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# ANNEX A: COMMISSION RECOMMENDATIONS

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## ON OVERALL DISARMAMENT STRATEGY

1. Nuclear disarmament should be pursued as a two-phase process: with “minimization” to be achieved no later than 2025, and “elimination” as soon as possible thereafter. Short (to 2012), medium (to 2025) and longer term (beyond 2025) action agendas should reflect those objectives. [7.1-5; see also Sections 17,18, 19]
2. Short and medium term efforts should focus on achieving the general delegitimation of nuclear weapons, and on reaching as soon as possible, and no later than 2025, a “minimization point” characterised by:
  - (a) low numbers: a world with no more than 2,000 warheads (less than 10 per cent of present arsenals);
  - (b) agreed doctrine: every nuclear-armed state committed to no first use of nuclear weapons; and
  - (c) credible force postures: verifiable deployments and alert status reflecting that doctrine. [7.6-15; see also Sections 6 (on delegitimation) and 17-18]
3. Analysis and debate should commence now on the conditions necessary to move from the minimization point to elimination, even if a target date for getting to zero cannot now be credibly specified. [7.15-17; see also Section 19]

## ON OVERALL NON-PROLIFERATION STRATEGY

4. Nuclear non-proliferation efforts should focus both on the demand side – persuading states that nuclear weapons will not advance their national security or other interests – and the supply side, through maintaining and strengthening a comprehensive array of measures (addressed in following recommendations) designed to make it as difficult as possible for states to buy or build such weapons. [8.9-16; see also Sections 9-15]

## ON NPT SAFEGUARDS AND VERIFICATION

5. All states should accept the application of the Additional Protocol. To encourage universal take-up, acceptance of it should be a condition of all nuclear exports. [9.7]
6. The Additional Protocol and its annexes should be updated and strengthened to make clear the IAEA's right to investigate possible weaponization activity, and by adding specific reference to dual-use items, reporting on export denials, shorter notice periods and the right to interview specific individuals. [9.8-9]
7. With safeguards needing to move from a mechanistic to an information-driven system, there should be much more information sharing, in both directions, on the part of both states and the IAEA, with the agency re-evaluating its culture of confidentiality and non-transparency. [9.10-11]

## ON NPT COMPLIANCE AND ENFORCEMENT

8. In determining compliance, the IAEA should confine itself essentially to technical criteria, applying them with consistency and credibility, and leaving the political consequences for the Security Council to determine. [9.15]
9. The UN Security Council should severely discourage withdrawal from the NPT by making it clear that this will be regarded as *prima facie* a threat to international peace and security, with all the punitive consequences that may follow from that under Chapter VII of the UN Charter. [9.20]
10. A state withdrawing from the NPT should not be free to use for non-peaceful purposes nuclear materials, equipment and technology acquired while party to the NPT. Any such material provided before withdrawal should so far as possible be returned, with this being enforced by the Security Council. [9.21-22]
11. All states should make it a condition of nuclear exports that the recipient state agree that, in the event it should withdraw from the NPT, safeguards shall continue with respect to any nuclear material and equipment provided previously, as well as any material produced by using it. [9.23]

## ON STRENGTHENING THE IAEA

12. The IAEA should make full use of the authority already available to it, including special inspections, and states should be prepared to strengthen its authority as deficiencies are identified. [9.24]
13. If the IAEA is to fully and effectively perform its assigned functions, it should be given, as recommended in 2008 by the Zedillo Commission:
  - (a) a one-off injection of funds to refurbish the Safeguards Analytical Laboratory;
  - (b) a significant increase in its regular budget support, without a “zero real growth” constraint, so as to reduce reliance on extra-budgetary funding for key functions;
  - (c) sufficient security of future funding to enable medium to long-term planning; and
  - (d) support from both states and industry in making staff secondments and offering training opportunities. [9.25–27]
14. Consideration should be given to an external review, by the Zedillo Commission or a successor panel, of the IAEA’s organizational culture, in particular on questions of transparency and information sharing. [9.28]

## ON NON-NPT TREATIES AND MECHANISMS

15. The Nuclear Suppliers Group (NSG) should develop a criteria-based approach to cooperation agreements with states outside the NPT, taking into account factors such as ratification of the CTBT, willingness to end unsafeguarded fissile material production, and states’ records in securing nuclear facilities and materials and controlling nuclear-related exports. [10.3–9]
16. The Proliferation Security Initiative (PSI) should be reconstituted within the UN system as a neutral organization to assess intelligence, coordinate and fund activities, and make both generic and specific recommendations or decisions concerning the interdiction of suspected materials being carried to or from countries of proliferation concern. [10.10–12]

## ON EXTENDING OBLIGATIONS TO NON-NPT STATES

17. Recognizing the reality that the three nuclear-armed states now outside the NPT – India, Pakistan and Israel – are not likely to become members any time soon, every effort should be made to achieve their participation in parallel instruments and arrangements which apply equivalent non-proliferation and disarmament obligations. [10.13–16]
18. Provided they satisfy strong objective criteria demonstrating commitment to disarmament and non-proliferation, and sign up to specific future commitments in this respect, these states should have access to nuclear materials and technology for civilian purposes on the same basis as an NPT member. [10.17]
19. These states should participate in multilateral disarmament negotiations on the same basis as the nuclear-weapon state members of the NPT, and not be expected to accept different treatment because of their non-membership of that treaty. [10.18]

## ON BANNING TESTING

20. All states that have not already done so should sign and ratify the CTBT unconditionally and without delay. Pending entry into force, all states should continue to refrain from nuclear testing. [11.1–8]
21. All signatories should provide the necessary financial, technical and political support for the continued development and operation of the CTBTO, including completing the global coverage of its monitoring systems, facilitating on-site inspection when warranted, and establishing effective national data centres and information gathering systems. [11.9–12]

## ON LIMITING THE AVAILABILITY OF FISSILE MATERIAL

22. All states should negotiate to an early conclusion in the Conference on Disarmament a non-discriminatory, multilateral, internationally and effectively verifiable and irreversible Fissile Material Cut-off Treaty (FMCT), banning the production of fissile material for nuclear weapons or other nuclear explosive devices. [12.1–14]
23. All nuclear-armed states should declare or maintain a moratorium on the production of fissile material for weapon purposes pending the entry into force of such a treaty. [12.15]

24. On the question of pre-existing stocks, a phased approach should be adopted, with the first priority a cap on production; then an effort to ensure that all fissile material other than in weapons becomes subject to irreversible, verified non-explosive use commitments; and with fissile material released through dismantlement being brought under these commitments as weapon reductions are agreed. [12.18]
25. As an interim step, all nuclear-armed states should voluntarily declare their fissile material stocks and the amount they regard as excess to their weapons needs, place such excess material under IAEA safeguards as soon as practicable, and convert it as soon as possible to forms that cannot be used for nuclear weapons. [12.19]
26. The use of HEU in civil research programs should be ended as soon as possible, and the availability and use of separated plutonium in energy programs phased out as viable alternatives are established. [12.20-27]

## ON NUCLEAR SECURITY

27. All states should agree to take further measures to strengthen the security of nuclear materials and facilities, including early adoption of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM) and the most recent international standards, accelerated implementation of the Cooperative Threat Reduction (CTR) and associated programs worldwide, and greater commitment to international capacity building and information sharing. [13.1-16, 22-23]
28. At the Global Summit on Nuclear Security in April 2010, and in subsequent follow-up activity, priority attention should be given to the implementation-focused issues identified in Box 13-1. [13.4]
29. On the control of material useable for “dirty bombs”, further efforts need to be made to cooperatively implement the Code of Conduct on the Safety and Security of Radioactive Sources, with assistance to states in updating legislation and licensing practice, promoting awareness among users, and generally achieving a safety and security culture. [13.17-21]
30. Efforts should continue to be made to establish an intelligence clearing house which would provide a mechanism by which countries might be willing not only to share their intelligence, but also provide the know-how for other countries to interpret and deal with it. [13.22]
31. Strong support should be given to the emerging science of nuclear forensics, designed to identify the sources of materials found in illicit

trafficking or used in nuclear explosions, including through providing additional resources to the Nuclear Smuggling International Technical Working Group. [13.24-25]

## ON NUCLEAR ENERGY MANAGEMENT

32. The use of nuclear energy for peaceful purposes should continue to be strongly supported as one of the three fundamental pillars of the NPT, along with disarmament and non-proliferation. Increased resources should be provided, including through the IAEA's Technical Cooperation Programme, to assist developing states in taking full advantage of peaceful nuclear energy for human development. [14.1-3]
33. Support should be given to the initiative launched at the 2008 Hokkaido Toyako G8 Summit for international cooperation on nuclear energy infrastructure, designed to raise awareness worldwide of the importance of the three Ss - safeguards, security and safety - and assist countries concerned in developing the relevant measures. [14.4-6]
34. Proliferation resistance should be endorsed by governments and industry as an essential objective in the design and operation of nuclear facilities, and promoted through both institutional and technical measures - neither is sufficient without the other. [14.7-8]
35. The increasing use of plutonium recycle, and the prospective introduction of fast neutron reactors, must be pursued in ways which enhance non-proliferation objectives and avoid adding to proliferation and terrorism risks. In particular, a key objective of research and development on fast neutron reactors should be to design and operate them so that weapons grade plutonium is not produced. [14.9-15]
36. International measures such as spent fuel take-back arrangements by fuel suppliers, are desirable to avoid increasing spent fuel accumulations in a large number of states. Particular attention should be paid in this respect to take-back of fuel from initial core loads. [14.13]
37. New technologies for spent fuel treatment should be developed to avoid current forms of reprocessing altogether; and, as they are established, use of MOX fuel in thermal reactors, and conventional reprocessing plants, can be phased out. [12.26]
38. Nuclear industry, and government-industry collaboration, will need to play a greater role in mitigating the proliferation risks associated with a growing civilian nuclear sector worldwide. Industry should become a more active partner with governments in the drafting of regulations

and treaties that affect its activities, to ensure that they make operational sense and to encourage compliance. [14.16-24]

## ON MULTILATERALIZING THE NUCLEAR FUEL CYCLE

39. Multilateralization of the nuclear fuel cycle - in particular through fuel banks and multilateral management of enrichment, reprocessing and spent fuel storage facilities - should be strongly supported. Such arrangements would play an invaluable role in building global confidence in the peaceful uses of nuclear energy, and provide an important foundation for a world free of nuclear weapons, for which a necessary requirement will be multilateral verification and control of all sensitive fuel cycle activities. [15.48]
40. Pending the acceptance of more far-reaching proposals, support should be given to voluntary arrangements whereby, in return for assurances of supply, recipient states would renounce the national construction and operation of sensitive fuel cycle facilities for the duration of the agreement. [15.47]

## ON PRIORITIES FOR THE 2010 NPT REVIEW CONFERENCE

41. The following should be the major priority issues for the 2010 NPT Review Conference:
- (a) *Action for Disarmament*. Agreement on a twenty-point statement, "A New International Consensus for Action on Nuclear Disarmament" (see Box 16-1), updating and extending the "Thirteen Practical Steps" agreed in 2000.
- (b) *Strengthening Safeguards and Enforcement*. Agreement:
- that all states should accept the application of the Additional Protocol and that, to encourage its universal take-up, acceptance should be made a condition of all states' nuclear exports;
  - to declare that a state withdrawing from the NPT is not free to use for non-peaceful purposes nuclear materials, equipment and technology acquired while party to the NPT;
  - to recommend that the Security Council make it clear that any withdrawal will be regarded prima facie as a threat to international peace and security; and

- to recommend to states that they make it a condition of nuclear exports that safeguards agreements continue to apply after any such withdrawal.
- (c) *Strengthening the IAEA.* Agreement that the IAEA's budget be significantly increased – without any “zero real growth” constraint, and so as to reduce reliance on extra-budgetary support for key functions – as recommended in 2008 by the Zedillo Commission.
- (d) *Middle East Weapons of Mass Destruction Free Zone.* Agreement that the Secretary-General of the UN should convene an early conference of all relevant states to address creative and fresh ways to implement the 1995 resolution, including the identification of confidence building measures that all key states in the region can embrace, and to commence early consultations to facilitate that.
- (e) *Nuclear security.* Agreement that states should take further measures to strengthen the security of nuclear materials and facilities, including early adoption of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material and the most recent international standards, accelerated implementation of the cooperative threat reduction and associated programs worldwide, and greater commitment to international capacity building and information sharing.
- (f) *Peaceful uses.* Agreement that the inalienable right to the use of nuclear energy for peaceful purposes remains one of the fundamental objectives of the NPT and to dedicate increased resources, including through the IAEA's Technical Cooperation Programme, to assist developing states in taking full advantage of peaceful nuclear energy for human development.

## ON REDUCING WEAPON NUMBERS: BILATERAL AND MULTILATERAL PROCESSES

42. The “minimization point” objective should be to achieve no later than 2025 a global total of no more than 2,000 nuclear warheads, with the U.S. and Russia reducing to a total of 500 nuclear weapons each, and with at least no increases (and desirably significant reductions) in the arsenals of the other nuclear-armed states. The objective must be to cut not only strategic but all classes of weapons, and not only deployed weapons but those in storage and those awaiting destruction (but still capable of reconstitution and deployment) as well. [7.8; 18.1–3]

43. To bring the bilateral target within achievable range, the U.S. and Russia should accelerate implementation of the START follow-on treaty now being negotiated, bringing forward the envisaged reductions under this to no later than 2015. [17.13]
44. Once this treaty is ratified, the U.S. and Russia should resume intensive negotiations with a view to reaching a further START agreement no later than 2015, which would bring the total number of warheads down to no more than 1000 for each, and hopefully much less, by the year 2020. [17.12–13]
45. To achieve the minimization point objective of a global maximum of no more than 2,000 warheads, with the nuclear-armed states other than the U.S. and Russia having no more than 1,000 between them, the highest priority need is for all nuclear-armed states to explicitly commit *not to increase* the number of their nuclear weapons, and such declarations should be sought from them as soon as possible. [17.15–16]
46. To prepare the ground for multilateral disarmament negotiations, strategic dialogues should be initiated by all the nuclear-armed states with each other, and systematic and substantial national studies conducted of all the issues – including missile defence, conventional imbalances and disarmament verification – that will arise at all stages of the process. [17.17–19, 22–24]
47. Consideration should be given to the Conference on Disarmament in Geneva as an appropriate forum for initial consultations, on a formal or informal basis, between all the nuclear-armed states, given the need, if the multilateral disarmament process is to advance, for there to be early agreement on an appropriate negotiating process. [7.9; 17.20–21]
48. To facilitate future verification processes, in the credibility of which all nuclear-armed states will have a mutual interest, “nuclear archaeology” steps should be taken now by them to ensure that all relevant records are identified, secured and preserved, and relevant measurements and samples are taken. [17.25–26]

## ON NUCLEAR DOCTRINE: NO FIRST USE, EXTENDED DETERRENCE, AND NEGATIVE SECURITY ASSURANCES

49. Pending the ultimate elimination of nuclear weapons, every nuclear-armed state should make an unequivocal “no first use” declaration, committing itself to not using nuclear weapons either preventively or pre-emptively against any possible nuclear adversary, keeping them

available only for use, or threat of use, by way of retaliation following a nuclear strike against itself or its allies. [17.28]

50. If not prepared at this stage to make such a declaration, every nuclear-armed state should at least accept the principle that the sole purpose of possessing nuclear weapons – until such time as they can be eliminated completely – is to deter others from using such weapons against that state or its allies. [7.10; 17.28–32]
51. The allies in question – those presently benefiting from extended deterrence – should be given firm assurances that they will not be exposed to unacceptable risk from other sources, including especially biological and chemical weapons. In this context, continuing strong efforts should be made to promote universal adherence to the Biological and Toxin Weapons Convention and the Chemical Weapons Convention, and to develop more effective ways of ensuring compliance with the former. [17.29]
52. It is particularly important that at least a “sole purpose” statement be made in the U.S. Nuclear Posture Review due for publication early in 2010, placing pressure as this would on other nuclear-armed states to be more forthcoming, and undermining “double standards” arguments at the 2010 NPT Review Conference. [17.32]
53. New and unequivocal negative security assurances (NSAs) should be given by all the nuclear-armed states, supported by binding Security Council resolution, that they will not use nuclear weapons against non-nuclear weapon states. The only qualification should be that the assurance would not extend to a state determined by the Security Council to be in non-compliance with the NPT to so material an extent as to justify the non-application of any NSA. [17.33–39]
54. All NPT nuclear-weapon state members should sign and ratify the protocols for all the Nuclear Weapon Free Zones, and the other nuclear-armed states (so long as they remain outside the NPT) should issue stand-alone negative security assurances for each of them. [16.16]

## ON NUCLEAR FORCE POSTURE: LAUNCH ALERT STATUS AND TRANSPARENCY

55. The basic objective is to achieve changes to deployment as soon as possible which ensure that, while remaining demonstrably survivable to a disarming first strike, nuclear forces are not instantly useable. Stability should be maximized by deployments and launch alert status being transparent. [7.12–15; 17.40–50]

56. It is crucial that ways be found to lengthen the decision-making fuse for the launch of any nuclear weapons, and in particular – while recognizing the difficulty and complexity of the negotiating process involved between the U.S. and Russia – that weapons be taken off launch-on-warning alert as soon as possible. [17.43]
57. In order to achieve strategic dialogues capable of making real progress on disarmament, maximum possible transparency in both nuclear doctrine and force postures should be offered by all nuclear-armed states. [17.44]
58. A relaxation of Israel’s policy of complete opacity would be helpful in this respect, but continued unwillingness to do so should not inhibit its engagement in multilateral disarmament negotiations (given that nuclear disarmament can be defined as a process of taking unsafeguarded fissile materials and putting them under international safeguards). [17.45–50]

## ON NORTH KOREA AND IRAN

59. Continuing efforts should be made, within the framework of the Six-Party Talks, to achieve a satisfactory negotiated solution of the problem of North Korea’s overt pursuit of a nuclear weapons program, involving verifiable denuclearization and resumed commitment to the NPT in return for security guarantees and economic assistance. [17.52–56]
60. Continuing efforts should be made by the P5+1, Security Council and IAEA member states to achieve a satisfactory negotiated resolution of the issue of Iran’s nuclear capability and intentions, whereby any retention of any element of its enrichment program would be accompanied by a very intrusive inspection and verification regime, giving the international community confidence that Iran neither has nor is seeking nuclear weapons. [17.57–60]

## ON PARALLEL SECURITY ISSUES: MISSILES, SPACE, BIOLOGICAL AND CONVENTIONAL WEAPONS

61. The issue of anti-ballistic missile (ABM) systems should be revisited, with a view to allowing the further development of theatre ballistic missile defence systems, including potential joint operations in areas of mutual concern, but setting severe limits on strategic ballistic missile defences. It should be recognized that while, in a world without nuclear weapons, strategic missile defences could play an important stabilizing role as an insurance policy against potential cheaters, they

now constitute a serious impediment to both bilateral and multilateral nuclear disarmament negotiations. [18.28–30; see also 2.30–34, 17.18]

62. International efforts to curb missile proliferation should continue, but continued failure to multilateralize the INF should not be used as an excuse for either present party to withdraw from it. [2.35–37]
63. Ongoing attempts to prevent an arms race in outer space (PAROS) at the Geneva Conference on Disarmament, and work at the Vienna-based UN Committee on the Peaceful Uses of Outer Space, should be strongly supported. [18.31]
64. Continuing strong efforts should be made to promote universal adherence to the Biological and Toxin Weapons Convention and the Chemical Weapons Convention, and to develop more effective ways of defending against potential biological attacks, including – for all its difficulties – building a workable Convention verification regime. [17.29; 18.32–33]
65. The issue of conventional arms imbalances, both quantitative and qualitative, between the nuclear-armed states, and in particular the relative scale of U.S. capability, needs to be seriously addressed if it is not to become a significant impediment to future bilateral and multilateral nuclear disarmament negotiations, including by revisiting matters covered in the Treaty on Conventional Armed Forces in Europe (CFE). The development of more cooperative approaches to conflict prevention and resolution may well prove more productive in this context than focusing entirely on arms limitation measures. [18.34–36]

## ON ACTION AGENDAS: SHORT, MEDIUM AND LONGER TERM

66. The Short Term Action Agenda, for the period between now and 2012 – and including the 2010 NPT Review Conference – should focus on the issues we identify in Box 17-1.
67. Consideration should be given to the possibility of the United Nations General Assembly holding a Special Session on Disarmament late in 2012, as a way of benchmarking the achievements of the short term and defining the way forward. Any decision should be deferred until mid-2010, to allow for reflection on the outcome of the 2010 Review Conference, and whether enough momentum is building to justify the resources and effort involved. [17.2–3]
68. The Medium Term Action Agenda, for the period between 2012 and 2025, should focus on the issues we identify in Box 18-1.

69. The Longer Term Action Agenda, for the period beyond 2025, should focus on establishing the conditions we identify in Box 19-1.
70. Given that questions of cost-burden sharing are likely to arise as disarmament momentum builds over the longer term, it may be helpful for interested states to commission a detailed study on the calculation of disarmament and non-proliferation costs and possible ways of funding them. [18.26–27]

## ON MOBILIZING AND SUSTAINING POLITICAL WILL

71. Sustained campaigning is needed, through both the traditional and new media and direct advocacy, to better inform policy-makers and those who influence them about nuclear disarmament and non-proliferation issues. Capable non-governmental organizations should be appropriately supported by governments and philanthropic foundations to the extent necessary to enable them to perform this role effectively. [20.7–10]
72. There should be a major renewed emphasis on formal education and training about nuclear disarmament and related issues in schools and universities, focusing on the history of nuclear weapons, the risks and threats involved in their continued deployment and proliferation, and possible ways forward. An associated need is for more specialized courses on nuclear-related issues – from the scientific and technical to the strategic policy and legal – in universities and diplomatic-training and related institutions. [20.11–12]
73. Work should commence now on further refining and developing the concepts in the model Nuclear Weapons Convention now in circulation, making its provisions as workable and realistic as possible, and building support for them, with the objective of having a fully-worked through draft available to inform and guide multilateral disarmament negotiations as they gain momentum. Interested governments should support with appropriate resources the further development of the NWC. [20.38–44]
74. To help sustain political will over time, a regular “report card” should be published in which a distinguished international panel, with appropriately professional and broad-based research support, would evaluate the performance of both nuclear-armed and non-nuclear-armed states against the action agendas identified in this report. [20.49–50]

75. Consideration should be given to the establishment of a new “Global Centre on Nuclear Non-proliferation and Disarmament” to act as a focal point and clearing house for the work being done on nuclear non-proliferation and disarmament issues by many different institutions and organizations in many different countries, to provide research and advocacy support for both like-minded governments on the one hand, and civil society organizations on the other, and to prepare the “report card” described above. [20.53]
76. Such a centre might be constructed to perform functions at two levels:
- (a) a base of full time research and advocacy professionals, drawing directly on the resources of a wide international network of well-established associated research centres; and
  - (b) a superstructure, in the form of a governing or advisory board drawn from distinguished global figures of wide-ranging experience, giving their imprimatur as appropriate to the centre’s published reports, policy initiatives and campaigns. [20.51–54]