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Preparatory Committee for the 2026 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Addressing "Vienna issues": the Comprehensive Nuclear-Test-Ban Treaty; compliance and verification; export controls; cooperation in the peaceful uses of nuclear energy; nuclear safety; nuclear security; and discouraging withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons

Working paper submitted by Australia, Austria, Canada, Denmark, Finland, Hungary, Ireland, Netherlands (Kingdom of the), New Zealand, Norway and Sweden (the Vienna Group of Ten)

1. The Vienna Group of Ten reconfirms its full commitment to the Treaty on the Non-Proliferation of Nuclear Weapons. The Non-Proliferation Treaty is the cornerstone of the international nuclear disarmament and non-proliferation regime and fundamentally contributes to international peace, stability and security. Universalization of the Treaty is of utmost importance, and the Vienna Group of Ten encourages all States yet to accede to the Treaty to do so as soon as possible.

2. The Non-Proliferation Treaty is unique in providing a framework that fosters international confidence and cooperation in the peaceful uses of nuclear energy. The Treaty's objective of ensuring that nuclear materials, equipment, technology and facilities do not contribute to nuclear proliferation creates the necessary basis for peaceful nuclear cooperation and transfer. The full implementation of the Treaty also underpins the exchange and peaceful application of nuclear science and technology in a growing range of areas vital to human and animal health and environmental protection and supports attainment of the Sustainable Development Goals.

3. The three pillars of the Non-Proliferation Treaty are equally important and mutually reinforcing. The Vienna Group of Ten calls on all States, including those outside of the Treaty, to redouble their efforts to realize the fundamental goals of the Treaty, including full, verifiable and irreversible nuclear disarmament.

4. One hundred and forty-six International Atomic Energy Agency (IAEA) member States, including 35 least developed countries, have engaged in technical cooperation with IAEA, highlighting the ongoing relevance of peaceful uses of nuclear energy.

5. In addition, important efforts have been undertaken to advance the 64-point action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons and to continue maintaining a high-level focus on the Comprehensive Nuclear-Test-Ban Treaty, the peaceful uses of nuclear energy and nuclear safety and security.

6. While acknowledging the positive contribution of the Non-Proliferation Treaty to international security and development, confidence in the Treaty's effectiveness is being challenged by limited progress on the implementation of nuclear disarmament commitments, the lack of universality and non-compliance issues.

7. These challenges have been exacerbated by the unprovoked, unjust and illegal invasion of Ukraine by the Russian Federation.

8. Given these challenges, as well as the lack of a consensus outcome document at the tenth Review Conference, it is imperative that discussions in preparation for the 2026 Review Conference be conducted in a spirit of cooperation, and support continued strengthening of the Treaty and its review process.

9. We welcome the multilateral work of the United Nations Group of Governmental Experts on Nuclear Disarmament Verification, which, in its first iteration (2018–2019), considered how nuclear disarmament verification can advance nuclear disarmament, while the second iteration (2022–2023) considered further nuclear disarmament verification issues. We welcome that both iterations of the Group reached consensus on their substantive reports, with the second iteration finalizing its report on 19 May 2023. The report will provide a solid conceptual basis for further practical work on nuclear disarmament verification in a multilateral format. We also welcome the work of the International Partnership for Nuclear Disarmament Verification, the Quad Nuclear Verification Partnership and the joint Franco-German Nuclear Disarmament Verification Exercise (NuDiVe) to develop credible measures and build global capacity for verifying nuclear disarmament.

10. We further highlight the important complementary roles of a fissile material cut-off treaty, inter alia, as a quantitative control on nuclear weapons proliferation, and the Comprehensive Nuclear-Test-Ban Treaty. The Vienna Group of Ten therefore strongly welcomes the 2018 consensus report of the high-level expert preparatory group of the treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices and notes that its content will be useful for treaty negotiations. The 2010 action plan reaffirmed that the conclusion of a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices was vital to the Non-Proliferation Treaty and would constitute a core element of the nuclear disarmament and non-proliferation regime. We call for the immediate commencement of negotiations on the fissile material cut-off treaty and urge all States that have not yet done so to implement a moratorium on fissile material production for nuclear weapons or other nuclear explosive purposes.

11. The Vienna Group of Ten emphasizes the importance of incorporating diversity, gender equality, geographic representation and youth in a consistent and deliberate manner in fields related to nuclear disarmament and non-proliferation in recognition of the cross-cutting nature of the Non-Proliferation Treaty's three pillars. The Vienna Group of Ten further underscores the need to create conditions where women are not only able but are also strongly encouraged to engage and participate in discussions, assessments and policy creation in meetings on the Non-Proliferation Treaty in a full, effective and meaningful manner.

12. The Vienna Group of Ten also emphasizes the importance of promoting the meaningful and inclusive participation of young people in discussions in the field of disarmament, non-proliferation and peaceful uses.

13. The present working paper aims to ensure that the so-called “Vienna issues” listed in the title of the paper are given appropriate weight during the review cycle of the 2026 Review Conference.

14. **The Vienna Group of Ten submits the following recommendations to the Preparatory Committee**:

On cross-cutting issues, that the Review Conference:

(1) *Affirm* its full commitment to the Non-Proliferation Treaty as the cornerstone of the international nuclear disarmament and non-proliferation regime;

(2) *Encourage* all States that are not parties to the Treaty to accede to it as soon as possible;

(3) *Reaffirm* that the three pillars of the Treaty are equally important and mutually reinforcing, and recall that all obligations and commitments under the Treaty and its Review Conferences remain valid;

(4) *Acknowledge* the fundamentally important role played by IAEA in contributing to the implementation of the Treaty;

(5) *Underline* the importance of gender mainstreaming and facilitating the pursuit of gender equality and workforce diversity in discussions and decisions across all three pillars of the Treaty;

(6) *Emphasize* the importance of regional cooperation in assisting States parties in obtaining the benefits of the Treaty.

On the Comprehensive Nuclear-Test-Ban Treaty, that the Review Conference:

(7) *Affirm* that the Comprehensive Nuclear-Test-Ban Treaty is vital to the Non-Proliferation Treaty and constitutes a core element of the nuclear disarmament and nuclear non-proliferation regime;

(8) *Underline* that the entry into force of the Comprehensive Nuclear-Test-Ban Treaty is of the utmost urgency as it will provide the global community with a permanent, non-discriminatory, verifiable and legally binding commitment to end any nuclear weapon test explosion or any other nuclear explosion, as a means to constrain the development and qualitative improvement of nuclear weapons, which combats both horizontal and vertical nuclear proliferation;

(9) *Urge* all States that have not yet done so to sign and/or ratify the Comprehensive Nuclear-Test-Ban Treaty without delay, in particular those remaining Annex 2 States necessary for the Treaty’s entry into force;

(10) *Urge* the Russian Federation to reverse its decision to revoke its ratification of the Comprehensive Nuclear-Test-Ban Treaty without delay;

(11) *Urge* States signatories to promote adherence to the Treaty through bilateral and joint outreach, seminars and other means;

(12) *Urge* all States to acknowledge the global de facto norm against nuclear testing and to maintain the moratorium on explosive nuclear tests, and refrain from any action that would defeat the object and purpose of the Comprehensive Nuclear-Test-Ban Treaty, pending its entry into force;

(13) *Urge* all States to support the work of the Provisional Technical Secretariat and its Executive Secretary to continue developing the Comprehensive Nuclear-Test-Ban Treaty’s verification regime, including completion, improvement and sustainment of the International Monitoring System. This work is vital to the

effectiveness of the Treaty, to maintaining the norm that existing signatures and ratifications establish against nuclear testing, and to sustaining political progress towards entry into force.

On compliance and verification, that the Review Conference:

(14) *Underline* the importance of building and maintaining confidence in the peaceful nature of nuclear activities in non-nuclear-weapon States;

(15) *Recognize* the vital importance of IAEA verification and monitoring in building confidence in the exclusively peaceful nature of nuclear programmes, and call on States parties to extend their full cooperation to IAEA in the implementation of safeguards and other verification arrangements;

(16) *Agree* that IAEA officials must be treated respectfully and be able to discharge their safeguards functions under the relevant agreements effectively;

(17) *Call for* the universal application of IAEA safeguards, and call on all States to submit all relevant materials and activities, both current and future, to IAEA safeguards;

(18) *Urge* all States parties to the Non-Proliferation Treaty that have yet to fulfil their obligations to accept safeguards, as set forth in an agreement to be negotiated and concluded with IAEA in accordance with its statute and the Agency's safeguards system, to do so without delay;

(19) *Recognize* the Additional Protocol as a long-standing and integral part of the IAEA safeguards system, affirm that a comprehensive safeguards agreement, together with an additional protocol, represents the current verification standard pursuant to article III (1) of the Treaty, and urge all States parties that have not yet done so to conclude and bring into force additional protocols without further delay and to support the efforts of IAEA to encourage the universalization of the Additional Protocol;

(20) *Note* that the ability of IAEA to draw credible and soundly based annual safeguards conclusions for States parties with small quantities protocols to their comprehensive safeguards agreement based on the original text is significantly affected, and urge all States parties with unmodified small quantities protocols to rescind or amend them;

(21) *Call on* all States parties to ensure that IAEA continues to have the necessary political, technical and financial support to be able to effectively meet its responsibility to apply safeguards as required by article III of the Treaty;

(22) *Urge* all States to cooperate fully and proactively with IAEA in implementing safeguards agreements and in expeditiously addressing anomalies, inconsistencies and questions identified by IAEA in order to assist it in drawing its safeguards conclusions with respect to the correctness and completeness of States' declarations;

(23) *Underscore* the importance of compliance by States parties with their non-proliferation obligations under the Treaty and the importance of addressing all non-compliance matters in order to uphold the Treaty's integrity;

(24) *Express concern* about cases of non-compliance with safeguards obligations by States parties and call on all States currently in non-compliance with their Non-Proliferation Treaty safeguards obligations to resolve all cases of non-compliance in full conformity with their respective legal obligations and thereby promptly return to compliance with their safeguards obligations;

(25) *Stress* that, in order to draw credible safeguards conclusions, IAEA needs the full and timely cooperation of States in the implementation of their safeguards agreements, including through the provision by States of early design information;

(26) *Welcome* the continuing efforts of IAEA to strengthen the effectiveness and efficiency of IAEA safeguards as part of the ongoing evolution of the safeguards system, including through the development and implementation of State-level safeguards approaches;

(27) *Commend* IAEA for its ongoing efforts to conduct safeguards verification activities despite armed attacks at or against nuclear facilities in Ukraine.

On export controls, that the Review Conference:

(28) *Reaffirm* that each State party to the Non-Proliferation Treaty is responsible for ensuring that its nuclear-related exports do not directly or indirectly assist in the development of nuclear weapons or other nuclear explosive devices and that such exports are conducted in full conformity with the objectives and undertakings of the Treaty;

(29) *Underline* the role of nuclear-related export controls in ensuring that such exports do not contribute to the proliferation of nuclear weapons, their means of delivery or other nuclear explosive devices;

(30) *Stress* that effective export controls are central to enabling cooperation in the peaceful uses of nuclear energy, thereby contributing to international peace and security as well as sustainable development;

(31) *Urge* all States to apply in their export controls the Understandings of the Zangger Committee, which are designed to implement the obligations under article III of the Treaty, and to further make use of current multilaterally agreed upon export control Guidelines and Understandings;

(32) *Recognize* that sound domestic laws and regulations are a prerequisite to effective implementation of export controls;

(33) *Recall* the essential role played by the relevant Security Council resolutions, including resolution 1540 (2004) and subsequent resolutions, and the obligations of all States to implement those resolutions;

(34) *Reaffirm* that the list of items triggering IAEA safeguards and the procedures for implementing control of these items, in accordance with article III (2) of the Treaty, should be reviewed regularly to take into account advances in technology, their proliferation sensitivity and changes in procurement practices;

(35) *Welcome* States parties' increasing adherence to the Understandings of the Zangger Committee and the Guidelines of the Nuclear Suppliers Group, encourage further progress in this regard, and call on all States parties to examine opportunities offered by the increasing adherence to export control guidelines with a view to strengthening the global nuclear disarmament and non-proliferation regime;

(36) *Reaffirm* that new supply arrangements for the transfer of source or special fissionable material or equipment or material especially designed or prepared for the processing, use or production of special fissionable material to non-nuclear-weapon States should require, as a necessary precondition, acceptance of full-scope IAEA safeguards, and urge all States to require an

additional protocol based on the model INFCIRC/540 (Corrected) as a condition for new supply arrangements.

On cooperation in the peaceful uses of nuclear energy, that the Review Conference:

(37) *Acknowledge* the inalienable right, under article IV of the Non-Proliferation Treaty, of all States parties to undertake research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I, II and III, recognizing the benefits that can be obtained from the peaceful applications of nuclear energy and nuclear techniques;

(38) *Stress* that adherence to, and compliance with, the non-proliferation and verification requirements of the Treaty are preconditions for cooperation in this field;

(39) *Stress* the importance of implementing the highest levels of safety and security at all stages of the nuclear fuel cycle and in all peaceful uses of nuclear energy;

(40) *Underline* the essential role of IAEA in assisting developing States parties, notably least developed countries, in engaging in the peaceful applications of nuclear energy and nuclear techniques, including through its technical cooperation programme, as well as the further development of instruments, standards and codes of conduct to ensure nuclear safety and security and environmental protection;

(41) *Emphasize* the important role that nuclear applications can play in realizing the Sustainable Development Goals in the 2030 Agenda for Sustainable Development and note that the sustainable development goals of States parties can provide a framework for tangible results to which the IAEA technical cooperation programme, as a useful vehicle for technology transfer, can make an important contribution;

(42) *Encourage* States parties in a position to do so to contribute to the IAEA technical cooperation programme as well as the Peaceful Uses Initiative and flagship initiatives designed to promote access to the peaceful uses of nuclear energy and applications;

(43) *Support* dialogue to foster, in a sustained manner, knowledge about the potential of nuclear applications to contribute to the Sustainable Development Goals;

(44) *Recognize* the significant and particular dangers posed to peaceful nuclear activities by armed conflict in countries with nuclear industries, causing circumstances in which a State party may no longer be able to meet fully its nuclear safety, security and safeguards commitments and obligations related to peaceful activities;

(45) *Welcome* the IAEA Ministerial Conference on Nuclear Science, Technology and Applications and the Technical Cooperation Programme as a contribution to the development and deployment of nuclear techniques for peaceful purposes and the building of relevant partnerships;

(46) *Take note* of the first-ever IAEA Nuclear Energy Summit, held in Brussels on 21 March 2024.

On nuclear safety, that the Review Conference:

(47) *Emphasize* the importance for States and international organizations to continue to take active steps to enhance safety measures for all fuel cycle activities;

(48) *Underline* that measures to strengthen nuclear safety facilitate international cooperation in the field of peaceful nuclear activities and the production, transfer and use of nuclear and other radioactive material;

(49) *Encourage* all States to become parties to the Convention on Nuclear Safety, and encourage contracting parties to fulfil their obligations under the Convention;

(50) *Welcome* the consensus outcome of the Joint Eight and Ninth Review Meeting of the Contracting Parties to the Convention on Nuclear Safety held in 2023;

(51) *Encourage* all States to become parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, and encourage contracting parties to fulfil their obligations under the Joint Convention;

(52) *Take note* of the outcomes of the Seventh Review Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management held in 2022;

(53) *Encourage* all States to implement the principles of the Vienna Declaration on Nuclear Safety to prevent accidents with radiological consequences and mitigate such consequences should they occur;

(54) *Underline* the central role of IAEA in enhancing the global nuclear safety regime;

(55) *Commend* IAEA for formulating the seven indispensable pillars for ensuring nuclear safety and security, which apply in all circumstances, including in armed conflict, and which derive from and are aligned with IAEA safety standards and nuclear security guidance;

(56) *Welcome* the establishment of the five concrete principles to promote nuclear safety and security at the Zaporizhzhia nuclear power plant in Ukraine, in full respect of the sovereignty and territorial integrity of Ukraine, and the efforts of IAEA to monitor and report on the implementation of those principles;

(57) *Commend* IAEA for its efforts to assist in ensuring nuclear safety following attacks at and against nuclear facilities in Ukraine;

(58) *Emphasize* the importance of States continuing to take active steps to respond to the observations and lessons contained in the report by the IAEA Director General on the Fukushima Daiichi accident to identify further scope for enhancing nuclear safety;

(59) *Commend* the work of the task force established by IAEA to review the plans and actions by Japan related to discharges of Advanced Liquid Processing System water from the Fukushima Daiichi nuclear power station, and welcome the ongoing monitoring and other technical work of IAEA related to the discharges;

(60) *Encourage* all States to address regulatory effectiveness and transparency, operational safety, design safety and emergency preparedness and response by

hosting IAEA review missions on a regular basis, and to share publicly the outcomes in order to further strengthen nuclear safety worldwide;

(61) *Emphasize* the need for States embarking on nuclear energy programmes to develop adequate national technical, human and regulatory infrastructure to ensure safety, security and safeguards for all fuel cycle activities in line with international conventions, standards, guidelines and recommendations, as appropriate, at a very early stage of the process;

(62) *Emphasize* also the importance for all States embarking on nuclear power programmes to plan in early stages for the safe, secure and safeguarded management of spent fuel and radioactive waste, including the deep geological disposal of spent nuclear fuel;

(63) *Highlight* the importance of environmental safety considerations in nuclear power programme design, construction, operation, decommissioning and disposal activities;

(64) *Emphasize* the importance for all States, in particular those with nuclear fuel cycle activities, of becoming parties to all conventions and agreements relevant to safety and security and support the further development, as necessary, of legally binding instruments to ensure a better global safety and security framework;

(65) *Underline* the importance of international cooperation to enhance the safety and security of the transportation of nuclear and other radioactive material, including through the use of best practice guidelines for systematic communications in relation to the safe maritime and other transport of radioactive material, and in this regard commend the work of the informal dialogue of coastal and shipping States;

(66) *Underline* the importance of international cooperation in assessing and addressing, in a timely manner, any legal and regulatory challenges in connection with the deployment of new technologies, including, but not limited to, small modular reactors, advanced reactor technologies and transportable nuclear power plants;

(67) *Welcome* IAEA standards and guidance on the management of radioactive sources throughout their life cycle, including for disused sources, and encourage States to express their political commitment to implement the Code of Conduct on the Safety and Security of Radioactive Sources and its supplementary guidance documents;

(68) *Recognize* synergies in the interface among nuclear safety, nuclear security and safeguards, and encourage States to continue to bring safeguards, safety and security together when relevant.

On nuclear security, that the Review Conference:

(69) *Underline* the importance of effective nuclear security, including physical protection as well as cybersecurity and computer security of all nuclear and other radioactive materials and facilities, including those materials used for military purposes and related facilities, and emphasize the need for all States to achieve and maintain the highest standards of nuclear security;

(70) *Affirm* the central role of IAEA in strengthening an effective and comprehensive global nuclear security framework based on prevention, detection and response, including coordinating international nuclear security activities and facilitating regional activities, and supporting national

implementation of IAEA guidance and recommendations such as the Joint Statement on Strengthening Nuclear Security Implementation (INFCIRC/869);

(71) *Provide* support, as required, to IAEA in its efforts to address the nuclear security implications of the current situation in Ukraine, including through the continued physical presence of IAEA technical experts at the Zaporizhzhia nuclear power plant and other nuclear facilities in Ukraine;

(72) *Recognize* the existing and constantly evolving and emerging threat of nuclear and radiological terrorism and the risk of acquisition of materials by non-State actors, and highlight the need to take measures to identify and address emerging and evolving challenges and threats to the security of nuclear and radioactive material and related facilities;

(73) *Stress* with serious concern the threat posed by illicit trafficking and other unauthorized activities and events involving nuclear and other radioactive material, equipment and technology outside of regulatory control;

(74) *Call on* States that possess nuclear weapons to undertake voluntary measures to increase transparency and confidence in the effectiveness of security for military nuclear materials and related materials;

(75) *Welcome* the outcomes of the fourth IAEA International Conference on Nuclear Security, held from 20 to 24 May 2024, and call on States to actively participate in the preparations for the next IAEA International Conference on Nuclear Security;

(76) *Underline* that measures to strengthen nuclear security enhance public confidence and facilitate international cooperation in the field of peaceful nuclear activities and the promotion of peaceful uses of nuclear energy, as nuclear security is essential to the responsible use of nuclear and other radioactive material;

(77) *Call on* States to ensure that IAEA has predictable, reliable and sufficient technical, financial and human resources in order to undertake its nuclear security-related activities in a sustainable way;

(78) *Encourage* States that have not yet done so to become parties to the Convention on the Physical Protection of Nuclear Material and the 2005 Amendment thereto, and encourage all parties to the Convention and the 2005 Amendment to fully implement their obligations thereunder, including in accordance with article 14.1 regulations;

(79) *Call on* States to continue to strengthen measures to address offences relating to nuclear material and nuclear facilities in their national law, as appropriate, in accordance with the Convention and its Amendment;

(80) *Welcome* the consensus outcome of the 2022 Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material, including the agreement to support the work of IAEA in promoting the universalization of the Amendment to the Convention and to convene the next Conference of the Parties within six years;

(81) *Urge* all States that have not yet done so to become parties to the International Convention for the Suppression of Acts of Nuclear Terrorism as soon as possible, and encourage all States parties to the Convention to fully implement their obligations thereunder;

(82) *Highlight* the importance of maintaining effective transport security;

(83) *Encourage* States to use IAEA guidance to expand efforts to strengthen preventive and protective measures against insider threats at nuclear facilities, including through the development and use of effective nuclear material accountancy and control systems;

(84) *Encourage* States to make use of IAEA assistance in the areas of training and education across all technical areas of nuclear security and to provide support to IAEA in its ongoing work for the establishment of its Nuclear Security Training and Demonstration Centre at its laboratories in Seibersdorf, Austria;

(85) *Encourage* States to make use of and contribute to IAEA advisory services relevant to nuclear security (its International Physical Protection Advisory Service and its International Nuclear Security Advisory Service), to publish their recommendations to the extent possible, and establish and implement, with IAEA, Integrated Nuclear Security Support Plans;

(86) *Recognize* the increased need for all States parties to reinforce their efforts to improve existing cooperation mechanisms, including through membership in and information-sharing through the IAEA Incident and Trafficking Database;

(87) *Recognize* synergies in the interfaces among nuclear safety, nuclear security and safeguards and encourage States to continue to bring safeguards, safety and security together;

(88) *Encourage* States to further minimize highly enriched uranium stocks and to further minimize their use, including by converting radioisotope production to low-enriched uranium fuel and targets or by using other non-highly enriched uranium technologies, taking into account the need for an assured and reliable supply of medical isotopes and to implement the reporting mechanism in the Joint Statement on Minimising and Eliminating the Use of Highly Enriched Uranium in Civilian Applications (INFCIRC/912);

(89) *Encourage* States to keep their stockpiles of separated plutonium to the minimum amount possible consistent with their national requirements and to report stocks in line with the Guidelines for the Management of Plutonium (INFCIRC/549);

(90) *Highlight* the importance of nuclear forensics as an essential component of an effective nuclear security architecture, and encourage States to develop and enhance nuclear forensics capabilities;

(91) *Welcome* the work of IAEA in raising awareness of the potential impact on nuclear security of cyberattacks, and the provision of guidance and assistance to IAEA member States in enhancing computer security and information security;

(92) *Welcome* contributions by the United Nations and the International Criminal Police Organization (INTERPOL) to strengthening global nuclear security;

(93) *Welcome and encourage* active participation within nuclear security-related initiatives, including to counter non-State actor threats, such as the Global Partnership against the Spread of Weapons and Materials of Mass Destruction and the Proliferation Security Initiative, and support the outcomes of the Global Initiative to Combat Nuclear Terrorism;

(94) *Note* the outcomes of the 2022 comprehensive review conducted by the Security Council Committee established pursuant to resolution 1540 (2004)

(S/2016/1038), and welcome efforts for the comprehensive implementation of Security Council resolution 1540 (2004);

(95) *Call on* States to establish competent and well-coordinated independent authorities to detect and respond to criminal or unauthorized acts involving any nuclear or other radioactive material that is out of regulatory control.

On discouraging withdrawal from the Non-Proliferation Treaty, that the Review Conference:

(96) *Affirm* the unique role that the Non-Proliferation Treaty plays in providing a framework that fosters international confidence and cooperation in the peaceful uses of nuclear energy;

(97) *Note* that withdrawal from the Treaty carries inherent risks to non-proliferation efforts and could constitute a threat to international peace and security;

(98) *Reaffirm* that exercise of the right of withdrawal under article X of the Treaty should be governed by the following principles:

(a) Withdrawal from the Treaty is a right for States parties governed by article X of the Treaty, which sets out that the right can only be exercised in the face of extraordinary events related to the subject matter of the Treaty that have jeopardized the supreme interests of its country;

(b) Withdrawal from the Treaty can be exercised only following notice to all other States parties and the Security Council three months in advance, and such notice must include a statement of the extraordinary events that the withdrawing State regards as having jeopardized its supreme interests;

(c) This right is governed by international law; the withdrawing State will remain liable for violations of the Treaty perpetrated prior to withdrawal;

(d) Withdrawal should not affect any right, obligation or legal situation between the withdrawing State and each of the other States parties created through implementation of the Treaty prior to withdrawal, including those related to IAEA safeguards;

(e) Every diplomatic effort should be made to persuade the withdrawing State to reconsider its decision, including by addressing its legitimate security needs and encouraging regional diplomatic initiatives;

(f) All nuclear materials, equipment and technology acquired by a State party under article IV prior to withdrawal must remain under IAEA safeguards or fallback safeguards even after withdrawal;

(g) Nuclear-supplying States should be encouraged to exercise their right – in accordance with international law and their national legislation – to incorporate dismantling and/or return clauses or fallback safeguards in the event of withdrawal into contracts or other arrangements concluded with the withdrawing State, and to adopt standard clauses for this purpose.

Background note 1: the Comprehensive Nuclear-Test-Ban Treaty

1. The Comprehensive Nuclear-Test-Ban Treaty was an integral part of the 1995 decision to indefinitely extend the Non-Proliferation Treaty and constitutes a core element of the nuclear disarmament and nuclear non-proliferation regime. Once in effect, it will provide the global community with a permanent, non-discriminatory, verifiable and legally binding commitment to end any nuclear weapon test explosion or any other nuclear explosions. It constrains the development of nuclear weapons and their qualitative improvement, which combats both horizontal and vertical nuclear proliferation. The provisions of article V of the Non-Proliferation Treaty should be interpreted in this light.

2. Over two and a half decades have passed since the Comprehensive Nuclear-Test-Ban Treaty was opened for signature. Although the Treaty has yet to come into force, the nuclear test moratorium has become a de facto international norm. However, as was recognized in the 2022 Joint Statement on the Comprehensive Nuclear-Test-Ban Treaty, entry into force of the Treaty remains our urgent goal due to its permanent and legally binding effect. Progress has been made towards ratification, and continued efforts are under way to that end: the Treaty has now been signed by 187 States, and of those 178 have ratified it, including 35 whose ratification is necessary for entry into force. The entry into force of the Comprehensive Nuclear-Test-Ban Treaty remains of the utmost urgency.

3. In November 2023, the Russian Federation revoked its ratification of the Comprehensive Nuclear-Test-Ban Treaty. This disappointing and deeply regrettable decision is a significant step backwards and wholly contrary to commitments undertaken in the context of the Non-Proliferation Treaty, and to progress made towards the universalization and entry into force of the Comprehensive Nuclear-Test-Ban Treaty. As an Annex 2 State, the Russian Federation has a special responsibility towards the Comprehensive Nuclear Test-Ban Treaty, and such a decision undermines the international security architecture and ongoing non-proliferation and disarmament efforts.

4. The international community has repeatedly reaffirmed its commitment to the Comprehensive Nuclear-Test-Ban Treaty and highlighted the importance of its earliest possible entry into force, most recently in the final declaration adopted at the thirteenth Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty (Article XIV Conference), held in September 2023. At the Conference, States signatories set out their commitment to take concrete and actionable steps towards the early entry into force and universalization of the Treaty. The Security Council, in its resolution 2310 (2016), as well as the General Assembly, most recently in its resolution 77/94, also recognized that early entry into force of the Treaty would constitute an effective nuclear disarmament and non-proliferation measure that would contribute to the achievement of a world without nuclear weapons. In its resolution, the Council urged all States that had either not signed or not ratified the Treaty, particularly the remaining Annex 2 States, to do so without further delay.

5. Pending the Comprehensive Nuclear-Test-Ban Treaty's entry into force, States should refrain from any action that would defeat its object and purpose. Development of new types of nuclear weapons, for example, may result in the resumption of tests and a lowering of the nuclear threshold. The existing moratorium on nuclear weapon test explosions and any other nuclear explosions must be maintained, but cannot serve as a substitute for ratifying the Treaty.

6. Only the Democratic People's Republic of Korea has acted contrary to the moratorium in the twenty-first century, by conducting nuclear tests in 2006, 2009,

2013, twice in 2016 and on 3 September 2017. These deplorable tests, in violation of relevant Security Council resolutions, undermine the international non-proliferation regime and the object and purpose of the Comprehensive Nuclear-Test-Ban Treaty. The events further underlined the urgent need for entry into force of the Treaty and the relevance and effectiveness of a universal and effective international monitoring and verification system for detecting nuclear explosions.

7. The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization is making good progress towards finalizing the system to verify compliance with the Treaty at its entry into force and undertakes efforts towards its sustainment and recapitalization. The goal of this work is an effective, reliable, participatory and non-discriminatory verification system with global reach. All major components of the verification system, including the capability to conduct an on-site inspection, should be ready to meet the verification requirements of the Treaty by the time of its entry into force. Data from the international monitoring system should also continue to be available and be used for civil and scientific purposes, especially in the context of natural disasters and other emergency situations, as well as climate change, including further cooperation with other international organizations in this regard.

8. There are a number of outreach activities that promote the signature and ratification of the Treaty, including the biennial Article XIV Conference, the ministerial meeting of the Friends of the Comprehensive Nuclear-Test-Ban Treaty, the Group of Eminent Persons and the Comprehensive Nuclear-Test-Ban Treaty Organization Youth Group, as well as bilateral and regional outreach activities undertaken by States signatories. Extensive training courses and conferences also contribute to enhanced awareness of the Treaty, help enable States signatories to fulfil their verification responsibilities and address possible technical, scientific and legal challenges. Focused activities are undertaken to build the capacity of experts from developing countries and to expand the roster of qualified inspectors and surrogate inspectors.

Background note 2: compliance and verification

1. Article III (1) of the Treaty requires non-nuclear-weapon States parties to accept safeguards on all source and special fissionable material in all peaceful nuclear activities.

2. Full compliance with all provisions of the Non-Proliferation Treaty, including with relevant safeguards agreements, underpins the integrity of the Treaty. IAEA safeguards are fundamental to the nuclear non-proliferation regime and help create an environment conducive to nuclear cooperation. The IAEA safeguards system must be upheld.

3. A State's comprehensive safeguards agreement, based on IAEA document INFCIRC/153 (Corrected), requires the State to account for and control all nuclear material subject to safeguards and to provide the required design information and reports to IAEA. IAEA, as the competent authority designated under article III, verifies the correctness and completeness of a State's declarations in order to provide assurances of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear material and activities.

4. Credible assurances regarding the absence of undeclared nuclear material and activities require that a comprehensive safeguards agreement be complemented by an additional protocol based on IAEA document INFCIRC/540 (Corrected). Implementation of an additional protocol provides increased confidence about a State's compliance with its Treaty obligations and is an integral part of the IAEA safeguards system, as it grants IAEA the tools needed to draw credible conclusions on the absence of undeclared nuclear materials and activities.

5. The combination of a comprehensive safeguards agreement and an additional protocol represents the current verification standard pursuant to article III (1) of the Treaty. The implementation of a comprehensive safeguards agreement and additional protocol together allows for IAEA to draw the broader conclusion that all nuclear material in a State remained in peaceful activities. It also allows for the application of a State-level safeguards approach, that is, the implementation of efficiency measures without compromising safeguards effectiveness in States where IAEA is confident there is an absence of undeclared nuclear materials and activities.

6. All States parties that have yet to do so should bring into force and implement comprehensive safeguards agreements without delay. A total of 154 States have signed an additional protocol, and such protocols are in force for 142 States. Those States that have not yet done so should bring into force additional protocols without further delay, and all States should submit all nuclear material and activities, both current and future, to IAEA safeguards. States parties with unmodified small quantities protocols should, as soon as possible, rescind or amend them. Under the modified small quantities protocol, States parties are required, inter alia, to submit an initial inventory report on all nuclear material to IAEA and to facilitate IAEA inspections. All States parties in a position to do so should continue to coordinate with IAEA in their efforts to promote the conclusion of comprehensive safeguards agreements and additional protocols, and the amendment of small quantities protocols.

7. As confirmed by the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons and the 2000 and 2010 Review Conferences, IAEA safeguards should be assessed and evaluated regularly. Decisions adopted by IAEA policymaking organs aimed at further strengthening the effectiveness and improving the efficiency of IAEA safeguards should be supported and implemented.

8. The IAEA State-level safeguards approach represents progress towards a more effective and efficient safeguards system that adheres fully to the principles of non-discriminatory, technical, objectives-based safeguards implementation.

9. All States should cooperate fully and proactively with IAEA in implementing safeguards agreements and in expeditiously addressing anomalies, inconsistencies and questions identified by IAEA in order to assist it in reaching its annual safeguards conclusions, which are of critical importance in assessing States' compliance with their Non-Proliferation Treaty obligations. IAEA should continue to make full use of all tools at its disposal to draw conclusions and resolve safeguards issues.

10. In order to draw well-founded safeguards conclusions, IAEA needs to receive early design information, in accordance with the 1992 decision of the IAEA Board of Governors (IAEA document GOV/2554/Attachment 2/Rev.2), which outlines the need for all non-nuclear-weapon States parties to provide this information to IAEA on a timely basis. Early design information is also a requirement pursuant to the revised small quantities protocol and relevant provisions of the subsidiary arrangements.

11. States should undertake consultations with IAEA early in the design process for new nuclear facilities to ensure that aspects relevant to safeguards are taken into consideration in order to facilitate future safeguards implementation, from their initial planning stage through design, construction, operation and decommissioning.

12. Any State party that does not comply with its safeguards obligations under the Non-Proliferation Treaty isolates itself from the benefits of constructive international relationships and from the benefits that accrue from adherence to the Treaty, including from cooperation in the peaceful uses of nuclear energy, until it enters into full compliance. The Vienna Group of Ten calls on those States that are currently non-compliant to promptly return to full compliance with their obligations, in particular:

- The Democratic People's Republic of Korea. The nuclear weapons programme of the Democratic People's Republic of Korea, including nuclear tests in 2006, 2009, 2013, 2016 and 2017, remains a serious challenge to the international nuclear non-proliferation regime. The Democratic People's Republic of Korea must comply with its Non-Proliferation Treaty obligations and allow for the return of IAEA inspectors and the reintroduction of IAEA safeguards.
- The Syrian Arab Republic. The finding by the IAEA Board of Governors in 2011, that the country's undeclared construction of a nuclear reactor at Dair Alzour and its failure to provide design information for this facility constitutes non-compliance with obligations under its safeguards agreement, remains a concern. The Syrian Arab Republic must remedy its non-compliance by cooperating fully with IAEA, including by providing full access to all sites and locations requested by IAEA.

13. Full implementation by the Islamic Republic of Iran of its safeguards agreement pursuant to the Non-Proliferation Treaty is key to regaining confidence that the nature of the nuclear activities of the Islamic Republic of Iran is exclusively peaceful. This includes its interactions with IAEA to address outstanding safeguards issues related to previously undeclared nuclear locations further to the resolutions of the IAEA Board of Governors on this issue. The reapplication and early ratification by the Islamic Republic of Iran of the Additional Protocol to its safeguards agreement with IAEA is also a key measure. It has been three years since the Islamic Republic of Iran stopped the provisional application of the Additional Protocol, thereby preventing the Agency from conducting complementary access in the Islamic Republic of Iran. The Islamic Republic of Iran has also not implemented provisions of modified Code 3.1

of the Subsidiary Arrangements to its Safeguards Agreement, which is a legal obligation for the Islamic Republic of Iran.

14. Since the tenth Review Conference, attempts to achieve a return to the Joint Comprehensive Plan of Action (JCPOA) have not been successful. A compromise proposal put forward by the High Representative of the European Union in his capacity as coordinator of the JCPOA Joint Commission, in August 2022, representing the result of negotiations between all concerned States, was ultimately rejected by one party. Since then, there has been a continued expansion of the stockpiles of the Islamic Republic of Iran and its production capabilities for highly enriched uranium. It is also of deep concern that, since February 2022, IAEA has not had access to information from the Agency's JCPOA-related monitoring and surveillance equipment in the Islamic Republic of Iran. As a result, the Agency has lost continuity of knowledge in relation to that country's production and inventory of centrifuges, rotors and bellows and heavy water. This has detrimental implications for the Agency's ability to provide assurance of the peaceful nature of the nuclear programme of the Islamic Republic of Iran.

Background note 3: export controls

1. Export controls aim to ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons or other nuclear explosive devices, an unsafeguarded nuclear fuel cycle activity or acts of nuclear terrorism, and that international trade and cooperation in the nuclear field, under article IV of the Non-Proliferation Treaty, is not hindered unduly in the process. Nuclear export controls are a legitimate, necessary and desirable means of implementing the obligations of States parties under article III of the Treaty. Effective export controls are central to enabling cooperation in the peaceful uses of nuclear energy.

2. The existence of extensive covert networks for the procurement and the supply of sensitive nuclear equipment and technology underlines the need for all States to exercise vigilance in countering nuclear proliferation, including through the strict implementation of national nuclear export control policies. States should have in place adequate laws and regulations so that they can effectively implement export controls.

3. There is a clear relationship between the non-proliferation obligations as set out in articles I, II and III of the Non-Proliferation Treaty and the objectives for peaceful uses set out in article IV of the Treaty. Nothing in the Treaty should be interpreted as affecting the inalienable right of all States parties to the Treaty to undertake research, production and use of nuclear energy for peaceful purposes, without discrimination and in conformity with articles I, II and III of the Treaty. Recipient States have an obligation to exercise appropriately stringent controls to prevent nuclear proliferation.

4. The Understandings of the Zangger Committee (INFCIRC/209, as amended) provide important guidance to States parties in meeting their obligation under article III (2) of the Non-Proliferation Treaty. They include a list of items triggering IAEA safeguards for exports to non-nuclear-weapon States, including States that are not parties to the Treaty.

5. The Nuclear Suppliers Group Guidelines (INFCIRC/254, as amended) play an important and useful role in the development of national export control policies and contribute to the international non-proliferation regime. The Guidelines complement the Understandings of the Zangger Committee by adding controls over nuclear technology, as well as nuclear-related dual-use items that can make a contribution to nuclear weapons programmes.

6. The list of items triggering IAEA safeguards and the procedures for implementing control of these items, in accordance with article III (2) of the Non-Proliferation Treaty, should be reviewed regularly to take into account advances in technology, proliferation sensitivity and changes in procurement practices.

7. Guidelines from export control regimes are finding increasing acceptance and application by national authorities and the number of States participating in these regimes continues to grow. All States parties should consider the opportunities offered by the increasing adherence to export control guidelines with a view to strengthening the global nuclear disarmament and non-proliferation regime.

8. In September 2008, a number of States parties participating in the Nuclear Suppliers Group granted an exception specific to India to the full-scope safeguards requirement in the Nuclear Suppliers Group’s export control guidelines. This exemption was based on certain non-proliferation commitments and actions by India (INFCIRC/734 (Corrected)). Notwithstanding this decision, continuing importance is attached to the principle that new supply arrangements for the transfer of source or special fissionable material, or equipment or material especially designed or prepared

for the processing, use or production of special fissionable material, to non-nuclear-weapon States should require, as a necessary precondition, the acceptance of full-scope IAEA safeguards and internationally legally binding commitments not to acquire nuclear weapons or other nuclear explosive devices.

9. All non-nuclear-weapon States parties to the Non-Proliferation Treaty have a legal obligation under article III of the Treaty to accept IAEA safeguards. As a comprehensive safeguards agreement, together with an additional protocol, represents the verification standard for the fulfilment of this obligation, this verification standard should be acknowledged and applied as a condition for all new supply arrangements to non-nuclear-weapon States. The additional protocol further contains important provisions related to reporting to IAEA on the export and import of nuclear-related equipment.

10. Before supplying nuclear material, sensitive equipment or technology, States parties have the responsibility to seek assurance that the recipient State has in place Non-Proliferation Treaty-related IAEA safeguards, an adequate nuclear security regime, a minimum set of measures to combat illicit trafficking and rules and regulations for appropriate export controls in cases of retransfer.

Background note 4: cooperation in the peaceful uses of nuclear energy

1. Pursuant to article IV of the Non-Proliferation Treaty, all States parties have an inalienable right to undertake research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I, II and III of the Treaty. For the purposes of article IV of Treaty, “nuclear energy” encompasses both power and non-power applications.

2. All States parties to the Non-Proliferation Treaty have undertaken to facilitate, and have the right to participate in, the fullest possible exchange of equipment, material, services and scientific and technological information for the peaceful uses of nuclear energy in a safe and secure environment.

3. Nuclear applications play an essential role in areas such as human health, water management, agriculture, food safety and nutrition, energy and environmental protection. Nuclear applications can contribute to realizing the Sustainable Development Goals in the 2030 Agenda for all States parties.

4. IAEA plays an essential role, including through its technical cooperation programme, in assisting States to build human and institutional capacities, including regulatory capabilities, for the safe, secure and peaceful application of nuclear science and technology. Around 150 countries take part in the IAEA technical cooperation programme in pursuit of socioeconomic development. We welcome IAEA efforts to enhance the effectiveness and efficiency of these activities. Close cooperation among States parties, IAEA and other international organizations, in particular those of the United Nations family, facilitates synergies and minimizes overlap. Therefore, each recipient State should have in place an IAEA country programme framework coordinated with United Nations Sustainable Development Cooperation Framework workplans, and cooperation should take place with United Nations country teams. The technical cooperation programme, in conjunction with other IAEA programmes can help States to realize the goals of the 2030 Agenda for Sustainable Development. The use of nuclear techniques contributes directly to the achievement of at least 9 of the 17 Goals.[1] In addition, IAEA, through all its programmes and activities, should strive to contribute to Goal 5 on gender equality, including through gender mainstreaming and the pursuit of gender parity.

5. In addition to the IAEA Technical Cooperation Fund, the IAEA Peaceful Uses Initiative is a flexible and efficient instrument that provides support for IAEA in nuclear applications. In addition, dialogue to foster, in a sustained manner, knowledge about the potential of nuclear applications among relevant stakeholders can be helpful in realizing their advantages. IAEA has launched a series of flagship initiatives in the field which may benefit from additional support.

6. The IAEA Ministerial Conference on Nuclear Science, Technology and Applications and the Technical Cooperation Programme, to be held in November 2024, will be an opportunity to facilitate the development and deployment of nuclear techniques for peaceful purposes and build related partnerships with an emphasis on, inter alia, climate change, health, and food safety and security. It will demonstrate the important contribution of IAEA to the implementation of the Non-Proliferation Treaty.

7. IAEA should assign greater priority to the needs of developing countries, and in particular those of the least developed countries, when planning its future activities. The implementation of the 2030 Agenda for Sustainable Development should serve as a guide for defining priority activities.

[1] See www.iaea.org/about/overview/sustainable-development-goals.

8. Nuclear safety and nuclear security aim at preventing or mitigating accidental or deliberate harmful effects of radiation on people and the environment. They enable access to the peaceful uses of nuclear energy and are essential for maintaining public support for peaceful uses. When developing nuclear energy, including nuclear power, it remains important to ensure that its use is accompanied by commitments to and ongoing implementation of safeguards as well as the highest levels of safety and security, including at all stages of the nuclear fuel cycle. We support implementation of standards, guidance and codes of conduct developed within the framework of IAEA, as well as relevant international legal instruments. The technical and appropriate regulatory infrastructure and a skilled workforce, as well as legislative frameworks and independent regulatory bodies, have to be in place when developing nuclear energy. It is important that States consider ways of achieving gender equality in their national regulatory bodies and within their national nuclear fields and industries, including by ensuring that gender considerations are taken into account in building a skilled workforce.

9. Armed conflict in countries with nuclear industries poses particular dangers, causing circumstances in which a State party may no longer be able to fully meet its nuclear safety, security and safeguards commitments and obligations related to peaceful nuclear activities. The need to develop additional standards and guidance to address the nuclear safety and security implications of armed conflict in order to protect installations and facilities for the peaceful uses of nuclear technology should be considered within the framework of IAEA.

Background note 5: nuclear safety

1. Safety in all activities throughout the nuclear fuel cycle is a prerequisite for the peaceful uses of nuclear energy. Protection of the people and the environment can be achieved by ensuring the highest levels of nuclear and radiation safety, security and safeguards, including management of their interfaces. This requires continuous efforts to prevent complacency and ensure all elements of safety culture are maintained at the optimal level. Primary responsibility for the safety of nuclear installations rests with the operators. Individual States are responsible for establishing frameworks for safety, including ensuring that necessary national technical, human and regulatory infrastructure are in place. This may require States to invest in education and training programmes and seek technical cooperation and assistance.

2. Although responsibility for the nuclear safety framework rests with individual States, international cooperation, especially that led by IAEA, is vital for the exchange of knowledge and learning from best practices and experience. The international community has strengthened its focus on nuclear safety since the Fukushima Daiichi nuclear accident in 2011, including through: the adoption of the Declaration of the IAEA Ministerial Conference on Nuclear Safety; the High-level Meeting on Nuclear Safety and Security (hosted by the Secretary-General); the Action Plan on Nuclear Safety endorsed by the General Conference of IAEA in 2011; the Vienna Declaration on Nuclear Safety adopted by consensus in February 2015; the report of the IAEA Director General on the Fukushima Daiichi accident published in August 2015; and the International Conference on a Decade of Progress after Fukushima-Daiichi: Building on the Lessons Learned to Further Strengthen Nuclear Safety, held in Vienna from 8 to 12 November 2021. The report by the Director General on the Fukushima Daiichi accident highlighted 45 observations and lessons aimed at strengthening nuclear safety worldwide. All States with nuclear facilities are encouraged to host IAEA peer review missions on a regular basis and publicly share the outcomes in order to further strengthen nuclear safety worldwide.

3. It is also important for States that have nuclear fuel cycle activities and radioactive material to become parties to all relevant conventions and to make the political commitments necessary to ensure a better global safety framework, including:

- The Convention on Nuclear Safety, which is of central importance for nuclear safety, and allows for regular international peer reviews.
- The Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management, which is of central importance for disposal and long-term storage solutions for spent fuel and waste, and allows for regular international peer reviews.
- The Convention on Early Notification of a Nuclear Accident, and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, which sets out a framework for international cooperation and response, involving IAEA, should such an event occur.
- The Code of Conduct on the Safety of Research Reactors, which establishes international guidelines for the licensing, construction and operation of research reactors.
- The Code of Conduct on the Safety and Security of Radioactive Sources and its associated Guidance, which provide international guidelines for the regulatory control of radioactive sources.

- The Regulations for the Safe Transport of Radioactive Material, which establish transport standards relating to the safety of persons, property and the environment.
- By taking advantage of the IAEA Incident and Emergency Centre, which serves as a focal point for international emergency preparedness, communication and response to nuclear or radiological incidents and emergencies and for promoting improvement in emergency response and preparedness.
- By taking full advantage of IAEA advisory services, including the IAEA Integrated Regulatory Review Service, to implement global best practice in nuclear safety regulation.

4. International cooperation is important in order to enhance the safety and security of the international transportation of radioactive materials while respecting maritime and air navigation rights and freedoms under international law. It is in the interests of all States that maritime and other transportation of nuclear and radioactive materials continue to be conducted in compliance with international standards of safety, security and environmental protection.

5. States, in coordination with IAEA and other international organizations, must assess and address, in a timely manner, any legal and regulatory challenges in connection with the deployment of new technologies, including, but not limited to, small modular reactors, advanced reactor technologies and transportable nuclear power. In this regard, the IAEA Director General's Nuclear Harmonization and Standardization Initiative is an important forum.

6. A positive example of international cooperation in action is the practice of some shipping States and operators by which timely information and responses are provided to relevant coastal States to address safety and security concerns, including in the event of an accident, through the use of agreed best practice guidelines for systematic communications.

7. Implementation by the IAEA secretariat of the Plan of Activities on the Radiation Protection of the Environment remains important. There should be further cooperation between IAEA and relevant international organizations and stakeholders in promoting a coherent international policy regarding the radiological protection of the environment. The United Nations Scientific Committee on the Effects of Atomic Radiation continues to provide a valuable contribution by assessing and reporting levels and effects of exposure to ionizing radiation. Many States rely on the Committee's estimates as the scientific basis for evaluating radiation risk and for establishing protective measures.

8. The IAEA International Expert Group on Nuclear Liability continues to undertake valuable work in examining the application and scope of the international nuclear liability regime and considering further specific actions to address any gaps in scope and coverage of the regime. The International Expert Group should continue to address outstanding issues as provided for in the Action Plan on Nuclear Safety and in the recommendations of the 2011 IAEA International Conference on the Safe and Secure Transport of Radioactive Material.

Background note 6: nuclear security

1. States continue to stress the vital importance of nuclear security and the responsibility of States to maintain, at all times, effective security of all nuclear and other radioactive materials, including nuclear materials used in nuclear weapons, and nuclear facilities under their control.

2. The strong international commitment to strengthening nuclear security worldwide has been demonstrated by a number of important events and initiatives, such as:

- The Ministerial Declarations at the International Conferences on Nuclear Security convened by IAEA in 2013, 2016 and 2020, and the joint statement by the Co-Presidents of the Conference in 2024.
- The Nuclear Security Summits held from 2010 to 2016, including their action plans and gift baskets.
- The Global Partnership against the Spread of Weapons and Materials of Mass Destruction and the Global Initiative to Combat Nuclear Terrorism.
- The International Conference on the Security of Radioactive Material: The Way Forward for Prevention and Detection convened by IAEA in 2018.
- The Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material, held in 2022.
- The International Conference on Computer Security in the Nuclear World: Security for Safety, held in 2023.

3. IAEA has competence in various technical subjects that promote nuclear security and has a central coordinating role in strengthening the global nuclear security framework and in facilitating effective cooperation and coordination at the international and regional levels. States should ensure that IAEA has predictable, reliable and sufficient technical, financial and human resources to undertake its nuclear security-related activities in a sustainable manner. In implementing its Nuclear Security Plan for 2022–2025, IAEA can rely on the strong commitment of member States to enable it to implement its nuclear security work. The important role of nuclear industry in implementing and enhancing nuclear security is increasingly recognized.

4. In order to further strengthen nuclear security worldwide, the following concrete measures are of vital importance:

- In line with the *Nuclear Security Fundamentals* adopted by the IAEA Board of Governors, IAEA should continue to keep these fundamentals and the recommendations up to date and to reflect them in its Nuclear Security Series publications.
- Without altering the non-binding status of the IAEA Nuclear Security Series documents, States may commit themselves voluntarily and publicly to embed IAEA recommendations into domestic rules and regulations by signing onto INFCIRC/869.
- States can also choose to commit to a number of initiatives that have been opened to the full IAEA membership through other information circulars (INFCIRCs), aimed at further strengthening aspects of nuclear security, including certified training for nuclear security management, supporting nuclear and radiological terrorism preparedness and response capabilities, developing national nuclear detection architectures, ensuring transport security of nuclear materials, mitigating insider threats, strengthening the security of high activity

sealed radioactive sources, using forensics in nuclear security and minimizing and eliminating the use of highly enriched uranium in civilian applications.

- States should make use of and contribute to the relevant IAEA advisory services, including the IAEA International Physical Protection Advisory Service and the International Nuclear Security Advisory Service, and establish and implement Integrated Nuclear Security Support Plans.
- Greater transparency on the part of States with military materials on the security of those materials would demonstrate their commitment to nuclear security and contribute to greater domestic and international confidence. Sharing information and lessons learned can improve security. States that possess nuclear weapons are called on to undertake such confidence-building measures, which might include voluntary declarations, reporting in national progress reports or within the framework of Security Council resolution 1540 (2004), applying, where feasible and appropriate, best practices for civilian materials and military materials, or considering bilateral or internal peer reviews without jeopardizing sensitive information.
- States that have not yet done so should become parties to the Convention on the Physical Protection of Nuclear Material and Nuclear Facilities and its 2005 Amendment, and to the International Convention for the Suppression of Acts of Nuclear Terrorism. All States parties to the Convention on the Physical Protection of Nuclear Material and Nuclear Facilities and its 2005 Amendment and the International Convention for the Suppression of Acts of Nuclear Terrorism should fully implement their obligations thereunder.
- States concerned should further minimize highly enriched uranium stocks and further minimize their use, including by converting radioisotope production to low-enriched uranium fuel and targets or by using other non-highly enriched uranium technologies, while taking into account the need for an assured and reliable supply of medical isotopes.
- States concerned should keep their stockpiles of separated plutonium to the minimum consistent with their national requirements.
- States should reinforce their efforts to locate and secure nuclear and other radioactive material out of regulatory control and to improve existing control and cooperation mechanisms with a view to curbing illicit trafficking in nuclear and other radioactive materials. They should consider supporting the work of IAEA regarding the prevention, detection and response to illicit trafficking.
- States should develop and enhance nuclear forensics capabilities and utilize, as appropriate, the support by IAEA and the outcomes and best practices stemming from the Global Initiative to Combat Nuclear Terrorism and the Nuclear Forensics International Technical Working Group in areas such as enhancing traditional and nuclear forensics capabilities and providing relevant training assistance to States.
- As the nuclear industry increasingly uses digital technology to control, monitor and protect nuclear facilities, the work of IAEA in raising awareness of the potential impact on nuclear security of cyberattacks, and the provision of guidance and assistance to its member States in this regard, should be strengthened and sustained in view of the growing threat of such attacks.
- In view of emerging challenges and threats to nuclear security, States are encouraged to make use of the assistance by IAEA in using advances in science, technology and engineering to meet these challenges.

- States should make use of IAEA assistance in the areas of training and education across all technical areas of nuclear security. In this context, States are encouraged to provide support to IAEA in its ongoing work for the establishment of its Nuclear Security Training and Demonstration Centre at its laboratories in Seibersdorf, Austria.
- Fostering a culture of nuclear security through nuclear security education, training and proper certification of nuclear security managers should be a priority for States and the nuclear industry. Cooperation with IAEA to establish centres of excellence and other nuclear security training and support centres, as well as international nuclear security education networks, is essential.
- States not already doing so are encouraged to make use of the outcomes and best practices stemming from the Global Initiative to Combat Nuclear Terrorism.

5. In line with IAEA Nuclear Security Series No. 15, States should establish and maintain effective executive, legislative and regulatory frameworks to detect and respond to criminal or unauthorized acts involving nuclear or other radioactive material that is outside of regulatory control. Establishing and maintaining such frameworks help to ensure that assigned roles and responsibilities are carried out and powers are exercised according to law, cooperatively and in a coordinated manner within a State and, where necessary, between States.

Background note 7: discouraging withdrawal from the Non-Proliferation Treaty

1. Article X of the Non-Proliferation Treaty confers on States parties the right of withdrawal from the Treaty. It sets out the reasons for which the right of withdrawal can be exercised, and the process for exercising it. But this right cannot be considered in isolation. It should be considered in the context of the integrity of the Treaty and the broader framework of international law, including the principle of customary international law that says that a State continues to be responsible for violations of legal obligations committed prior to its withdrawal from a treaty. Abuse of article X would undermine the integrity of the Treaty and the objective of its universality.

2. Withdrawal from the Non-Proliferation Treaty carries inherent risks to non-proliferation and could constitute a threat to international peace and security. Withdrawal is a significant political event and should be given urgent political attention by States parties. Building on useful discussions on the issue of withdrawal at the tenth Review Conference, States parties could develop and agree on principles for exercising the right of withdrawal.

3. In cases of withdrawal, it is important to recall that the primary responsibility for the maintenance of international peace and security rests with the Security Council, pursuant to Article 24 of the Charter of the United Nations.

4. All nuclear materials, equipment, technology and facilities acquired and developed for peaceful purposes by a State during the time it was a party to the Non-Proliferation Treaty should, in the case of withdrawal, be restricted to peaceful uses only. As a consequence, they should remain subject to IAEA or fallback safeguards.