doc. A/RES/70/33.

16 UN General Assembly First Committee, Taking Forward Multilateral Nuclear Disarmament Negotiations, October 14, 2016, UN Doc. A/C.1/71/L.41.

17 UN General Assembly Resolution 71/258 (January 11, 2017), UN Doc. A/RES/71/258.

states and their nuclear-umbrella allies, an organizational session took place in February 2017, mandating two negotiation sessions, in March and June 2017. The negotiating conference will submit a report to the UN General Assembly at its seventy-second session. The General Assembly will then assess the progress made in the negotiations and decide on the best way forward. With the nuclear states opposing the negotiations and the proposed treaty, it remains to be seen if the process will go forward beyond this first negotiating conference. Nonetheless, the General Assembly resolution indicates the widespread discontent with the deadlock within UN fora on this issue.

Reports and studies commissioned by the UN General Assembly: In addition to adopting resolutions, the General Assembly has requested studies and reports to address issues related to nuclear weapons. These studies and reports have widely acknowledged the environmental and socioeconomic impact of nuclear weapons. They have included the following:

- The secretary-general's 1967 report on *The Effects of the Possible Use of Nuclear Weapons and on the Security and Economic Implications for States of the Acquisition and Further Development of These Weapons* was the first comprehensive study on this topic.[18]

- The first Group of Governmental Experts published its report in 1981: the *Comprehensive Study on Nuclear Weapons*. This study provided "factual information on present nuclear arsenals, trends in the technological development of nuclear-weapon systems, the effects of their use and the implications for international security."[19] This comprehensive study was updated again in 1991.[20]

- A report on *The Relationship between Disarmament and Development*, published by a Group of Governmental Experts in 1982, focused on the use of resources for military purposes, the socioeconomic consequences of the arms race and of disarmament measures, and how disarmament measures could free up resources for socioeconomic development.[21]

- The *Study on the Climatic and Other Global Effects of Nuclear War*, published by a Group of Governmental Experts in 1989, concluded "that a major nuclear war would entail the high risk of a global environmental disruption" and that "the risk would be greatest if large cities and industrial centres in the northern hemisphere were to be targeted in the summer months."[22]

Over the years, the General Assembly has created Groups of Governmental Experts to study a range of other subjects, including regional disarmament, confidence-building measures, the relationship between disarmament and international security, the economic and social consequences of the arms race and of military expenditures, unilateral nuclear disarmament measures, concepts of security, and deterrence.[23] Despite these many studies, with varying levels of relevance and success, little has been done in recent years. New science has emerged over the past several decades, but it is mostly confined to scientific journals and specialized audiences.

Nuclear-weapon-free zones (NWFZ): Influenced by the Rapacki Plan led by Poland in the 1950s (which never came to fruition), the first NWFZ was created in Latin America in 1967,[24] and there are now five

18 UN General Assembly, *Report of the Secretary-General on the Effects of the Possible Use of Nuclear Weapons and on the Security and Economic Implications for States of the Acquisition and Further Development of These Weapons*, UN Doc. A/6858, October 10, 1967.

19 UN Centre for Disarmament, *Comprehensive Study on Nuclear Weapons*, UN Doc. A/35/392, 1981.

20 UN Department of Disarmament Affairs, *Nuclear Weapons: A Comprehensive Study*, UN Doc. A/45/373, 1991.

21 UN Centre for Disarmament, *The Relationship between Disarmament and Development*, UN Doc. A/36/356, 1982.

22 UN Department for Disarmament Affairs, *Study on the Climatic and Other Global Effects of Nuclear War*, UN Doc. A/43/351, 1989.

23 See www.un.org/disarmament/publications/studyseries/ .

24 The 1967 Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean.

NWFZs (Latin America, the South Pacific, Southeast Asia, Africa, and Central Asia). The NPT recognizes NWFZs in Article VII and affirms the right of countries to be part of a regional approach to strengthening global nuclear non-proliferation and disarmament norms and to consolidating international efforts toward peace and security. NWFZs are treaty-based zones with legally binding protocols recognized by the five nuclear-weapon states. Within these NWFZs, countries may use nuclear energy for peaceful purposes. The issue is politically charged in the Middle East, where most countries wish to create an NWFZ but have been blocked by a few that oppose the start of discussions. This was one of the main factors behind the failure of the NPT review conference in May 2015.

Security Council Resolution 1540: The UN Security Council adopted one of the most "recent" norm-making resolutions in the field of non-proliferation in 2004. Security Council Resolution 1540 filled a gap in common international and regional standards for control of sensitive technologies that could lead to the proliferation of WMD, whether nuclear, chemical, or biological. The resolution imposes binding obligations on states to adopt domestic legislation addressing the means of delivering WMD and to establish appropriate domestic controls over related materials to prevent their illicit trafficking. Member states are required to report annually to the Security Council on their efforts to meet their obligations under this resolution.[25]

Chemical and Biological Weapons

With regards to non-nuclear WMD, the UN track record is more encouraging.

Chemical Weapons Convention (CWC): The CWC, which was signed in 1993 and entered into effect in 1997, was the first post–Cold War weapons treaty of a global and nondiscriminatory nature. Since then, the international community has demonstrated its strong desire to use this instrument to eliminate the possibility of developing, producing, using, stockpiling, or transferring chemical weapons. The 192 states parties to the CWC account for about 98 percent of the world's chemical industry, with nearly 5,000 industrial facilities liable to verification by the Organisation for the Prohibition of Chemical Weapons (OPCW), the body responsible for implementing the convention. The OPCW has verified the destruction of more than 90 percent of the world's declared stockpile of chemical agents and nearly 60 percent of known chemical munitions and containers.[26]

The CWC has deepened the international norm against the use and possession of chemical weapons and provided for unprecedented international cooperation in Syria, which led to the destruction of most of that country's known chemical weapons.[27] Before the adoption of UN Security Council Resolution 2118 in September 2013, Syria had to ratify the CWC to join the OPCW and turn over a series of documents related to its stockpile. This allowed the OPCW to establish a calendar for verifying, removing, and destroying its stockpiles, which was considered a success. The current top priority for the CWC is to gain universal membership and ensure that chemical weapons do not reemerge.

Biological Weapons Convention (BWC): The BWC, which was signed in 1972 and entered into effect in 1975 as the first multilateral disarmament treaty, has enshrined global and nondiscriminatory legal norms against biological weapons for over forty years. Under the BWC, 174 states parties have banned the production of an entire category of weapons.[28] However, while a formal verification regime has been long in the making, the continued absence of such a regime undermines the BWC's legitimacy and prevents it from properly addressing biological risks. Moreover, while member states agreed thirty years

25 UN Security Council Resolution 1540 (April 28, 2004), UN Doc. S/RES/1540.

26 Organisation for the Prohibition of Chemical Weapons, "The Chemical Weapons Ban Facts and Figures," October 2015, available at www.opcw.org/news-publications/publications/facts-and-figures/ .

27 Organisation for the Prohibition of Chemical Weapons, *Report on the Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction in 2014*, December 2, 2015.

28 The BWC builds on and complements other treaties, in particular the 1925 Protocol for the Prohibition of Asphyxiating, Poisonous or Other Gases, and of Bacterial Methods of Warfare.

ago to strengthen the treaty by reporting annually to the UN on confidence-building measures, only about half of the treaty signatories currently submit these voluntary annual reports. While there is universal agreement that biological weapons are not an acceptable means of warfare,[29] the BWC also does not sufficiently protect against new biological weapons or bioterrorism.

Other UN Institutions

UN Office for Disarmament Affairs (UNODA): Established as a department in 1998, UNODA is the secretariat for the UN disarmament machinery, including the UN Register of Conventional Arms and regional fora. It also provides support and information to member states and is the UN's public face for disarmament through education, outreach, and media relations.

UN Institute for Disarmament Research (UNIDIR): Established in 1980, UNIDIR is a voluntarily funded autonomous institute within the UN whose mission is to assist the international community, through research and education, in finding and implementing solutions to disarmament and security challenges. While UNIDIR does valuable work, it lacks adequate funding to sustain its workload.

UN secretary-general's Advisory Board on Disarmament Matters: The advisory board, established in 1978 and composed of fifteen experts, convenes twice a year to advise the secretary-general on specific disarmament matters. It also functions as UNIDIR's board of trustees. The advisory board adopts its agenda based on requests from the secretary-general and its own recommendations. The secretary-general reports annually to the General Assembly on the advisory board's activities.

Non-proliferation and Disarmament beyond the UN System

Addressing non-proliferation and disarmament issues within the confines of the multilateral machinery has been challenging, at best, especially in relation to nuclear weapons. Several attempts have been made to identify ways to end the nuclear disarmament stalemate by forcing movement in the UN or by circumventing the UN machinery altogether. These attempts have been met with great resistance by nuclear-weapon states and their allies (often referred to as nuclear umbrella states), and few have yielded concrete results. However, several state coalitions and multi-stakeholder initiatives have sought to create positive momentum where the multilateral system has not been able to.

Joint Comprehensive Plan of Action in Iran: The Iran nuclear deal, concluded in July 2015, is a landmark agreement resulting from multiparty negotiations. Although the agreement was plurilateral, the UN system, through the IAEA, was involved in its implementation. The Security Council had passed multiple resolutions over the years demanding that Iran halt its enrichment activities, but it took political leadership, which the UN lacked, to conclude negotiations. While the level of influence and legitimacy provided by the UN resolutions is open to debate, ultimately it was the P5+1 (or E3+3: China, Germany, France, Russia, the UK, and the US) that gained enough traction, after twenty months of negotiations and several failed attempts, to conclude an agreement.

In January 2016 the IAEA announced that Iran had met its nuclear-related commitments and that implementation of the deal could start. This set in motion the partial shutting down of the country's nuclear program. The multilateral system, through the IAEA, plays a key role in monitoring and verifying implementation of the deal. The Iran deal shows that each case may have its own specificities and solutions, but the notion of peaceful use of nuclear energy by non-nuclear-weapon states will henceforth be assessed by a new standard.

Nuclear Security Summit: Considering the need to reconcile growing interest in the peaceful use of nuclear energy in the developing world with non-

29 The use of biological weapons is prohibited in international and non-international conflicts under both treaty and customary international humanitarian law. See International Committee of the Red Cross, Customary IHL Database, Rule 73, available at www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter23_rule73 .

proliferation goals, nuclear security has become a major focus of international debate. This is the challenge US President Barack Obama tried to address through the launch, in 2010, of the Nuclear Security Summit (there have since been four summits, the latest, and last, in April 2016). The overall objective was to identify solutions at the national, regional, and international levels to concerns that vulnerable nuclear material could fall into the hands of terrorists.

Numerous commitments were made throughout the four summits to help strengthen the global nuclear security architecture. The summits provided the opportunity to draw commitments on the ratification and implementation of several treaties, including the Amendment to the Convention on the Physical Protection of Nuclear Material, which finally entered into force in May 2016, following the final summit. While not all agree on the importance of the summits' outcomes, they have created a space to discuss nuclear security and safety, get hundreds of national security commitments, and bridge the discussions on nuclear safety and security. Most of all, they have enabled the IAEA to establish a triennial International Conference on Nuclear Security (the first took place in December 2016), which promises to be much more inclusive than the summits.

Regional initiatives: While nuclear-weapon-free zones (NWFZs) can serve as regional building blocks for global nuclear disarmament, these are not the only regional initiatives. The constructive role of regional organizations in building norms and capacity often gets overlooked. For example, the Organization for Security and Co-operation in Europe's (OSCE) 2010 Astana Commemorative Declaration towards a Security Community is a transnational initiative engaging states at the national level to limit regional arms races.[30] This was preceded by the 1994 Principles Governing Non-Proliferation, which derived from OSCE states parties' endorsement of universal adherence to the NPT, CWC, BWC, and other international instruments.

Inter-organizational initiatives: Inter-organizational synergies that further enable awareness and implementation of global disarmament initiatives have already proven to be efficient tools, and they deserve more investment. Regional cooperation on Security Council Resolution 1540 is a case in point, as organizations such as the OSCE, Organization of American States, World Customs Organization, and World Health Organization have worked with UNODA in implementing relevant provisions. Regional or national regulatory agencies, such as the European Atomic Energy Community (Euratom), can also play a role in identifying verification and monitoring measures that could help develop greater political will for nuclear disarmament.

Government and civil society initiatives: Other initiatives by governments and civil society have emerged over the years to promote progress toward a world free of nuclear weapons, often on the margins of the multilateral system. These have included the following:

- The New Agenda Coalition, established in 1998, played a role in convincing nuclear-weapon states to agree to practical steps toward nuclear disarmament at the 2000 NPT Review Conference and consistently submits a resolution or decision to the General Assembly on a nuclear-weapon-free world.

- With the same objective, the Middle Power Initiative promotes the need to fill the legal gap on nuclear weapons.

- The Non-Proliferation and Disarmament Initiative, a ministerial-level group of twelve middle-power states established within the framework of the NPT in 2010, aims mainly to advance the nuclear disarmament agenda and promote greater transparency in the way nuclear-weapon states fulfill their disarmament obligations.

- The International Panel on Fissile Material, an independent group of arms-control and non-proliferation experts, produces research and

30 Organization for Security and Co-operation in Europe, Astana Commemorative Declaration Towards a Security Community, December 3, 2010.

reports often referenced by member states supporting the adoption of the Fissile Material Cut-off Treaty.

- The Proliferation Security Initiative, launched by the US in 2003, is an informal global effort to stop trafficking of WMD, their delivery systems, and related materials. One of its main activities has been to conduct several simulation exercises every year.

- The International Partnership for Nuclear Disarmament Verification, another US-led initiative, was announced in December 2014. It aims to bring together both nuclear-weapon and non-nuclear-weapon states to discuss the challenges of verification in nuclear disarmament and ways to overcome those challenges.

- Other bilateral and plurilateral treaties and arrangements seeking to reduce or eliminate certain categories of nuclear weapons or their delivery systems include the Nuclear Suppliers Group, the Missile Technology Control Regime, the Hague Code of Conduct against Ballistic Missile Proliferation, and the Wassenaar Arrangement.

This overview of WMD non-proliferation and disarmament efforts, while not exhaustive, demonstrates that not all is dormant. However, efforts mostly focus on denuclearization and seem limited in scope when considering the legal gap on several types of emergent threats. Moreover, the scope of these threats is widening with ongoing and emergent conflicts, and the concept of strategic stability, as commonly understood, is being challenged. While old frameworks and treaties remain relevant, they are in dire need of revitalization and complementary support. The legitimate concern is that new forms of warfare will outpace old frameworks. The fact is that "the ability to act quickly as new threats emerge—often in weeks or months, not years—is critical but underappreciated,"[31] and the question of whether these capabilities exist or can be developed remains.

31 Weber and Parthemore, "Innovation in Countering Weapons of Mass Destruction."

"Old Tools, New Threats" or "New Tools, Old Threats"?

Disenchantment and polarization are the two defining characteristics of the current WMD debate. The General Assembly's first-ever resolution (in 1946) established a commission to make proposals on "the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction."[32] General acceptance of the goal of nuclear disarmament has not changed in the seventy years since, but no agreement on a suitable pathway or a universal framework for achieving this goal has found consensus.

Nuclear-weapon states see progress on non-proliferation as a precondition for nuclear disarmament. While there is support for non-proliferation, there is also growing impatience among a large number of countries at the slow pace of nuclear disarmament. The pace of the two largest possessors' reductions has slowed, and none of the other nuclear-weapon states are part of any agreed multilateral framework to reduce their stockpiles of nuclear weapons. Neither is there any agreed framework for dialogue among all states possessing nuclear weapons to address nuclear dangers (including accidental or deliberate use of nuclear weapons), promote transparency, put in place confidence-building measures, or reduce their stockpile of nuclear weapons. Finally, the opposition of many nuclear powers to no-first-use of nuclear weapons demonstrates the entrenched nature of nuclear weapons in their security doctrines.

These factors bring to the fore the gaps in the legal regime (centered on the NPT), which focuses on containing and restraining possession rather than restraining the use of nuclear weapons. Those impatient with nuclear disarmament do not see merit in a step-by-step or building-block approach but rather support a leap forward with the decisive step of banning nuclear weapons.[33] A number of countries do not favor this approach, given their dependence on nuclear weapons for security, and have continued to modernize their nuclear forces, despite growing tensions between some of the main possessors. In the face of an impasse between the multilateral machinery and politically entrenched positions of nuclear-weapon states and their allies, can new approaches emerge and old concepts find their second wind?

Holistic Approaches for the Complete Elimination of WMD

The UN disarmament and non-proliferation machinery has been set up in such a way that discussions focus on obligations of nuclear-weapon states, verification mechanisms, and monitoring capabilities. Attempts to broaden the debate to address human rights, humanitarian consequences, transparency, and accountability are constantly challenged. Some states fear that allowing these issues to converge would cause alliances to emerge, making it much more difficult to avoid public and political pressure. Breaking the silos around these

32 UN General Assembly Resolution 1(1) (January 24, 1946).

33 Andrew Baklitskiy, "The 2015 NPT Review Conference and the Future of the Nonproliferation Regime," Arms Control Association, 2015, available at www.armscontrol.org/print/7084 .

issues could help democratize the UN machinery, even if political will and leadership are crucial for actually changing that machinery.

Humanitarian Impact: Dealing with the Consequences

While it is hard to imagine any use of nuclear weapons that would be fully compatible with existing principles and rules of international humanitarian law, this has not stopped countries from acquiring such weapons. As part of the movement to eliminate all forms of nuclear weapons, states and other actors have made significant efforts to raise awareness of the catastrophic consequences of the use of nuclear weapons. Since the risk of a nuclear attack, accidental or voluntary, can never be eliminated as long as nuclear armaments exist, the hope has been to provide traction for a push to eliminate nuclear weapons by raising awareness of the lack of existing capacity—and the difficulty of imagining future capacity—for an adequate humanitarian response to a nuclear attack.

The seventieth session of the General Assembly in 2015 saw the culmination of a global effort by UN member states (led by Austria, Mexico, and Norway) and civil society to call for a commitment to ban nuclear weapons because of the devastating humanitarian impact their use would have (e.g., the Humanitarian Pledge for the Prohibition and Elimination of Nuclear Weapons in Resolution 70/48, as well as several other resolutions). The main sponsors hosted a series of conferences over two years (2013–2014), highlighting the humanitarian consequences of using nuclear weapons to prevent them from ever being used again. The initiative brought additional attention to the importance of Article VI of the NPT,[34] channeled the voice of the majority of NPT member states on nuclear disarmament, and perhaps instilled enough dynamism to set in motion discussions on a legal instrument prohibiting nuclear weapons.[35]

While the call to ban nuclear weapons on humanitarian grounds has gained some momentum, the humanitarian consequences of other WMD still require greater awareness. Although the CWC and BWC have largely banned the development, production, stockpiling, and use of chemical and biological weapons, these weapons are easier to access and use, which is why they are often referred to as the "poor man's atomic bomb." The humanitarian impact of a smallpox outbreak or a chemical attack might not be as apocalyptic as that of a nuclear attack but would still be catastrophic and present an extremely challenging environment for first responders.

Breaking the Silos: Human Rights, Development, and WMD

WMD discussions in the multilateral system are clearly contained within the UN disarmament and non-proliferation machinery, leaving little space to broaden their scope—which is probably to the benefit of nuclear-weapon states. It could be considered whether to add this item to the agenda of the Human Rights Council under the "freedom from fear" in an effort to further push the debate beyond security doctrines. This was done quite successfully with the question of "killer robots," raising awareness and breaking the silos separating armaments from human rights.

The UN Conference on Trade and Development could also discuss the costs of WMD armaments and non-proliferation to development. Developing countries often face discrimination in multilateral fora when discussing disarmament.[36] Underrepresentation of developing countries, costs of armaments versus development aid, and the influence of agenda prioritization are not popular topics but, if they were to gain enough traction, could start to change and democratize the system.

34 Article VI refers to efforts made in good faith by NPT parties to pursue negotiations on a treaty on general and complete disarmament with the principal purpose of nuclear disarmament and the cessation of the arms race.

35 Paul Meyer, "Running Interference for Our Nuclear Allies," *Embassy*, November 26, 2015.

36 Article 36, "Disarmament, Development and Patterns of Marginalisation in International Forums," April 2016, available at www.article36.org/wp-content/uploads/2016/04/A36-Disarm-Dev-Marginalisation.pdf .

Civil Society: A Force to Be Reckoned With

The efforts around the Humanitarian Pledge for the Prohibition and Elimination of Nuclear Weapons, adopted during the General Assembly's seventieth session, "galvanized civil society engagement to a degree not seen for decades."[37] This is not to say that civil society has been idle when it comes to non-proliferation and disarmament, but its role is often undervalued, in part due to the notion that armaments, especially nuclear armaments, fall strictly under the purview of the state. Nevertheless, civil society advocacy has brought several issues to the forefront in other areas that fall under the purview of states, and many initiatives would not have materialized without continuous civil society efforts (e.g., the landmine convention and the creation of the International Criminal Court). While civil society has been given a yearly platform at the First Committee, and calls are being made for greater civil society interaction with the Conference on Disarmament, civil society is still marginalized in formal settings despite its informal influence.

A UN Nuclear Regulatory Agency

In 1946 the US presented the idea of all fissile material being owned by an international agency called the Atomic Development Authority. The Acheson-Lilienthal Report proposed that this authority release small amounts of fissile material to individual states for peaceful use of atomic energy. The US insisted on retaining the atomic bomb until satisfied with the effectiveness of the agency, causing the Soviet Union to reject the idea. The failure to secure international control of nuclear weapons virtually guaranteed the nuclear arms race that followed. The concept of a regulatory agency is attractive, and such an agency could benefit the international community at large, including by addressing terrorist threats. While such a proposal has several shortfalls and would be unlikely to succeed in the current international context, it deserves renewed attention, at least in the long term.

Twentieth Century Security Strategies in the Twenty-First Century

At the center of discussions on WMD is the question of whether certain types of weaponry can keep a country safer. At what point does owning WMD—whether nuclear, chemical, or biological—increase the risk of exposure, whether from an internal accident, a weapon launch due to cyberattack, or an attack by a threatened country? Here enters the deterrence debate.

Moreover, the unevenness of capabilities creates a dilemma facing efforts to unlock the gridlock in disarmament and non-proliferation: the states capable of developing new weapons are mainly the same as those defending the existing international system. In whose interest would it be to limit capabilities and impose international obligations? An arms race is reemerging, and this global threat lies in the hands of a few powerful states. This arms race links with other issues, including degradation of weapons systems, high-alert status, the growing role of non-state actors, and more precise, smaller, and cheaper weapons, to increase the global threat posed by WMD.

A Revitalized Arms Race

The nuclear weapons stockpile is aging and should be at least partly, if not entirely, retired. With the US and Russia both owning nearly 5,000 nuclear weapons, retiring them could have financial, safety, and security benefits for both countries. Instead, however, the US has moved toward modernizing its strategic nuclear capability at the cost of $1 trillion over thirty years, and Russia is upgrading its force "with new multi-warhead missiles, aircraft, submarines, and even a rumored nuclear underwater drone."[38] Between the proponents of complete disarmament and those defending a step-by-step approach, no one is asking how to contain a nuclear arms race and if the UN system can help.

37 Meyer, "Running Interference for Our Nuclear Allies."

38 Gordon Adams and Richard Sokolsky, "Obama Is About to Launch a New Nuclear Arms Race. There's a Better Way," Defense One, January 18, 2016.

The De-alerting Debate

The continuing role of nuclear weapons in security doctrines and their high-alert status has not kept pace with improvements in the international climate after the end of the Cold War. Unfortunately, the return of tensions in Central and Eastern Europe indicates that the earlier period was a lost opportunity. Even today, nuclear-armed intercontinental ballistic missiles (ICBMs) can reach the US or Russia in less than thirty minutes. US launch processes for ICBMs and submarine-launched ballistic missiles (SLBMs) require only two and twelve minutes, respectively.[39]

Nevertheless, there is still space for strengthening the stability-enhancing features of deterrence. Russia and the US could help by taking their thousands of nuclear warheads off high-alert.[40] Perhaps the risk of the launch of nuclear weapons by mistake or miscalculation is low, but eroding safety measures, strengthened cyber-attack capabilities, and the potential for human error increase those chances. The world has faced many close calls in the past.[41] The fact is that "high alert weapons carry a fourfold risk of unnecessary nuclear war."[42] With sufficient political will, this risk could be eliminated with minimal effect on the current security doctrine—even as the main nuclear possessors are looking to modernize their strategic force.

Backing Away from or Recommitting to Deterrence?

There is also a renewed debate about the role of nuclear deterrence.[43] While deterrence via conventional weapons is often more credible, nuclear weapons are the ultimate deterrent. This Cold War–era theory is facing new, more complex realities shaped by reemerging tensions, additional great powers, new nuclear-weapon states, the greater role of non-state actors, and new environments, including outer space and cyberspace. "Refurbishing" old weapons into smaller and smarter ones can make them better deterrents, and research is ongoing to develop nuclear missiles that are more precise, including for underground detonation. This could mean that fewer nuclear weapons are necessary for the same deterrence effect, but "the smaller yields and better targeting can make the arms more tempting to use—even to use first, rather than in retaliation."[44]

The existence of nuclear weapons, even if small in size or number, leads many to determine that deterrence might be "the safest doctrine to deal with them."[45] This doctrine is hard to disprove—until a nuclear attack by two states possessing nuclear weapons occurs. If no such attacks have occurred, however, it may not be because of but despite nuclear weapons. Parallels with a study on gun

39 Andrew Brown and Jeffrey Lewis, "Reframing the Nuclear De-Alerting Debate: Towards Maximizing Presidential Decision Time," Nuclear Threat Initiative, December 11, 2013, available at www.nti.org/analysis/articles/reframing-nuclear-de-alerting-debate-towards-maximizing-presidential-decision-time/ .

40 Ramesh Thakur, "How to Handle the Risk of Nuclear Proliferation," OpenCanada.org, February 27, 2015, available at www.opencanada.org/features/how-to-handle-the-risk-of-nuclear-proliferation/ .

41 Union of Concerned Scientists, "Close Calls with Nuclear Weapons," April 2015, available at www.ucsusa.org/sites/default/files/attach/2015/04/Close%20Calls%20with%20Nuclear%20Weapons.pdf .

42 Gareth Evans, Tanya Ogilvie-White, and Ramesh Thakur, "Nuclear Weapons: The State of Play 2015," Centre for Nuclear Non-Proliferation and Disarmament and Australian National University, 2015, available at https://cnnd.crawford.anu.edu.au/sites/default/files/publication/cnnd_crawford_anu_edu_au/2015-02/printer_copy.pdf .

43 Camille Grand, "The Salience of Nuclear Weapons after Ukraine," speech at 2015 EU Non-Proliferation and Disarmament Conference Second Plenary Session, November 12, 2015.

44 William J. Broad and David E. Sangerjan, "As U.S. Modernizes Nuclear Weapons, 'Smaller' Leaves Some Uneasy," *New York Times*, January 11, 2016, available at www.nytimes.com/2016/01/12/science/as-us-modernizes-nuclear-weapons-smaller-leaves-some-uneasy.html?ncid=newsltushpmg00000003&_r=0 .

45 Thérèse Delpech, "Nuclear Deterrence in the 21st Century: Lessons from the Cold War for a New Era of Strategic Piracy," RAND Corporation, 2012, p. 1.

regulations could suggest that the mere fact of possessing a weapon increases the chance of being a victim of violent attack.[46] Perhaps it is time to reestablish constructive dialogue between the strategic and disarmament communities to reevaluate security doctrine in the current context.

From Militarization to Weaponization of Outer Space

While the prevention of an arms race in outer space (PAROS) is a critical issue on the UN disarmament and arms control agenda, some argue that the threshold of whether "to militarize or not to militarize space" has already been crossed with the proliferation of strategic satellites and space exploration. With the crossing of this threshold, efforts should focus on preventing a space arms race by prohibiting the placement of weapons in outer space.[47] Strengthening space security could be achieved either through comprehensive or partial legal instruments (e.g., General Assembly Resolution 63/40 on PAROS, the Code of Conduct for Outer Space Activities) or through transparency and confidence-building measures (e.g., General Assembly Resolution 63/68). Both approaches have strong advocates, but a lack of trust and political will has made progress slow on both tracks at a time when threats to space security (e.g., ballistic missile defense, cyber threats, and weakened deterrence capabilities) have increased manifold.

Ballistic Missile Defense: Present and Alert

It is difficult to address the current debate without acknowledging ballistic missile defense (BMD). Considered either as the future of deterrence or as an increasing global threat, BMD technology (conventional or WMD) is said to be possessed by some thirty countries and is very much part of the twenty-first century landscape. A new dimension of BMD to be reckoned with is the creation of a hypersonic missile that would go five times the speed of sound. While no country has yet achieved this, some superpowers are said to be close to such capabilities, which would defy all early-warning systems. In the meantime, the presence of BMD in Europe is seen as directly responsible for growing tensions in the region, and the high-alert status of BMD remains a constant threat to the world.

46 Comparison of homicides and suicides in Seattle, WA, and Vancouver, BC, from 1980 to 1986 determines that almost everything about the cities was the same except gun control laws and homicide rates. The chances of being shot in Seattle were eight times greater. John Henry Sloan, et al., "Handgun Regulations, Crime, Assaults and Homicide," *New England Journal of Medicine* (1988).

47 Delpech, "Nuclear Deterrence in the 21st Century," p. 70.

Conclusions and Recommendations

The formal structures of the UN disarmament and non-proliferation machinery cannot and should not be replaced, but they are in need of serious revitalization. In an ideal world, the disarmament and non-proliferation machinery would be "open to all, blockable by none." The reality is that over the last thirty years, the UN disarmament machinery has suffered from a constant erosion of the processes that support its normative framework. The unnoticed passing of the seventieth anniversary of the General Assembly's first resolution, which called for a plan of action for the elimination of all nuclear weapons and other WMD, is a troubling sign for an organization that has too little to celebrate. Probably one of the most ominous signs comes from the General Assembly and its First Committee, which moved from condemning the use of nuclear weapons as a crime against humanity to declaring it "inherently immoral." These are symptoms of a declining system that has not been able to deliver anything new on disarmament in over twenty years.

At the root of lack of progress on disarmament is the lack of inclusiveness, which translates into a lack of political will and democratic pressure, coupled with rigid organizational procedures that allow member states to stall discussions. At the state level, progress will remain blocked by the self-preserving interests of the nuclear powers, which, while trying to limit proliferation, need to maintain nuclear capabilities as long as nuclear arms exist in any shape or form. This does not mean there is no space for improving, strengthening, and further developing the current disarmament regimes. While the multilateral system is not a panacea, it contains tools to address WMD and shape solutions.

The taboo around the "new" nuclear-weapon states confines them to the margins of the NPT and other nuclear disarmament discussions, with little accountability. At the same time, progress largely depends on how much pressure non-nuclear-weapon states are able to put on nuclear-weapon states, which is often too little. The resulting system is unyielding, lacks transparency, shields states from unwanted pressures, and only holds those accountable who have nothing to hide.

Even revitalizing the debate might not be sufficient to address new disarmament and non-proliferation challenges and risks opening a can of worms by allowing renegotiation of all past gains. Ad hoc conferences of like-minded states have proven useful for addressing specific subjects and generating international attention and momentum, but their outcomes lack universal consensus, limiting their long-term utility. However, they have the power to engender action by including all interested parties, which can be a motor for needed change.

Such movement is not created in a vacuum, and in the absence of political leadership to drive change, the UN might be kept waiting indefinitely. The following recommendations vary in ambition but are all in the realm of the possible for a secretary-general willing to tackle the issue of disarmament and non-proliferation.

Strengthen the UN Disarmament Machinery

1. **The General Assembly should request that the secretary-general establish a Group of Governmental Experts to conduct a new comprehen-**

48 UN General Assembly Resolution 1653(XVI) (November 24, 1961), UN Doc. A/RES/1653(XVI).
49 UN General Assembly Resolution 70/50 (December 7, 2015), UN Doc. A/RES/70/50.

sive study on nuclear weapons. This study would assess: (1) the development of nuclear arsenals and stockpiles of weapons-usable materials since 1946 and their current size and capabilities; (2) trends in the technological development of nuclear-weapon systems; (3) the economic cost and implications for states of acquiring, maintaining, modernizing, and further developing nuclear weapons; and (4) the humanitarian effects of using nuclear weapons, including the potential climatic and physical effects of nuclear war and its socioeconomic consequences.

2. **The secretary-general should consider reinstating the Department for Disarmament Affairs.** While there were good reasons to change the Department for Disarmament Affairs to the Office for Disarmament Affairs (UNODA) in 2007, many would admit it has lost some of its clout in the process. More than a cosmetic change, this would facilitate access to greater funding, resources, and capabilities to handle today's disarmament and non-proliferation challenges. It would also strengthen the mandate to develop policies and strategies for the secretary-general.

3. **The secretary-general should request that UNODA—or the UN Institute for Disarmament Research (UNIDIR)—look into the management and doctrine of nuclear weapons.** Through Groups of Governmental Experts, the General Assembly has already looked into past doctrines, but a nongovernmental study could update and focus UN discussions on these issues. Such a study could help non-nuclear-weapon states, think tanks, and civil society advance and support more inclusive and transparent discussions among the P5. It could also serve as a tool for controlling the quality and accuracy of information and for getting buy-in from the P5.

4. **The secretary-general should propose strengthening UNIDIR's mandate and providing core funding.** UNIDIR fulfills a unique role in providing member states and the multilateral system with quality research. With sustainable and predictable funding, it would be better placed to carry out research pertaining to all member states and civil society, helping bridge a growing gap in knowledge and participation. UNODA could then commission UNIDIR to play a more central role in discussions on nuclear weapons management and in reviewing security doctrines in light of current challenges.

5. **The secretary-general should mandate UNODA to explore ways for nuclear-weapon states to bear a cost for retaining nuclear weapons.** For example, nuclear-weapon states could subsidize measures by non-nuclear-weapon states to protect against the indiscriminate effects of nuclear weapons. This mandate could give UNODA a more practical role in coordinating such measures—perhaps as an Office of Disarmament and Protective Security—and compel a rethink of extended deterrence.

Support the IAEA's Increasing Responsibilities

6. **Member states should provide the resources necessary for the International Atomic Energy Agency (IAEA) to discharge its responsibilities under the Non-Proliferation Treaty (NPT).** The IAEA's mandate includes promoting technical cooperation in the fields of nuclear safeguards, safety, and security, which is funded by voluntary contributions. Member states should consider funding some of this work under the regular budget, in part to guarantee greater access to technical cooperation for developing countries.

7. **The IAEA should create a science and technology advisory board.** This board could conduct research on nuclear safeguards, safety, and security in support of existing advisory groups and bilateral programs. It could also help share information among member states and with civil society.

Implement Security Council Resolution 1540 and Other Paths to Innovative Multilateralism

8. **UNODA should identify links between Resolution 1540 and other issues.** In particular, it should explore links between Resolution 1540 (putting in place non-proliferation measures)

and cybersecurity and terrorism to help address gaps and challenges in the non-proliferation regime (e.g., the potential for cyberattacks to turn nuclear power plants into WMD).

9. **Nuclear discussions should be broadened to include human rights and humanitarian issues.** Including human rights and humanitarian issues in the discussion on nuclear disarmament and non-proliferation can make them more inclusive by incorporating the views of those potentially most affected by nuclear weapons policies.

10. **The secretary-general, through UNODA, should build on Resolution 1540 to improve the UN's image.** The diffusion of technology and the emergence of new actors have highlighted the need for increased regulatory controls that build on Resolution 1540. Supporting implementation of Resolution 1540 through broader outreach, capacity building, and cooperation with all stakeholders would also help increase awareness of the work of the UN multilateral system in supporting non-proliferation initiatives.

Assess the Role of New Technologies

11. **The UN General Assembly should mandate the secretary-general to report on new technologies and WMD.** New technologies have an important role to play in countering WMD, particularly in democratizing the process of countering proliferation. The UN should report on the impact of new developments of science and technology on international security, in particular WMD.

12. **The UN, through the IAEA and implementation of Resolution 1540, could help provide affordable access to counter-proliferation technologies.** The UN can support efforts by low-income countries to counter threats from WMD. New technologies can also help expand opportunities for the private sector and individual citizens to mitigate dangers from nuclear, biological, and chemical weapons. The goal would be to invest in innovation for good rather than feeding an arms race for new technology.

Engage Civil Society

13. **The secretary-general should support NGOs in mobilizing funding through multiple sources.** This would help strengthen the role of civil society in the disarmament machinery, help include underrepresented regions in debates, and legitimize the role of civil society at the UN.

14. **The secretary-general should consider creating a forum bringing together member states and NGOs working on disarmament and non-proliferation.** While UNODA recognizes the key role of NGOs, the lack of a formal forum impedes NGOs from developing relationships and gaining exposure to all the work being done. Such a forum could serve as an alternative pathway channeling civil society's determination to overcome the gridlock on disarmament and non-proliferation.

Annex 1: ICM Personnel

Co-chairs

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HE Mr. José Manuel Ramos-Horta, *Timor-Leste*
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HE Mr. Claude Wild, *Switzerland*

Conveners

Terje Rød-Larsen, President,
International Peace Institute

The Ministerial and Ambassadorial Board lists include attendees at the ICM Ministerial and Ambassadorial Board meetings.

ICM Secretariat

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Hillary Saviello, Social Media Officer

Annex 2: ICM Policy Papers

This is one in a series of fifteen issue-specific policy papers that the Independent Commission on Multilateralism (ICM) is publishing over the course of 2016 and 2017. These papers cover in greater detail issue areas addressed in ICM's September 2016 report "Pulling Together: The Multilateral System and Its Future." The fifteen policy papers (not in order of publication) are as follows:

Armed Conflict: Mediation, Peacebuilding, and Peacekeeping

Climate Change and the 2030 Agenda for Sustainable Development

Communication Strategy for the UN Multilateral System

Engaging, Supporting, and Empowering Global Youth

Forced Displacement, Refugees, and Migration

Fragile States and Fragile Cities

Global Pandemics and Global Public Health

Humanitarian Engagements

Impact of New Technologies on Peace, Security, and Development

Justice and Human Rights

Social Inclusion, Political Participation, and Effective Governance

Terrorism and Organized Crime

The UN, Regional Organizations, Civil Society, and the Private Sector

Weapons of Mass Destruction: Non-proliferation and Disarmament

Women, Peace, and Security

Annex 3: Participation in Consultations

Retreat: February 4–5, 2016 (Graduate Institute, Geneva)

Keynote Speaker

Jayantha Dhanapala, *President, Pugwash International; Former UN Under-Secretary-General for Disarmament Affairs*

Participants

Joseph Ballard, *Senior Policy Officer, Office of Strategy and Policy, Organisation for the Prohibition of Chemical Weapons*

Sergey Batsanov, *Director, Geneva Office, Pugwash Conferences on Science and World Affairs*

Mónica Bolaños Pérez, *Deputy Permanent Representative, Permanent Mission of Guatemala to the United Nations in Geneva*

Tim Caughley, *Resident Senior Fellow, UN Institute for Disarmament Research*

Regina Maria Cordeiro Dunlop, *Permanent Representative, Permanent Mission of Brazil to the United Nations in Geneva*

Els Debuf, *Senior Adviser on Humanitarian Affairs, Independent Commission on Multilateralism*

Ariun Enkhsaikhan, *Development Assistant, International Peace Institute*

Abdellatif Fakhfakh, *Permanent Mission of the United Arab Emirates to the United Nations in Geneva*

Cornel Feruţă, *Chief Coordinator, Director General's Office for Coordination, International Atomic Energy Agency*

Beatrice Fihn, *Executive Director, International Campaign to Abolish Nuclear Weapons*

Barbara Gibson, *Deputy Secretary-General, Independent Commission on Multilateralism*

István Gyarmati, *President, International Centre for Democratic Transition*

Nassereddin Heidari, *Minister, Permanent Mission of the Islamic Republic of Iran to the United Nations in Geneva*

Samantha Kumari Jayasuriya, *Deputy Permanent Representative, Permanent Mission of Sri Lanka to the United Nations in Geneva*

Rebecca Johnson, *Executive Director, Acronym Institute for Disarmament Diplomacy*

Benno Laggner, *Head of the Division for Security Policy and Ambassador for Nuclear Disarmament and Non-proliferation, Ministry of Foreign Affairs of Switzerland*

Kathleen Lawand, *Head of Arms Unit, Legal Division, International Committee of the Red Cross*

Jimena Leiva Roesch, *Senior Policy Analyst, International Peace Institute*

Patricia Lewis, *Research Director, International Security, Chatham House*

Jorge Lomónaco, *Permanent Representative, Permanent Mission of Mexico to the United Nations in Geneva*

Adam Lupel, *Director of Research and Publications, International Peace Institute*

Saja Majali, *Permament Representative, Permanent Mission of Jordan to the United Nations in Geneva*

Grégoire Mallard, *Associate Professor, Graduate Institute of International and Development Studies*

Rosemary McCarney, *Permanent Representative, Permanent Mission of Canada to the United Nations in Geneva*

Zia Mian, *Director, Program on Science and Global Security, Princeton University*

Omar El Okdah, *Senior Policy Analyst, International Peace Institute*

Cormac O'Reilly, *External Relations Officer, Comprehensive Nuclear-Test-Ban Treaty Organization*

Véronique Pepin-Hallé, *Adviser, Independent Commission on Multilateralism*

Pedro Motta Pinto Coelho, *Special Representative of Brazil to the Conference on Disarmament in Geneva*

Vaanchig Purevdorj, *Permanent Representative, Permanent Mission of Mongolia to the United Nations in Geneva*

Hardeep Singh Puri, *Secretary-General, Independent Commission on Multilateralism*

Amr Ramadan, *Permanent Representative, Permanent Mission of Egypt to the United Nations in Geneva*

Anette Ringnes, *Research Assistant, International Peace Institute*

Laura Rockwood, *Executive Director, Vienna Center for Disarmament and Non-Proliferation*

Kevin Rudd, *Chair, Independent Commission on Multilateralism*

Rodrigo Saad, *Special Assistant to the Secretary-General of the Independent Commission on Multilateralism, International Peace Institute*

Mark Smith, *Program Director, Defence and Security, Wilton Park*

Mary Soliman, *Acting Director, UN Office for Disarmament Affairs*

Lisa Tabassi, *Head of Legal Services, Organization for Security and Co-operation in Europe*

Fred Tanner, *Senior Adviser to the Secretary General, Organization for Security and Co-operation in Europe*

Thani Thongphakdi, *Permanent Representative, Permanent Mission of Thailand to the United Nations in Geneva*

Venkatesh Varma Datla Bala, *Permanent Representative, Permanent Mission of India to the Conference on Disarmament in Geneva*

Public Consultation: June 8, 2016

Discussants

Ray Acheson, *Director, Reaching Critical Will*

Vladimir Drobnjak, *Permanent Representative, Permanent Mission of Croatia to the United Nations*

Thomas Markram, *Director and Deputy to the High Representative, UN Office for Disarmament Affairs, UN*

Zia Mian, *Director, Program on Science and Global Security, Princeton University*

Moderator

Véronique Pepin-Hallé, *Adviser, Independent Commission on Multilateralism*

IPI Personnel

Issue Area Lead: Véronique Pepin-Hallé

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777 United Nations Plaza
New York, NY 10017–3521
USA
TEL +1-212 687-4300
FAX +1-212 983-8246

Freyung 3, 1010
Vienna, Austria
TEL +43-1-533-8881
FAX +43-1-533-8881-11

51-52 Harbour House
Bahrain Financial Harbour
P.O. Box 1467
Manama, Bahrain
TEL +973-1721-1344

www.ipinst.org

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