

2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Working paper submitted by Japan

The Government of Japan presents its compliments to the President of the tenth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons and has the honour to transmit herewith the text entitled “Chair’s Report” (see annex I), produced by the Group of Eminent Persons for Substantive Advancement of Nuclear Disarmament, and the transcript of the Opening Remarks by Prime Minister Kishida from Japan at the 3rd Track 1.5 Meeting for Substantive Advancement of Nuclear Disarmament on 9 December 2021 (see annex II).

The Group of Eminent Persons was established in 2017 by the Government of Japan, aiming at producing recommendations on concrete measures that could be taken by the international community for substantive advancement of nuclear disarmament, as well as aiming at helping bridge the gap among States. Members of the Group participated in the discussions in their personal capacities, and do not represent any specific organizations or countries.

The Group of Eminent Persons has produced three papers to date, all of which were incorporated into the process of the 2020 Treaty on the Non-Proliferation of Nuclear Weapons Review Conference. A report entitled “Building Bridges to Effective Nuclear Disarmament” was submitted to Ambassador Adam Bugajski, Chair of the second session of the Preparatory Committee for the tenth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons at the side event of the Group on the occasion of the Committee on 24 April 2018. Another report entitled “Kyoto Appeal” was submitted to Ambassador Syed Mohamad Hasrin, Chair of the third session of the Preparatory Committee for the tenth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons on 23 April 2019 ([NPT/CONF.2020/PC.III/WP.29](#)).

The Group of Eminent Persons further produced its “Chair’s Report”, which summarized the discussions and views expressed by the group members during the meetings held five times and also suggesting actions that can be initiated to move forward nuclear disarmament before the tenth Review Conference and during the next Treaty review cycle. The Government of Japan is pleased to input the Report to the tenth Review Conference.

While the tenth Review Conference had been postponed from March 2020, the Government of Japan has organized three “Track 1.5 meetings for Substantive Advancement of Nuclear Disarmament” to follow up and develop the discussions in the meetings of the Group of Eminent Persons.



The first meeting was held on 6 March 2020 and participants discussed three concrete nuclear disarmament measures towards the Review Conference: transparency, nuclear risk reduction, and nuclear disarmament and non-proliferation education. At the second meeting that was held on 9 March 2021, participants discussed the role of the Review Conference in avoiding division and encouraging dialogue on nuclear disarmament, concrete ideas on outcomes and agreeable measures among states at the Conference.

On 9 December 2021, the Government of Japan hosted the 3rd Track 1.5 Meeting for Substantive Advancement of Nuclear Disarmament online. Participants discussed ideas on possible outcomes of the tenth Review Conference, which was attended by government officials and experts from academia from various countries and representing a wide spectrum of positions.

Furthermore, Prime Minister Kishida made opening remarks. This marked the first time, in which a Prime Minister from Japan attended this Track 1.5 meeting. In his remarks, Prime Minister Kishida stated, “With the aim of producing a successful outcome at the Review Conference, I would like all experts at today’s meeting to put forward ideas irrespective of their national positions and to conduct candid discussions on concrete pathways for the realization of a world without nuclear weapons”.

Japan believes that the “Chair’s Report” of the Group of Eminent Persons and remarks made by Prime Minister Kishida at the above-mentioned meeting could be a meaningful reference for the international community and requests that these texts be circulated as a working paper for the tenth Review Conference.

Annex I

Chair's Report

Introduction

1. Prompted by deterioration of the international security environment and widening of serious schisms on approaches towards achieving a world without nuclear weapons between nuclear-weapon states and non-nuclear-weapon states, as well as among non-nuclear-weapon states, Mr. Fumio Kishida, then Foreign Minister of Japan, announced the establishment of the Group of Eminent Persons for Substantive Advancement of Nuclear Disarmament at the First Session of the Preparatory Committee for the 2020 Nuclear Non-Proliferation Treaty Review Conference in May 2017.
2. The most serious schism on nuclear disarmament is between those who approach nuclear disarmament from the standpoint of security, and those who approach it from the standpoint of humanitarianism, norms and morals. To bridge the gap between these two viewpoints requires political compromise and restoration of constructive dialogue. At the same time, it is necessary to delineate the most important issues to be discussed so that constructive dialogue can commence as soon as possible.
3. The purpose of this report is to characterize the gap between the logic of security and the logic of humanitarianism pertaining to nuclear weapons; to identify and explore “hard questions” that must be faced in order to eliminate nuclear weapons; and to suggest early steps that states and civil society groups can take to help bridge the gap between the two sides.
4. The Group of Eminent Persons members agreed that in his individual capacity, the Chairperson would prepare a report summarizing the discussions and views expressed during five meetings of the group. Therefore, this Chair's Report is not a consensus document agreed by the Group's members, but a summary of their ideas and discourse.
5. The report consists of five parts:
 - I. “State of the Affairs: Current Environment Surrounding Nuclear Disarmament,” which analyses factors that shape the current nuclear disarmament agenda;
 - II. “Hard Questions: Agenda for Building Bridge,” which explores issues that must be addressed to substantively advance nuclear disarmament;
 - III. “Principles for Positive Engagement to Bridge Disarmament Divide”, which enumerates elements for constructive engagement by contending parties over nuclear disarmament;
 - IV. “Actions that can be started before 2020,” which proposes steps that can be immediately or urgently started to move forward nuclear disarmament before the 2020 Review Conference;
 - V. “Actions that can be taken between 2020 and 2025,” which identifies actions that require additional preparation and therefore could be initiated during the next Treaty review cycle.

I. STATE OF THE AFFAIRS: CURRENT ENVIRONMENT SURROUNDING NUCLEAR DISARMAMENT

1) Deteriorating US-Russian Arms Control and Rising Major Power Competition

6. The erosion of the US-Russian nuclear arms control regime presents immediate, serious security concerns and has important ramifications for the overall nuclear disarmament architecture. After accusing each other of violating the Treaty on Intermediate-Range Nuclear Forces, Washington and Moscow withdrew from the treaty on August 2, 2019. Furthermore, the United States and Russia have yet to make progress in discussions on the future of the New Strategic Arms Reduction Treaty (New START), which will expire in 2021. They have not agreed on even an extension of the treaty. Momentum and political will for deeper cuts in US and Russian nuclear weapons seem to be lost. Unless and until Washington and Moscow resume discussions on arms control and strategic stability, prospects look dim for further reductions in strategic and non-strategic nuclear weapons below the limits established under New START.

7. The US-Russia arms control situation is further complicated by intensifying competition among the major powers. The United States, Russia, and China are all implementing nuclear modernization programmes, which include work on ballistic missile defences, hypersonic boost-glide weapons, and other emerging technologies that complicate strategic stability. Such developments reaffirm the role of nuclear weapons in their respective security policies and bolster nuclear deterrence. Meanwhile, technology developments and doctrinal changes seem to be lowering the threshold for using nuclear weapons, and consequently increasing the risk of a nuclear catastrophe.

2) Growing Regional Security and Proliferation Concerns

8. Regional security dynamics also greatly affect the landscape for nuclear disarmament. Although US and Russian arsenal reductions resulted in a decline in the net number of nuclear weapons since the Cold War, nuclear arsenals in East and South Asia have been increasing, while concerns over future proliferation in the Middle East complicate security in the region.

9. In South Asia, tensions and periodic military crises between India and Pakistan are increasing the risk of nuclear war between these two non-Treaty nuclear-armed states.

10. In the Middle East, there has been little progress toward the establishment of a zone free of weapons of mass destruction. A conference to be held under the auspice of the United Nations in November 2019, without the participation of Israel, can hardly be expected to result in significant progress. Furthermore, the Joint Comprehensive Plan of Action (JCPOA), which resolved immediate concerns about nuclear proliferation by Iran, is on the verge of collapse following withdrawal of the United States from the agreement. With Iran not receiving the promised economic returns for its compliance with the JCPOA, Tehran has started to break out of the agreed constraints on uranium enrichment. The risks of military confrontation between the United States and Iran are acute.

11. In East Asia, tensions on the Korean Peninsula in 2017 caused by North Korea's nuclear and long-range missile tests eased in 2018 following summit meetings between states in the region and North Korea. However, it remains unclear whether negotiations can produce an agreement that leads North Korea to take steps toward the total elimination of its nuclear weapons and related programmes.

3) Eroding Multilateral Disarmament Machinery

12. The Non-Proliferation Treaty remains the cornerstone of the international nuclear non-proliferation regime and enjoys near universal adherence. However, uneven implementation of the commitments contained in the Treaty and made in the context of past review conferences is causing frustration among many states and raising difficult questions about how to strengthen treaty implementation in the future. In particular, non-nuclear-weapon states charge that nuclear-weapon states have not made sufficient progress or taken sufficiently “meaningful measures” over many years toward implementing the disarmament commitments contained in article VI of the Non-Proliferation Treaty. Although the United States and Russia claim that they have cut their nuclear forces by 85 per cent from their Cold War peak arsenal, some non-nuclear-weapon states argue that these reductions have been driven by national security imperatives and that none of the five nuclear-weapon states have ever carried out nuclear force reductions expressly for the purpose of implementing Article VI.

13. The lack of universality of the Non-Proliferation Treaty remains an outstanding challenge. India, Israel, and Pakistan never joined the treaty, while North Korea’s legal status is a matter of dispute. Meaningful discussions on nuclear disarmament require the participation of all countries, but the lack of universality means this is very difficult in the current Treaty context.

14. In addition, the Non-Proliferation Treaty review process suffers from institutional fatigue. Previous consensus commitments on nuclear disarmament (the 13 steps agreed in 2000 and the 2010 Action Plan) stand unfulfilled. Debates on key issues have become sterile and repetitive. Many states and civil society groups have seemingly become indifferent to the review process, and only a handful of states devote high-level attention to the review meetings. This contributes to a vicious cycle that further erodes the value of the review process.

4) Acute Divide over Nuclear Disarmament

15. Differences of view over the positive and negative roles that nuclear weapons play in international peace and security have become sharper.

16. On one side of the divide are those who favour the immediate prohibition and abolition of nuclear weapons. They insist that stability that might result from a nuclear “balance of terror” is unethical, and that the continued presence of nuclear weapons threatens the existence of human beings. They argue that the survival of humanity requires that nuclear weapons never be used under any circumstances and should be eliminated as soon as possible. They further contend that nuclear-armed states’ perceptions of the value of nuclear deterrence and the status and prestige derived from nuclear weapons create potential temptation for further proliferation.

17. On the other side of the divide are those who favour retaining nuclear weapons for security purposes. They argue that nuclear weapons, and especially nuclear deterrence, play an essential role in maintaining national security and international stability by deterring an adversary’s use of nuclear weapons and, for some countries, other weapons of mass destruction and conventional weapons; preventing large-scale warfare among major powers (or nuclear-armed states); stabilizing major-power relations through mutual deterrence; offsetting an adversary’s perceived superior military capabilities; and preserving status and prestige as a major power. Accordingly, they stipulate that advances toward nuclear disarmament depend on achieving a stable international security environment.

18. In light of this deep divide, states and a large number of civil society groups that advocate for immediate nuclear disarmament initiated negotiations culminating in the

Treaty on the Prohibition of Nuclear Weapons. The treaty was adopted with the approval of 122 states at the General Assembly in July 2017. All five nuclear-weapon states, other nuclear-armed states, and some non-nuclear-weapon states, comprising mostly allies of nuclear-weapon states did not sign the treaty.

19. The Treaty on the Prohibition of Nuclear Weapons proponents tend to view the treaty as an expression of frustration that progress towards a world without nuclear weapons is blocked by nuclear-armed states which are perceived to lack the political will to advance nuclear disarmament. Proponents argue that the Treaty, which highlights international concerns about the potential for disastrous humanitarian and environmental consequences of nuclear war and challenges the notion that nuclear weapons are acceptable armaments, is itself an essential plank in the platform for the elimination of nuclear weapons. They contend the treaty will increase awareness of the humanitarian dimensions of nuclear weapons, thereby enhancing a prohibition norm. Some supporters of the Treaty on the Prohibition of Nuclear Weapons also argue that the treaty demonstrates the political costs of the nuclear-armed states' failure to live up to their Non-Proliferation Treaty commitments regarding nuclear disarmament.

20. Sceptics and opponents of the Treaty on the Prohibition of Nuclear Weapons, on the other hand, insist that the treaty will not be effective in eliminating nuclear weapons because the nuclear-armed states refuse to sign it. They argue that the security issues that drive nuclear-armed states and their allies to rely on nuclear deterrence cannot be solved through the Treaty. Furthermore, they criticize the treaty for eliding how nuclear disarmament should be verified and enforced, which are among the key issues that must be resolved if nuclear disarmament is to be pursued.

21. The relationship between the Non-Proliferation Treaty and the Treaty on the Prohibition of Nuclear Weapons is also a matter of debate. Opponents of the Treaty on the Prohibition of Nuclear Weapons warn that it risks neglect of the Non-Proliferation Treaty and its review process, possibly contributing to delegitimizing the Non-Proliferation Treaty as the foundation of the international non-proliferation regime. Proponents of the Treaty on the Prohibition of Nuclear Weapons retort that the Treaty is not a cause, but a symptom, of the gap and inequality between nuclear-weapon states and non-nuclear-weapon states that has already been "institutionalized" in the Non-Proliferation Treaty and has widened due to inadequate implementation of nuclear disarmament obligations/commitments by nuclear-armed states.

22. The Treaty on the Prohibition of Nuclear Weapons negotiation process and conclusion, as well as uncertainty about how to deal with the treaty during the Non-Proliferation Treaty Review Conference preparatory meetings, highlights how wide and deep the gap between these two groups has become. The divide is so stark that states with divergent views increasingly are unable to engage in constructive dialogue with each other.

II. HARD QUESTIONS: AGENDA FOR BUILDING BRIDGE

1) Finding a Common Ground and Building Bridges

23. Regardless of disagreements expressed by states during the Non-Proliferation Treaty review process and the Treaty on the Prohibition of Nuclear Weapons negotiations, it is not in any state's interest to allow the foundation of the global nuclear order to crumble. Rather, it is a common interest of all states to improve the international security environment and pursue a world without nuclear weapons in line with Article VI of the Non-Proliferation Treaty. The international community must move urgently to narrow and ultimately resolve its differences.

24. In order to build bridges across the nuclear disarmament divide, both sides need to recognize and accept the existence of these differences in view. Further, these differences must be addressed constructively if they are to be reconciled in a way that makes the elimination of nuclear arsenals possible. The long-standing dispute over the way forward, especially over how to reduce the role of nuclear weapons in national security policy or strategic relationships among states, can only be resolved through reasoned discourse and structured negotiations, rather than unproductive finger pointing. For example, nuclear prohibition advocates need to acknowledge that security concerns expressed by states that now rely on nuclear deterrence must be resolved, or at least redressed, if they are to make serious steps to eliminate nuclear weapons. States that rely on direct or extended nuclear deterrence need to acknowledge the humanitarian concerns about nuclear weapons and nuclear deterrence. These states should also acknowledge that, although nuclear deterrence may arguably enhance stability in certain environments, it is a dangerous basis for global security and therefore all states should seek a better long-term solution. Political leaders and civil society actors on both sides should acknowledge the differences that divide the groups, while showing respect for each other's opinions and conscientiously addressing their mutual concerns. In addition, they should not stick to their own positions in principle, but should exercise flexibility and make every effort to seek common goals and values through collaboration and cooperation.

25. Actors that wish to build bridges across the divide should consider developing an agenda that requires states and civil society groups holding diverse views to address directly the fundamental issues and questions at the heart of the divide, so that possible pathways to common ground can be identified and effective, concrete steps toward nuclear disarmament can be taken. One possible fruitful avenue, for instance, would be to establish a common agenda on the historic and root causes of reliance on nuclear weapons.

26. A successful bridge-building agenda to foster dialogue involving both nuclear-armed states and non-nuclear-weapon states must: (1) contribute effectively to the reduction of threats and risks and to lowering tensions in the current security environment; (2) improve confidence and trust among all types of states – nuclear-armed states, states in extended nuclear deterrence alliances, and proponent states of the Treaty on the Prohibition of Nuclear Weapons; and (3) address security concerns likely to be incurred during a nuclear disarmament process.

2) Hard Questions

27. Central to the impasse between proponents of deterrence and proponents of nuclear abolition are divergent views on a series of “hard questions.” It is difficult to see how states can break the impasse and develop a common vision for a world without nuclear weapons if they do not discuss and address these questions constructively. The agenda includes such issues as:

- a) The relationship between nuclear deterrence and security, including the right of self-defence
- b) Nuclear deterrence as the only remaining role of nuclear weapons
- c) The consistency of uses of nuclear weapons with international humanitarian law
- d) Risks, mitigation and accountability associated with various aspects of nuclear weapons
- e) How to manage the process of nuclear disarmament without undermining the security environment, and
- f) How to maintain a world free of nuclear weapons once it is achieved.

a) Nuclear deterrence and the right of self-defence?

28. Would it be legitimate or appropriate for a state to use nuclear weapons as a last resort if it concludes it would otherwise lose a war that threatened its existence? This question engages an undefined problem in international law characterized by the tension between state survival and the potential humanitarian consequences of nuclear use.

29. The International Court of Justice advisory opinion in 1996 regarding legality of the threat or use of nuclear weapons highlights this question: “[T]he threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law; however, in view of the current state of international law, and of the elements of fact at its disposal, the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake.” In practice, any use of force, especially nuclear force, for self-defence must meet universally agreed principles and conditions to exercise the right of self-defence including imminence, necessity (no alternative other than using armed forces), and proportionality.

30. A key issue is whether it is possible for any nuclear use to meet the legal principles for legitimate exercise of the right of self-defence, given the potential for catastrophic levels of casualties and environmental destruction. Abolition proponents tend to argue that nuclear weapons cannot be reconciled with the right of self-defence. If states stipulate the plausible legality of the use of nuclear weapons in extreme cases of self-defence, rather than advancing a strict prohibition and delegitimization, it will be exceedingly difficult to eliminate nuclear weapons forever.

31. Some deterrence proponents, on the other hand, argue that the use of nuclear weapons as a last resort could meet the principles for self-defence if no other measures could stop the aggression, and low-yield nuclear weapons are used only against military targets surrounded by few, if any, civilians. However, the risk remains that even small-scale, low-yield nuclear warheads could lead to conflict escalation and, ultimately, catastrophic consequences. This raises a corollary issue of how to assess proportionality and what could constitute a level of permissible damage.

32. Alternatively, can there be a clear distinction between survival of the state, which might be deemed less legitimate as reason for use of nuclear weapons, and survival of the nation/population? For instance, would it be legitimate for North Korea to use nuclear weapons against Japan, South Korea or the United States in order to prevent certain military defeat or leadership decapitation? If nuclear use by North Korea in such circumstances was perceived as illegitimate, then the applicability of this principle to other nuclear-armed states must be questioned.

33. If the use of nuclear weapons in circumstances of national survival or genocide prevention were to cause environmental and possibly humanitarian catastrophe to non-belligerent nations, how should the conflict between these two categories of states’ rights be addressed?

b) Nuclear deterrence as the only remaining role of nuclear weapons?

34. Should the only role of nuclear weapon be deterrence of other nuclear weapons? To answer this question it is necessary to answer whether there are any non-nuclear threats today (or on the horizon) that cannot be deterred or defeated by means other than nuclear weapons?

35. States with strong conventional military forces might feel sufficiently confident that they do not need nuclear weapons to deter or defeat conventional (or hybrid)

military threats. However, weaker states, and/or providers of extended deterrence to weaker allies, might believe that conventional weapons alone will not deter or defeat aggression by powerful potential aggressors to avoid defeat.

36. Some nuclear-armed states and their allies argue that chemical or biological weapons use cannot be deterred or defeated without threat or use of nuclear weapons. In the future, emerging non-nuclear threats such as cyberattacks on national or global critical infrastructure, might fall into the same category. There is no clear evidence to support the likelihood of such “cross-domain” deterrence. Sceptics of nuclear deterrence argue that the role of nuclear deterrence cannot be demonstrated, so it certainly should not be contemplated with regard to non-nuclear threats. For others, however, the question is about the extent to which the existence of nuclear weapons could contribute to general deterrence of an adversary’s use of non-nuclear weapons.

37. To encourage nuclear-armed states to move toward a sole purpose declaration, it will be necessary to detail convincingly how weaker states that now rely on nuclear deterrence (directly or from allies) could deter or defeat existential non-nuclear aggression by more powerful states. Similarly, it will be useful to explore the potential relationship between sole purpose declarations and controlling conflict escalation, including after first-use of nuclear weapons.

38. There are several corollary issues associated with sole purpose and deterrence credibility. For instance, if deterrence fails to prevent use of nuclear weapons, how can nuclear-armed states control escalation? Can deterrence be restored after first use of nuclear weapons? These questions have legal and moral implications for potential belligerent states and for non-belligerents alike.

c) The consistency of uses of nuclear weapons with international humanitarian laws?

Nuclear targeting and humanitarian laws

39. If there are threats against which the threat and use of nuclear weapons arguably could be legitimate in the abstract, is it probable that in practice the use of nuclear weapons would comport with international humanitarian law?

40. Embedded in this question are three issues. First is whether there are legitimate military targets against which nuclear weapons could be used in accordance with the principle of distinction. The second is whether so-called low-yield nuclear weapons could be used against distinct military targets and still meet the principle of proportionality. And the third is whether nuclear doctrines based on such targeting policies and arsenals would be consistent with international humanitarian law.

41. In the past, the concept of “strategic bombing,” that could result in millions of deaths as collateral damage, overcame legal and moral arguments and was too readily accepted by policymakers in the name of deterrence. Even if nuclear-armed states shift away from a “counter value” construct, their nuclear doctrines and/or force postures may still involve targeting assets located in or near cities, resulting in significant loss of life. Does such targeting for deterrence purposes, or locating strategic assets in or near cities in order to avoid such targeting and attack, even if nuclear weapons are never used against targets in cities, violate international humanitarian law?

Low-yield nuclear weapons

42. Depending on how states address these issues, additional questions would follow. For instance, if it were possible to target military facilities with precise, low-yield nuclear weapons in a manner consistent with international humanitarian law, could not advanced conventional weapons be used instead? When low-yield nuclear

weapons are incorporated into nuclear arsenals to replace or supplement high-yield ones that cannot meet the requirements of humanitarian law, would it actually lower the threshold for nuclear use, thus endangering the norm of non-use? At the same time, if the use of such weapons is more credible, would that strengthen their deterrent effect and thereby reduce the probability of conflicts in which their use might be contemplated?

Minimum deterrence

43. If the greatest risks of catastrophic human and environmental destruction stem from escalatory nuclear conflicts involving hundreds or thousands of weapons, could movement toward minimal deterrents reduce these risks? What are the qualitative and quantitative nuclear arsenal requirements for minimum deterrence?

44. Targeting policy is a central issue for minimum deterrence. If targeting policy is free from ethical constraints that prohibit counter-value targeting with high-yield nuclear weapons, then minimum deterrence might depend on the geographic and population size of an adversary, the distribution of its strategic and national assets, its defensive capabilities, and its political resilience. Against smaller states with concentrated populations and resources, therefore, a very small arsenal may be sufficient for minimum deterrence. However, if targeting policy is based on utilizing low-yield nuclear weapons against military capabilities, and upholding to the extent possible principles of international humanitarian law, then presumably a minimum deterrence capability would involve a much larger arsenal.

45. The implications of nuclear doctrine and targeting choices for minimum deterrence pose a dilemma. On the one hand, a small minimum-deterrence arsenal that is targeted at cities may be less ethical, but also may be more secure, less prone to accident, and establish a higher threshold of use given the small numbers and expectations of humanitarian consequences. On the other hand, a larger minimum-deterrence arsenal targeted at military facilities may be more ethical, but also could be less secure and more prone to accidents, and still lower the threshold for use if it is perceived to be in accordance with international humanitarian law. Is one type of minimum deterrence preferable to the other?

46. In the abstract, a secure, technically reliable retaliatory capability of a dozen nuclear weapons could inflict unprecedented, immediate damage on any country. Whether or not this generates minimum deterrence cannot be determined in a scientific or empirical way, since deterrence depends on the credibility of the threat, which in turn depends on the perceptions and circumstances of the parties involved.

47. A corollary issue relates to minimum deterrence nuclear postures, crisis stability, and escalation control. With smaller arsenals, leaders may perceive greater pressure to use nuclear weapons early in an escalating nuclear crisis to avoid losing them in a pre-emptive attack. Such pre-emptive attacks could come from nuclear-armed or non-nuclear strike systems. This fear may reinforce belief in the necessity of launch-on-warning nuclear postures. Thus, minimum deterrence might have unpredictable or even undesirable effects on crisis stability. The moral and legal complexities of the issues associated with minimum deterrence require further consideration.

d) Risks of nuclear weapons and confidence-building measures

Risks and mitigation

48. How might the trade-off between nuclear deterrence and its associated risks be treated or managed? How can agreed risks of nuclear deterrence be identified and what kinds of steps/measures could be taken in order to reduce them?

49. Nuclear-armed States describe themselves as “responsible actors” when it comes to their nuclear arsenals, although there is no explicit consensus about the behaviours that would be deemed responsible. The legitimacy and efficacy of nuclear deterrence implies that risks associated with nuclear weapons can be managed and minimized, yet the credibility of nuclear deterrence requires planning for nuclear weapons to be used. Nonetheless, nuclear-armed states tend to argue that the security benefits outweigh a small and manageable risk of deterrence failure.

50. To sceptics of deterrence and proponents of nuclear abolition, this approach to nuclear risk is unacceptably dangerous. There is no risk-free nuclear deterrence, and the extent to which risks actually can be minimized is unclear. Stipulating an acceptable level of nuclear risk runs counter to efforts to delegitimize nuclear weapons.

51. Yet, as long as nuclear weapons exist, it remains useful to identify, quantify, and ultimately reduce some of the measurable risks associated with nuclear deterrence. One example is ensuring the security of weapon-usable nuclear materials and their associated production infrastructure. Other proposals to address nuclear posture risks could also be useful: nuclear forces could be taken off alert if this would reduce chances of accidental use or early use in a conflict; warheads could be stored separately from delivery systems; and enhanced fail-safe mechanisms could be installed. Nuclear-armed states can also improve crisis communications, such as by establishing hotlines. Nuclear-armed states could identify ways of measuring progress toward these objectives and report them to the international community.

52. Transparency and confidence-building measures can also help states to manage the risks of deliberate, accidental, inadvertent or unintended nuclear use. Nuclear-armed states could usefully negotiate transparency and confidence-building measures for promoting multilateral nuclear threat reduction cooperation. Transparency and confidence-building measures should also be contemplated under the Treaty on the Prohibition of Nuclear Weapons, aiming to reduce the possibility that nuclear weapons will be used.

Transparency

53. What kinds of transparency measures by nuclear-armed states could substantially contribute improving the security environment, leading to confidence-building for nuclear threat reduction and disarmament?

54. What forms of transparency could contribute to stability and set standards for responsible behaviour? Such measures could, for instance, be aimed at reducing uncertainties about the characteristics and scope of nuclear-weapon states strategic modernization programmes, and at developing agreed rules of the road for potentially destabilizing military activities in peacetime, crisis, or conflict.

55. Though it is unrealistic for non-nuclear-weapon states to expect full transparency, nonetheless nuclear-weapon states could undertake certain transparency measures that can provide a baseline for promoting nuclear disarmament. For instance, transparency in strategy and doctrine – that is, how states think about nuclear weapons and why they think they need to possess them – could be an essential form of transparency. Both quantitative and qualitative (such as posture and doctrine) transparency also should be pursued, including, to the extent possible, transparency about numbers, capabilities, deployments and modernization plans for nuclear arsenals. Continued engagement with all the nuclear-weapon states to increase transparency in implementing the Non-Proliferation Treaty remains fundamental to trust and confidence-building.

56. A possible step is that nuclear-weapon states could agree to report on their nuclear weapon system and weapon-usable nuclear material holdings in an agreed common format, with declarations of nuclear material holdings broken down into categories of material in: active warheads, stored warheads, recovered from dismantled warheads, naval nuclear propulsion, space propulsion, nuclear weapon laboratories, and material excess to military requirements. Placement of declassified excess military nuclear material under International Atomic Energy Agency (IAEA) monitoring would be useful, utilizing attribute verification with information barrier techniques.

Accountability

57. States relying on nuclear weapons for their security have not necessarily addressed accountability issues explicitly. For instance, they have not clarified or demonstrated how their nuclear weapons would not pose a humanitarian catastrophe, or the basis on which the international community should have confidence that once nuclear weapons are used in a conflict involving two nuclear-armed adversaries, the conflict will not escalate to the point of humanitarian disaster. How can nuclear-weapon states become more accountable to the international community vis-à-vis the risks of deterrence?

58. Are there measures for accountability that nuclear-weapon states and non-nuclear-weapon states could agree that would constitute progress toward disarmament? Transparency activities to demonstrate accountability could include non-Treaty States in due course. Until now, nuclear-armed states have largely failed to accept, let alone implement, any meaningful forms of accountability. Neither have nuclear-weapon states attempted to provide accountability through engagement with non-nuclear-weapon states.

59. For example, non-nuclear-weapon states might ask nuclear-weapon states to clarify their positions on the relationship between their nuclear doctrine and international humanitarian law in terms of *jus in bello* (justice of war), *jus ad bellum* (justice in war) and *jus post bellum* (justice in the result of war); identify their efforts to enhance the safety and security of their nuclear arsenals (beyond just saying they are safe and secure); and provide reasons why they continue to possess nuclear arsenals.

60. If nuclear-weapon states begin to implement transparency and accountability measures, what might a standard reporting system in the Non-Proliferation Treaty review process look like? Developing a system for reporting might itself be a form of confidence-building. For instance, nuclear-weapon states could utilize an informal session or a Review Conference side event to discuss the reporting system and/or present initial transparency actions and provide an opportunity for non-nuclear-weapon states to ask questions and seek clarifications.

61. A related issue is whether there are situations or types of activity for which transparency of extant capabilities could be destabilizing rather than stabilizing? For example, states facing potential adversaries with larger nuclear or other military capabilities may perceive that transparency about their own capabilities could enhance the adversary's capacity or confidence to attack them, or negate or degrade their capacity to retaliate. One way to avoid such situations might be for nuclear-armed states to declare (in whatever forums, to whichever counterparts) the extent and pace of future force acquisitions of concern, rather than providing information on existing capabilities.

62. In general, nuclear-armed states have not addressed demands for accountability from non-nuclear-weapon states. The incorporation of these demands in the text of the Treaty on the Prohibition of Nuclear Weapons gives them additional weight. Yet

opposition to the Treaty on the Prohibition of Nuclear Weapons by nuclear-armed states and their extended deterrence allies presents opportunity for dialogue on the reasons they deem it impossible to join the Treaty. Proponents and opponents could also jointly consider what to do after the Treaty on the Prohibition of Nuclear Weapons enters into force: what kind of steps to be defined and promoted under the Non-Proliferation Treaty regime and the Treaty on the Prohibition of Nuclear Weapons regime; and how could they design a verifiable and enforceable nuclear disarmament regime. These issues could be discussed at the Non-Proliferation Treaty and/or Treaty on the Prohibition of Nuclear Weapons review conferences, or other forums.

e) Managing the process of nuclear disarmament without undermining international security

Benchmarks

63. Are there any effective benchmarks for managing the way to and ensuring the progress in nuclear disarmament?

64. Defining the relationship between constituent elements of a disarmament process along with benchmarks for measuring progress against them has at times been lost in the context of lists and actions agreed in Non-Proliferation Treaty Review Conferences, but not yet implemented in full. Though some of these actions may be useful benchmarks, out of context of an agreed process and/or road map they can lose meaning.

65. Alternative approaches to nuclear disarmament with associated benchmarks have been detailed in various international reports, including the 2009 Australia/Japan International Commission on Nuclear Non-Proliferation and Disarmament. Among the recommendations from these reports is to jointly define a minimization point or vantage point, a difficult but useful exercise to (collaboratively) establish a target short of zero. Also, collaborative efforts (or discussion) for identifying transparency and accountability benchmarks both in quantitative and qualitative terms could be a useful confidence-building step among nuclear-armed states and between nuclear-armed states and non-nuclear-weapon states. Another approach would be to agree on a target time frame for achieving a world without nuclear weapons, such as the year 2045, the 100th anniversary of the first test and use of nuclear weapons. This could be agreed at the 2020 Review Conference that will mark the fiftieth anniversary of the entry-into-force of the Treaty.

66. However, such creative formulations for disarmament benchmarks have still not addressed some fundamental issues associated with the final steps in a road map when nuclear-armed states would reduce their small nuclear arsenals to zero. Among these very difficult challenges are how the final steps would be measured and verified; what would be done with nuclear weapon establishments; and how the possibility of reconstituting nuclear forces would be managed. The Treaty on the Prohibition of Nuclear Weapons notably avoids many of these issues.

A minimization point

67. If states could agree on a “minimization point” as an essential benchmark for disarmament, what should be the required elements?

68. The International Commission on Nuclear Non-Proliferation and Disarmament characterized the minimization point as one consisting of very low numbers of nuclear warheads (less than 10 per cent of the nuclear arsenals that existed in 2005), adoption of “no first use” doctrines, and implementation of force deployments and alert statuses reflecting that doctrine. Several additional issues about the parameters and

potential characteristics of the minimization point require further clarification, including:

(i) Whether reducing the number of nuclear weapons matters more than reducing the roles and objectives served by nuclear weapons (qualitative minimization).

(ii) How many nuclear weapons would be regarded as necessary or acceptable to credibly maintain a minimum deterrent, and how could the numbers be tailored to the perceived requirements of individual nuclear-armed states.

(iii) To what extent and how could the importance given to nuclear weapons in international politics be minimized, and how could the roles that nuclear weapons play in international security issues be narrowed.

(iv) What would constitute a “minimized role” for nuclear weapons in concrete terms: for example, would it preclude nuclear counterforce targeting, or giving up conventional military targeting entirely, and what are the implications of such changes for international humanitarian law?

(v) How to define the relationship between a quantitative and/or qualitative minimization point and the maintenance of deterrence.

Would nuclear-armed states need to have more accurate and reliable weapons should they proceed to a certain “minimization point,” and what would this imply for the acceptability of nuclear modernization programmes?

How could states in extended nuclear deterrence alliances maintain confidence in their security during the minimization process?

What would minimization mean for missile defence systems and concerns about damage limitation?

(vi) Whether the minimization point can be compatible with the objective of mitigating the risk of humanitarian disaster.

(vii) How enforcement of an agreed minimization point can be implemented if a state attempts to violate its commitments.

69. For those who regard the process of nuclear disarmament since the Non-Proliferation Treaty entered into force as too slow, discussion of “minimization” raises concerns that it might result in an “acceptable” minimum arsenal level. Thus, states would need to consider assurances that a minimization point would not become a de facto end-point. Nuclear-armed states, on the other hand, could attempt to use this concept as a way to avoid deep reductions in the numbers and roles of nuclear weapons, arguing that that the current level is a minimization point for them.

Alternatives to nuclear deterrence

70. To what extent can non-nuclear military capabilities be alternatives to nuclear deterrence?

71. Managing power asymmetries during nuclear disarmament is one of the biggest obstacles to its achievement. Movement toward nuclear disarmament must be accompanied by efforts to prevent a conventional arms race and mitigate the sources of conflict among states.

72. Advanced, precision guided conventional weapon systems can be as lethal as certain types of low-yield nuclear weapons, without the physical and environmental devastation and potential humanitarian consequences of a nuclear explosion. To the extent these weapons can replace missions currently planned for nuclear weapons –

including targeting of buried or hardened facilities, or even deterrence of chemical and biological threats – they remove some of the rationale for nuclear deterrence.

73. However, if these weapons become “easier” to use because they do not carry the same taboo as nuclear weapons, then an increase in conflict could result. Rapid advances in conventional weapons pose special dilemmas for weaker states, which could see the acquisition of nuclear weapons as necessary to equalize the non-nuclear capabilities of stronger states. Non-nuclear weapons that threaten the survivability of small nuclear forces could inhibit states from pursuing nuclear disarmament or minimization.

74. Addressing the role of non-nuclear means of deterrence during nuclear disarmament will require first defining, and ultimately attempting to negotiate agreement on, acceptable overall balances of military power that would meet the defensive requirements of competing states while not enabling them to conduct aggression. What measures of control on offensive and defensive non-nuclear and other unconventional military capabilities must be considered in order for nuclear-armed states to diminish the roles of nuclear weapons? What methods could be developed to define whether and how cross-domain balances could be achieved? How could agreed force balances be monitored and enforced?

Engaging non-Treaty states

75. How can the non-Treaty states possessing nuclear weapons be brought into nuclear disarmament discussions and processes?

76. Formal Non-Proliferation Treaty-related processes that omit non-parties are incapable of engaging all nuclear-armed states. Article VI of the Treaty obligates the five nuclear-weapon states to engage with all states on non-proliferation and disarmament issues, which can include the other nuclear-armed states outside the Treaty. India and Pakistan, as states that have openly tested and declared possession of nuclear weapons, could be included in informal meetings with nuclear-weapon states. Israel, which has not acknowledged possessing nuclear weapons, may be better included in the context of discussions on creating a zone free of weapons of mass destruction in the Middle East. However, how to frame or characterize dialogue with non-Treaty nuclear-armed states without according them special status as possessors of nuclear weapons is a clear challenge.

77. Given that non-Treaty states have not made legally-binding commitments to disarmament, an agenda for dialogue among all nuclear-armed states could begin with a question: are the three states that have never signed the Non-Proliferation Treaty willing to join the other nuclear-armed states if and when they verifiably eliminate their nuclear arsenals? Nuclear-armed states could collectively discuss benchmarks for progress toward nuclear disarmament. Necessarily, given the adversarial relations among several of them, they would also need to identify steps to reduce regional and global tensions alongside steps to reduce their nuclear arsenals.

f) Maintaining a world without nuclear weapons once it is achieved

Peace and stability

78. How can the international community maintain peace and stability after eliminating nuclear weapons including the modality of deterrence without nuclear weapon? How can it ensure the irreversibility of the achievement of a world without nuclear weapons? What international security systems, including security assurances, are best suited for maintaining a world without nuclear weapons?

79. A world without nuclear weapons is not today’s world minus nuclear weapons. It is a fundamentally transformed world in which states and other actors do not feel

the need to possess nuclear weapons, and therefore have dismantled the means to do so. For that to happen, however, states that have previously relied on nuclear deterrence would have to be confident in other means to deter or defeat major aggression.

80. Establishing and maintaining cooperative relations among Security Council members, such that the Council could function effectively as a provider of peace and security, is a necessary condition. Other measures to bolster the United Nations as a collective security apparatus could be created. For example, the General Assembly could negotiate a new Chapter of the Charter of the United Nations that would deal with Peace and Stability in a World without Nuclear Weapons. Other enhancements to global collective security may be necessary, such as an international armed force set up under United Nations auspices as an emergency-response provider.

81. Even after nuclear weapons are dismantled, nuclear weapons know-how and the capabilities to recreate them will remain. States will need to evaluate which kinds of capabilities and activities would be permissible, and with what measures of reassurance, in a world without nuclear weapons. For instance, would ballistic missiles capable of carrying payloads beyond 500 kg still be permitted? Would conventional military munitions need to fall beneath certain thresholds? How would states regulate the range of dual-use scientific and research and development activity, such as astrophysics and neutron modelling, that can contribute to nuclear weapons design?

82. The possibility that states could rebuild nuclear weapons may pose a form of virtual deterrence. Whether and how to establish a system that would permit states to retain the ability to reconstitute nuclear weapons at short notice, under international monitoring and verification, is an important question. At the same time, the possibility of nuclear re-armament could destabilize international security, as states might fear that an adversary was seeking to acquire nuclear weapons in secret. This risk may be exaggerated, however, since breakout could be deterred by risks similar to those that deter nuclear use today: an aggressor would not have high confidence that it could succeed with its aggression and/or rebuild nuclear weapons before it was detected and others mounted a countervailing capability. Nor would a potential aggressor know that it could acquire enough nuclear weapons to deter or defeat a response by other powers.

Verification and Enforcement

83. How can nuclear disarmament in its final stages be verified? How would monitoring and enforcement work in a world without nuclear weapons?

84. Development of effective monitoring, verification and compliance mechanisms is a necessary condition for the achievement of nuclear disarmament. The process of developing such means should itself help build confidence among nuclear-armed states and between nuclear-armed states and non-nuclear-weapon states.

85. The further nuclear weapons are reduced, the more important monitoring and compliance verification procedures for nuclear disarmament will become in order to maintain the confidence of the international community, both to detect non-compliance and to ensure enforcement. Intensified research on nuclear disarmament verification is needed to develop robust approaches. Verification measures established under existing arms control, disarmament and non-proliferation treaties can inform a future nuclear disarmament verification system.

86. Verifying the total elimination of nuclear weapons is a particularly complex task and will require an extensive infrastructure. This infrastructure would also necessitate substantial changes to existing multilateral institutions, or creation of new specialized

organizations, equipped with trained personnel and politically enabled to trigger challenge inspections and/or refer issues for enforcement action. At zero nuclear weapons, effective verification would require unprecedented levels of transparency and intrusiveness in order to detect illicit activities. New approaches and technologies can provide deep transparency on key activities, but whether and how to do so without unduly compromising sovereignty is an issue requiring further study. One of the most difficult technical challenge is the verified dismantlement and elimination of nuclear warheads given the need to protect proliferation-sensitive information, in accordance with Article I of the Non-Proliferation Treaty.

87. Several initiatives are currently being undertaken by individual states and groups of states, including nuclear-weapon states and non-nuclear-weapon states, to investigate technologies, techniques and methodologies to ensure effective monitoring and verification of nuclear disarmament. Useful work has been done by some of the nuclear weapon states, and more can be done in the future, on verification and monitoring of stocks of deployed, non-deployed and stored nuclear warheads, as well as all types of delivery systems. The International Partnership for Nuclear Disarmament Verification and UK-Norway transparency experiment are useful precedents in terms of not only developing verification technologies but also cooperation between nuclear-weapon states and non-nuclear-weapon states. Current efforts should be strengthened and afforded the necessary resources. The development of reliable, cost-effective technologies that provide a high level of confidence without disclosure of sensitive information to non-nuclear-weapon states should be the goal of these activities. Ideally, there should be collaboration among current initiatives to help accelerate progress, with regular reports to the Non-Proliferation Treaty review process. All states should consider how to contribute to effective monitoring and verification.

88. Nuclear disarmament verification cannot, however, rely solely on technology. Complementary mechanisms, such as personnel exchanges, on-site inspections, and joint verification teams, will be necessary to mitigate concerns about intrusiveness, espionage and potential misuse of monitoring and verification technology.

89. If an effective monitoring and verification arrangement can be designed and implemented, how can the international community ensure and, if needed, enforce compliance by states with their legally binding obligations? Among the worst-case scenarios that must be confronted is the attempted breakout by a state from the constraints governing a nuclear-weapon-free world. To give all states the confidence that nuclear disarmament will be effective and durable, agreed mechanisms must be created to ensure timely enforcement. Research into this relatively neglected but vital subject should be accelerated both by governments and civil society, and results shared in the Non-Proliferation Treaty review process.

90. Could one form of disarmament enforcement entail individual states responding to attempted breakout by re-arming, thus denying the violator the coercive benefit of the violation? Nuclear-armed states are likely to insist on maintaining a capability to resume a nuclear weapons programme if others do so. Yet, permitting a reconstitution capability would complicate verification and may create its own form of instability.

91. The Security Council is currently the only existing international institution that could address the potential violation of nuclear disarmament treaties. However, it is unrealistic to expect that this mechanism will always work effectively in enforcing nuclear elimination obligations given that the five permanent, veto-wielding members of the Council are also nuclear-weapon states under the Non-Proliferation Treaty. Establishing a new, special body for enforcement other than the Security Council is implausible if the P5 would not support it, nor would it be effective if the P5 do not agree to vest it with sufficient enforcement authority.

III. PRINCIPLES FOR POSITIVE ENGAGEMENT TO BRIDGE DISARMAMENT DIVIDE

92. Actors engaged in efforts to bridge the disarmament divide should adhere to the following principles in order to establish common ground for groups with divergent views to jointly work on reinvigorating and promoting nuclear disarmament.

a) Strengthening the Norm of Non-use of Nuclear Weapons and a Vision of a World without Nuclear Weapons

93. The international community needs to renew its commitment to achieve a world without nuclear weapons. Statements in support of this commitment should reinforce the following core ideas, which not all nuclear weapon-possessing states have made clear: “A nuclear war cannot be won and must never be fought”; nuclear weapons should only be intended only for deterrence and not for war fighting; and international humanitarian law should be respected in all circumstances.

94. The norm of non-use of nuclear weapons, which is backed by the 74-year practice of non-use, must be upheld by the entire international community. Continuing the practice of non-use is a pillar of achieving a world without nuclear weapons, despite differences of view in how to achieve such a world.

95. Although nuclear deterrence may arguably enhance stability in certain environments, it is a dangerous basis for global security and all states should seek a better, long-term solution. Proponents and opponents of nuclear deterrence must persist in bridging their differences.

b) Upholding existing commitments on arms control and nuclear disarmament as foundations for international security and further dialogue on disarmament

96. Existing commitments on arms control and disarmament should be maintained and implemented in full. Despite new sources of instability in the global security environment, arms control, disarmament and non-proliferation commitments provide an important foundation for international security and cooperative relations between nuclear-weapon states and for the entire international community.

97. The Russian Federation and the United States should make every effort to affirm remaining arms control arrangements, including by extending New START until they agree on a new treaty.

98. The three pillars of the Non-Proliferation Treaty (nuclear non-proliferation, nuclear disarmament, and peaceful uses of nuclear energy) remain central to advancing the common goal of a world without nuclear weapons. To preserve the Treaty, all states parties should fulfil their joint commitment to the full implementation of the Decisions on Principles and Objectives and Strengthening the Review Process of 1995, and the Final Documents of the 2000 and 2010 Review Conferences.

99. Article VI of the Non-Proliferation Treaty contains the fundamental commitment by the nuclear-weapon States to achieve the total elimination of their nuclear arsenals leading to nuclear disarmament, which all States parties affirmed by consensus. All States, and especially nuclear-weapon states, should seek additional means of demonstrating their commitment to this principle.

c) Restoring civility in discourse

100. The stalemate over nuclear disarmament is not tenable. Whatever the disagreements expressed by states regarding the Non-Proliferation Treaty process and

the Treaty on the Prohibition of Nuclear Weapons, it is not in any state's interest to allow the foundation of the global nuclear order to crumble. Rather, it is a common interest of all states to improve the international security environment and pursue a world without nuclear weapons in line with Article VI of the Non-Proliferation Treaty.

101. The record of nuclear arms control makes clear that treaties can be negotiated and concluded in an international environment characterized by conflict, discord, and distrust. Establishment of a favourable environment for dialogue and negotiations on nuclear disarmament therefore should not be made a pre-requisite for actions to advance the disarmament agenda.

102. As they seek progress toward disarmament, states and civil society engaged in dialogue on disarmament must practice civility in their discourse. Respect for divergent views must be maintained to facilitate a joint search for common ground, on which all parties can cooperate to reduce nuclear dangers.

IV. ACTIONS THAT CAN BE STARTED BEFORE 2020

103. The first step in preserving the value of the Non-Proliferation Treaty as a common platform for all states working toward disarmament is to achieve a successful 2020 Review Conference. All Non-Proliferation Treaty states parties are well aware of the critically high stakes and should demonstrate ownership of the treaty through careful and thoughtful preparation for a meaningful outcome of the Conference, especially through constructive statements, by taking actions, and making practical suggestions for progress. The implementation of these measures will also be beneficial in maintaining the momentum and making progress on nuclear disarmament even in a difficult environment. Actions that can be taken in advance of the 2020 Review Conference include:

a) Extension of New START and starting talks for a follow-on treaty

104. The Russia-US nuclear arms control framework constitutes a fundamental basis for the global nuclear arms and threat reduction effort. The Russian Federation and the United States should spare no effort to re-engage and to rehabilitate the arms control framework to secure further reductions in nuclear forces. With the collapse of the Treaty on Intermediate-Range Nuclear Forces, the most urgent task for preserving the arms control framework is the extension of New START for an additional five years before the treaty expires in 2021. Should New START fail to be extended, its verification and data exchange measures will also cease to exist, leading to greater uncertainty about the two states' existing nuclear arsenals and modernization programmes.

105. Resumption of a regular Russia-United States dialogue on nuclear arms control and strategic stability is the single most urgent and important step to be taken. In addition to facilitating an expeditious extension of New START, the two countries should use these talks to begin mapping out how to establish a new arms control framework to address new types of nuclear weapons and delivery systems.

b) Risk reduction and nuclear security measures by nuclear-weapon states

106. While nuclear disarmament is likely to take many years, the more, immediate danger is the use of nuclear weapons. Nuclear-weapon states should take measures to reduce the risk of use, including by ensuring the safety and security of their nuclear weapons, weapon-usable nuclear materials, and related infrastructure. Such measures need to be in accordance with states' respective international, legally binding non-proliferation obligations. It is also imperative that they share information on the

actions taken to reduce risks of nuclear use with each other and with the rest of the international community.

c) Information sharing by nuclear-weapon states on nuclear posture, deterrence, and international humanitarian law

107. Nuclear-weapon states should better utilize the P5 consultation mechanism within the Non-Proliferation Treaty framework to share information on their respective nuclear posture, doctrines and policies so that they can better understand each others' intentions and hence mitigate potential misperceptions or miscalculations that could lead to nuclear use and escalation.

108. Nuclear-weapon states should also explain and discuss with each other whether and how their nuclear policies and force postures are consistent with international law, especially international humanitarian law. Nuclear-weapon states should share views on whether they think that the international humanitarian law applies to the use of nuclear weapons; the procedures and other means they plan to utilize to give others confidence that such law will be upheld; and whether they would be willing to endorse an international mechanism for adjudicating the legality of nuclear-weapons use after the fact.

109. The information on nuclear doctrines shared amongst the P5 should also be shared with non-nuclear-weapon states to the extent possible. This would constitute an important first step toward establishing a productive, long-term dialogue between disarmament proponents and nuclear deterrence proponents.

110. Relatedly, the Non-Proliferation Treaty review process could make better use of national reports. In particular, it would be useful to convene a session at the Review Conference and its preparatory committees, at which nuclear-weapon states explain their national reports, followed by a discussion with other states parties and civil society participants.

d) Revitalizing multilateral nuclear disarmament measures

111. The total elimination of nuclear weapons will not be achieved without multilateral nuclear disarmament measures. They should be reinvigorated as the most important medium-term efforts. While the entry-into-force of the Comprehensive Nuclear-Test-Ban Treaty remains pending, states should identify additional steps to advance the objectives of the treaty and reinforce the non-testing norm. In addition, states should ensure sufficient funding for maintaining and improving the Treaty's international monitoring system and on-site inspection arrangements.

112. Commencing negotiation of a Fissile Material Cut-Off Treaty as early as possible also would constitute a significant step forward for multilateral nuclear disarmament. Considering the challenges encountered in attempting to negotiate a Fissile Material Cut-Off Treaty in the Conference on Disarmament, and the urgent need to find avenues for progress, likeminded countries could utilize another venue to commence the negotiation and then report their conclusions to the Conference.

e) Signing protocols to nuclear-weapon-free zone treaties and reaffirming negative security assurance

113. Nuclear-weapon states which have yet to sign and ratify protocols to the nuclear-weapon-free zone treaties should do so. Nuclear-weapon states should also reaffirm their commitments of negative security assurance under Security Council resolution [984 \(1995\)](#) and nuclear-weapon-free zone treaties. These actions would help reinforce non-proliferation and the legal norm on the non-use of nuclear weapons.

f) Further exploring a way-forward, in particular, a platform for continued dialogue, on the Middle East zone free of weapons of mass destruction, and preserving the Joint Comprehensive Plan of Action

114. Festering regional disputes make nuclear-armed states more reluctant to contemplate steps towards nuclear disarmament. The key driver for nuclear weapons acquisition (beyond mere nuclear temptation) remains the combination of the perception of an existential threat and of the absence of a credible security guarantee. Whether real or imagined, addressing such threats is the key to disarmament. Therefore, vital efforts should be directed at resolving political problems and bringing parties to the negotiating table.

115. All states concerned should participate actively and constructively at the conference on the establishment of a Middle East zone free of nuclear weapons and other weapons of mass destruction, to be held at the United Nations in New York in November 2019. The conference should be carefully prepared so as not to disappoint the stakeholders in the region and the international community more broadly.

116. Important measures to be taken immediately in order to set a good basis for discussing a Middle East zone free of weapons of mass destruction are those to preserve the JCPOA. Its demise might lead to Iran's withdrawal from the Non-Proliferation Treaty and possibly to reduce other Middle East countries' commitments to the Treaty. Full compliance by all parties with all elements of the JCPOA is essential to the integrity of the nuclear non-proliferation regime.

g) Facilitation of nuclear non-proliferation and disarmament in the context of regional security (North Korea, the Middle East including Iran, and South Asia)

117. Full compliance by all parties with all elements of the JCPOA is essential to the integrity of the nuclear non-proliferation regime. All stakeholders should continue to support full implementation of the JCPOA, which is underpinned by Security Council resolution [2231 \(2015\)](#).

118. Avoiding catastrophic consequences from the North Korean nuclear and missile crisis and upholding the integrity of the international non-proliferation regime are two major principles for the denuclearization of the Korean Peninsula. Concerned states are urged to make every effort to resolve the problems through peaceful means, and to achieve the complete, verifiable and irreversible denuclearization of the Korean Peninsula.

119. Track 1 and track 1.5 regional security processes should seek to strengthen confidence-building measures. In addition, states in key regions should consider: creating inter-regional dialogue mechanisms for nuclear disarmament and non-proliferation; inviting states which have renounced the nuclear option to speak about their experiences; and developing interregional forums in which participants can share experiences on addressing regional security and nuclear challenges, including how to minimize the negative implications of an unstable regional security environment for the Non-Proliferation Treaty regime.

h) Engaging young generations

120. Engaging younger generations is essential for building bridges between proponents of abolition and proponents of deterrence, and for exploring common ground. Intergenerational forums can permit younger generations to hear from and share perspectives with actors that have deep experience on nuclear disarmament issues, which can be an important means of developing understanding of diverse viewpoints.

i) Further involvement of civil society

121. Civil society actors have an important contribution to make in nurturing mutual understanding and cooperation among conflicting parties, as well as in cultivating innovative ideas to help states implement nuclear disarmament measures. Engaging with civil society and academia is essential to advancing nuclear disarmament and non-proliferation. Increasing efforts to educate and inform citizens, especially the younger generation, about the various dimensions of nuclear weapons should help cultivate informed discussions. It is imperative to find additional methods for bringing inter-generational views into disarmament discussions.

122. Widespread civil society movement is crucial, but without critical political leadership disarmament cannot be achieved. Partnerships between political leaders and social movements can be instrumental in facilitating the transition toward cooperative security approaches more conducive to nuclear disarmament.

j) Visit to Hiroshima and Nagasaki

123. Cultivating a deeper understanding of the humanitarian risks and consequences of nuclear weapons is an important means of building shared perspectives on achieving the total elimination of nuclear weapons. Visiting Hiroshima and Nagasaki is a powerful and unique way to develop such a deeper understanding. State leaders, policy makers, members of civil society should visit these important cities, not least to honour the legacy of the Hibakusha, whose stories must be disseminated for posterity and placed in a human context as a testimony to the imperative of nuclear disarmament.

V. ACTIONS THAT CAN BE TAKEN BETWEEN 2020 AND 2025

124. As the next Non-Proliferation Treaty review cycle between 2020 and 2025 would be a very critical period to uphold nuclear disarmament momentum, it is necessary for all kinds of states, either nuclear-weapon states, non-nuclear-weapon states, or non-Treaty nuclear armed states to take concrete actions such as:

a) Expanding actions to non-Treaty nuclear-armed states

125. To universalize nuclear risk reduction and nuclear disarmament, it is necessary to find a way to involve the three non-Treaty nuclear-armed states. These states, in addition to the five nuclear-weapon states, should take measures to enhance risk reduction and nuclear security, and share this information with other states. In addition, these states should also explain and clarify whether and how their nuclear policies and force postures are consistent with applicable international law, especially international humanitarian law.

126. In order to include India and Pakistan, the process needs to be conducted informally, outside the Non-Proliferation Treaty. It would be useful to set up an informal, off-the-record, open-ended, forum to discuss necessary steps and measures to move forward the disarmament agenda. This should be done under United Nations auspices, as this will allow non-Treaty nuclear-armed states to participate. Inviting them to side events during the Non-Proliferation Treaty Review Conference and its preparatory committee would also be helpful. Such dialogues with non-Treaty nuclear-armed states should not imply giving them any special status as possessors of nuclear weapons.

b) Unilateral voluntary measures or “gift-baskets”

127. All states parties to the Non-Proliferation Treaty, particularly nuclear-weapon states, can make self-declared commitments to undertake additional voluntary measures to fulfil their Treaty obligations toward nuclear disarmament, and report their implementation periodically during the 2020-2025 review process. For this purpose, Non-Proliferation Treaty member states should discuss how to conduct this exercise before the 2020 Review Conference begins.

128. Such unilateral, voluntary commitments would not be a formal part of the Non-Proliferation Treaty process, but would complement consensus-based steps that are binding on all parties.

c) Addressing strategic stability, security dilemmas and nuclear arms control among major powers

129. Insecurity among major powers (China, Russia and the United States), coupled with the absence of multilateral arms control cooperation, is likely to frustrate progress towards nuclear disarmament. Finding means to mitigate security dilemmas, and to achieve a basic level of strategic stability in their bilateral and/or trilateral relationships is crucial until such time that major powers agree on deep cuts in their nuclear arsenals. China, Russia and the United States are strongly encouraged to find ways to discuss nuclear weapons policy, doctrine and risk reduction measures, including confidence-building measures such as hotlines and data exchanges.

d) Addressing nuclear/non-nuclear “entanglement” and the impact of emerging technologies on strategic stability and arms control modalities

130. The entanglement of nuclear and non-nuclear capabilities, in which these strategic capabilities are dangerously intertwined, can increase risks of accidental or unintended escalation and should be closely studied. All states should assess how new domains and emerging technologies –including cyber, space, lethal autonomous weapons and artificial intelligence –might affect strategic stability and the dangers of nuclear-weapons use, and contemplate how to mitigate or reduce risks of disruption.

131. A cyberattack on nuclear weapons or related systems – including nuclear planning, early warning, communication, and delivery systems, in addition to the nuclear weapons themselves – could have catastrophic consequences. The international community should carefully study the implications for nuclear arms control and disarmament.

132. Meanwhile, pursuing a normative framework, such as a code of conduct for these domains and technologies, could be useful. An example would be restraint on cyberattacks on nuclear command and control systems, States should also explore confidence building measures relating to non-nuclear high-technology weapons. A new kind of arms control architecture should be developed to regulate these new domains.

e) Controlling fissile materials both in civilian and military use

133. States are encouraged to end the production of fissile material for nuclear weapons. States that continue to produce such material are encouraged to clarify what prevents them from stopping.

134. While the negotiation of a Fissile Material Cut-Off Treaty is an urgent imperative, the political deadlock in the Conference on Disarmament currently stands in its way. Nevertheless, the effective control of weapons-usable fissile material – highly enriched uranium and weapons-usable plutonium – at the highest level of

safety and security is both a near-term imperative and a prerequisite for disarmament. Notwithstanding the challenges, it would be worth contemplating a safety and security regime that regulates all fissile material, whether military or for peaceful uses.

135. A world free of nuclear weapons will require an agreed, legally binding global regime that not only regulates fissile material production, but also provides verifiable accounting of existing material and strengthened safeguards against its use in nuclear weapons. This regime must also cover the disposition of fissile material in an irreversible and verifiable manner. This regime should include effective provisions to ensure that highly enriched uranium or plutonium used in non-weapons applications cannot be diverted to weapons use. All states possessing highly enriched uranium or plutonium should work toward developing the characteristics of such a regime.

f) Exploring a liability mechanism for nuclear weapons accidents and use

136. All States should explore mechanisms to hold states accountable and liable for any damages to third party states and populations resulting from the development, transport, deployment, or use of nuclear weapons.

137. States should also discuss the need for a special liability system for nuclear weapons. The general legal system of responsibility of states for internationally wrongful acts covers the damage nuclear weapons may cause to other states. However, this would not apply to past damages caused by, for instance, nuclear testing, which would need to be addressed through the special system.

138. Existing nuclear accident liability regimes do not cover an accidental nuclear weapon detonation (although they presumably cover accidents at facilities dealing with nuclear materials for nuclear weapons). States could initiate a process to amend these regimes, notwithstanding likely opposition from states with nuclear weapons. States could also discuss the obligations of states using nuclear weapons to neutral or third-party states that suffer harm.

CONCLUSION

139. Numerous security, legal and normative issues must be resolved to achieve the total elimination and prohibition of nuclear weapons. The “hard questions” contained in this report and the actions it recommends constitute a road map for states and civil society actors to work together in navigating these issues.

140. For states with nuclear deterrence deeply embedded in their national security policy, taking steps to reduce and ultimately eliminate their reliance on nuclear deterrence will be politically difficult. The abolition of nuclear weapons will constitute a change in the structure of international politics and cannot be achieved without building broad political momentum. In this sense, it is necessary for the international community to increase public awareness of the challenges and opportunities presented by nuclear disarmament, and to advance a strong, universal norm that nuclear weapons are taboo. Political and social movements that carry the flag for the humanitarian consequences of nuclear weapons are necessary to overcome the inevitable political challenges.

141. Political and social movements can create momentum, but they must be paired with a step-by-step strategy for simultaneous movement toward a new international security order and a world without nuclear weapons. Practical steps towards nuclear disarmament to achieve this outcome are diverse and complex, and their implementation will be technically and politically sensitive. How to safely manage the process leading to the elimination of nuclear weapons, including reducing reliance

on nuclear deterrence and replacing it with alternative means for security, is probably the most difficult challenge of all. New, sophisticated mechanisms for maintaining stability will be necessary, backed by strong and sustained engagement of all states.

142. Human history is littered with evidence of the fragility of peace. In the wake of conflict, leaders emerged to establish international institutions and craft rules to advance peace. Especially since 1945, considerable wisdom and political capital have been invested to maintain these institutions and rules. To make the peace less fragile, and realize progress toward the ultimate achievement of nuclear disarmament, the entire international community should work relentlessly to overcome the divide between proponents of deterrence and proponents of abolition, face up to the “hard questions” explored in this report, and jointly design a new international order based on security, legal instruments, and normative pillars for advancing and upholding a nuclear-weapon-free world.

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Setsuko Aoki	Professor of Law, Keio University Law School
Nobumasa Akiyama	Dean, School of International and Public Policy, Hitotsubashi University
Masahiko Asada	Professor and Vice Dean, Kyoto University
Linton F. Brooks	Former Administrator, National Nuclear Security Administration
Tim Caughley	Non-Resident Senior Fellow, United Nations Institute for Disarmament Research
Trevor Findlay	Senior Research Fellow, Department of Social and Political Sciences, Faculty of Arts, University of Melbourne
Angela Kane	Former United Nations High Representative on Disarmament Affairs
Mahmood Karem	Former Ambassador of Egypt to Japan/Former Member of the Secretary-General's Advisory Board on Disarmament Matters
Anton Khlopkov	Director of Center for Energy and Security Studies
Yasuyoshi Komizo	Chairperson, Hiroshima Peace Culture Foundation/ Secretary General, Mayors for Peace
George Perkovich	Ken Olivier and Angela Nomellini Chair/Vice President for Studies, Carnegie Endowment for International Peace
Tariq Rauf	Former Head of Verification and Security Policy Coordination Office, IAEA
Shen Dingli	Professor, Institute of International Studies, Fudan University
Bruno Tertrais	Deputy Director, Foundation for Strategic Research
Masao Tomonaga	Honorary Director, Japan Red Cross Nagasaki Atomic Bomb Hospital
Noboru Yamaguchi	Vice President, International University of Japan/ Advisor, The Sasakawa Peace Foundation

Annex II

The 3rd Track 1.5 Meeting for Substantive Advancement of Nuclear Disarmament

Opening Remarks by Prime Minister Kishida Fumio

9 December, 2021

Excellencies,

Ambassador Zlauvinen, President-designate of the tenth Review Conference,

Ms. Nakamitsu, Under Secretary General and High Representative for Disarmament Affairs of the United Nations,

Distinguished guests,

I would like to extend my heartfelt welcome to everyone joining us today from all over the world.

We are hosting today's meeting with the aim of deepening discussions in the run-up to the Non-Proliferation Treaty Review Conference, scheduled next January. I attach importance to the Treaty in which both nuclear-weapon States and non-nuclear-weapon States participate, as the cornerstone of the international disarmament and non-proliferation regime.

During my tenure as Foreign Minister, I attended the 2015 Review Conference as an incumbent Foreign Minister for the first time in 10 years. Towards achieving consensus at the Conference, I engaged in intensive discussions time and again among member states of the NPDI, or the Non-Proliferation and Disarmament Initiative, including at the NPDI Ministerial Meeting held in Hiroshima in 2014. Japan, together with other member states of the NPDI, also submitted a draft proposal for a consensus outcome document before the Conference in 2015. Nevertheless, the Conference in 2015 ultimately concluded without a consensus outcome document.

I was back in my hometown of Hiroshima when this unfortunate news reached me, and I still vividly remember how I had to break this news to the people of Hiroshima, and how I stated that "This is utterly regretful" in that we could not achieve consensus at the Review Conference in the year marking the seventieth anniversary of the atomic bombings on Hiroshima and Nagasaki.

Since then, six years have passed.

The frustration concerning the lack of progress in nuclear disarmament under the Non-Proliferation Treaty was a contributing factor to the adoption of the Treaty on the Prohibition of Nuclear Weapons. The Treaty on the Prohibition of Nuclear Weapons is an important treaty that could be regarded as a final passage to a world without nuclear weapons. Nevertheless, a single nuclear-weapon State has not joined the Treaty, even though the participation of nuclear-weapon States is indispensable to realize a world without nuclear weapons. As it stands today, States are currently divided with regard to their respective positions on the Treaty on the Prohibition of Nuclear Weapons.

In the meantime, the security environment surrounding Japan is rapidly becoming ever more severe. The build-up of nuclear forces in an opaque manner and the technological advancement of delivery systems of nuclear weapons are only a few examples of such activities. The nuclear and missile programmes of North Korea threaten the peace and stability not only of Japan but also that of the international

community. The schism among States with divergent views is ever widening, and we are losing our common ground to cooperate and advance nuclear disarmament.

This is the severe reality we are facing today.

Against such a backdrop, the Review Conference will be held in January next year. I hear that many have expressed their concern that the Review Conference will fail once again and that no consensus outcome document will be adopted.

This is not a time, however, for us to sit idly by in the face of this harsh reality.

To pave the way forward, we must take a decisive step towards making a breakthrough at the upcoming Review Conference. During my tenure as Foreign Minister, I strongly recognized that nothing could proceed unless both nuclear-weapon States and non-nuclear-weapon States engaged in disarmament, and nuclear-weapon States took action. This is why Japan, as the only country to have ever suffered atomic bombings during war, should lead countries with divergent views to overcome their differences and cooperate with each other by involving nuclear-weapon States, while gaining the confidence of the United States as our only ally. To this end, Japan will spare no effort towards the adoption of a final document that would constitute a substantive step forward towards a world without nuclear weapons at the next Review Conference.

With a view to playing a proactive role in building consensus, Japan has proposed elements to be included in the final document by submitting to the General Assembly a resolution on nuclear disarmament. I am pleased to say that this resolution was adopted by an overwhelming majority of 158 States three days ago. Japan has also submitted working papers together with our NPDI colleagues and friends from the Stockholm Initiative.

To enhance momentum for achieving consensus at the Review Conference, I will dispatch Mr. Terada Minoru, whom I recently designated as Special Advisor to the Prime Minister for Disarmament and Non-proliferation affairs, to countries concerned. I myself will continue to actively call on world leaders to realize the adoption of a consensus outcome document.

Distinguished guests,

At the upcoming Review Conference, we need to solidify the cornerstone of the international regime, the Non-Proliferation Treaty, and rebuild confidence between nuclear-weapon States and non-nuclear-weapon States. We must build upon such efforts, and move closer to the final passage to a world without nuclear weapons.

To reach this final passage, we have many tasks to carry out:

- continue effective nuclear disarmament measures such as the early entry into force of the Comprehensive Nuclear-Test-Ban Treaty and the immediate commencement of negotiations on a Fissile Material Cut-Off Treaty;
- limit the qualitative and quantitative build-up of nuclear weapons;
- make every effort to build a reliable international verification mechanism;
- and steadily decrease the number of nuclear weapons.

It is these efforts that will lead us to a world without nuclear weapons. This is the roadmap which Japan believes would take us to this lofty goal.

Distinguished guests,

Unfortunately, the reality is that even discussions on reducing the number of nuclear weapons have not shown progress, let alone talks concerning their abolition. Rather, there is a risk that the number of these weapons could increase. Against such

a severe backdrop, what could be the key to building an unshakable foundation that enables the reduction of nuclear weapons? I believe that before anything else the key to this lies in the transparency concerning nuclear forces.

Lack of transparency hinders us from verifying whether nuclear disarmament is truly advancing, or verifying whether nuclear disarmament measures are in fact regressing. No other measure than increasing transparency of nuclear forces can be the first step for the nuclear-weapon States to actually reduce their nuclear weapons. From this perspective, Japan welcomes the fact that the United States has unilaterally resumed releasing its nuclear weapons stockpile data.

Japan will call on all nuclear-weapon States to further disclose information on their nuclear forces, including nuclear warheads and delivery systems. Moreover, I understand that various discussions are underway regarding efforts towards the Review Conference within the framework of the P5 process. We hope to achieve a meaningful outcome for all pillars in a balanced manner, including in the area of nuclear disarmament.

Distinguished guests,

With the aim of producing a successful outcome at the Review Conference, I would like all experts at today's meeting to put forth ideas irrespective of their national positions and to conduct candid discussions on concrete pathways for the realization of a world without nuclear weapons.

Let us take a big step forward towards our shared exit of the total elimination of nuclear weapons.

Thank you.
