

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

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Implementation of the action plan agreed at the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Report submitted by Canada

Action 20 of the action plan set out in the final document of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons calls on States parties to submit regular reports on their implementation of the action plan, as well as of the 13 practical steps towards disarmament contained in the final document of the 2000 Review Conference and of article VI, paragraph 4 (c), of the 1995 decision entitled “Principles and objectives for nuclear non-proliferation and disarmament”.

Canada submits the present report in accordance with these commitments, which reflects the valued input of domestic stakeholders. Regular reporting is an important transparency measure to inform the international community of a party’s progress on the implementation of the Treaty and related commitments. It is also evidence of a party’s commitment to the Treaty itself. This report covers the period from May 2019 to June 2021.

Action Steps taken to implement commitments

Nuclear disarmament

1 **Canada’s national policy on nuclear disarmament:** In support of a rules-based international order that contributes to international peace and security, Canada maintains robust nuclear non-proliferation, arms control and disarmament policies. Canada supports a pragmatic, step-by-step approach to global nuclear disarmament that halts the production of materials for nuclear weapons, reduces existing stockpiles and irreversibly eliminates them.

Working with partners and allies in nuclear disarmament: Canada promotes its nuclear disarmament policies with allies and partners in the North Atlantic Treaty Organization, the Group of Seven (G7), the Francophonie, the Organization of American States and the Association of Southeast Asian Nations, among others. Canada is an active member of the Non-Proliferation and Disarmament Initiative, contributing to the development of practical steps to promote implementation of the Treaty across all three of its pillars. Canada is also a member of the ministerial-level Stockholm Initiative on Nuclear Disarmament, which proposed 21 concrete, pragmatic short-term measures (“stepping stones”) that, if



implemented, will re-build trust and confidence among States and positive momentum for progress on nuclear disarmament. Canada and other Stockholm Initiative members are actively promoting these stepping stones for consideration at the tenth Review Conference. Canada also participates in the working groups of the Creating an Environment for Nuclear Disarmament initiative, to address the underlying causes of the lack of significant progress on nuclear disarmament.

Diversity and inclusion in Canadian policy: Canada recognizes that maintaining international peace and security requires an inclusive approach that considers the perspectives of all persons, and that applying a meaningful gender lens can have a positive impact on the achievement of the shared goals of the Treaty across all three pillars.

In June 2019, Jacqueline O'Neill was appointed as Canada's first ambassador for Women, Peace and Security. Ambassador O'Neill has helped to advance a cohesive government implementation of the Canadian national action plan on women and peace and security¹ at home and abroad. In February 2020, Ambassador O'Neil met with the Under-Secretary-General and High Representative for Disarmament Affairs, Izumi Nakamitsu, to discuss ways to increase linkages between gender issues and non-proliferation and disarmament.

Gender and diversity activities in the Non-Proliferation Treaty process: Canada actively supports the principles of diversity and inclusion within the Non-Proliferation Treaty process. At the 2019 session of the Preparatory Committee for the Review Conference of the Parties to the Treaty, Canada's general debate statement² advocated the inclusion of gender perspectives in all international security discussions. Canada joined a statement by the Vienna Group of Ten calling for the equal, full and effective participation of women and men in the Non-Proliferation Treaty. Additionally, Canada contributed to the working papers entitled "Improving gender equality and diversity in the Non-Proliferation Treaty review process" (NPT/CONF.2020/PC.III/WP.25) and "Integrating gender perspectives in the implementation of the Treaty on the Non-Proliferation of Nuclear Weapons" (NPT/CONF.2020/PC.III/WP.27), in collaboration with Australia and Sweden (April 2019). Canada's Permanent Representative to the International Atomic Energy Agency (IAEA) was a panellist in the Preparatory Committee side event entitled "When participation becomes meaningful: advancing the conversation on gender diversity in the NPT", in collaboration with Australia, the Netherlands, the Philippines, Sweden, the Office for Disarmament Affairs, the Carnegie Endowment for International Peace and the James Martin Center for Nonproliferation Studies (May 2019).

Canadian leadership on gender in the United Nations system: As a strong proponent of women's leadership in peace and security, Canada is a champion of action item 36 of the Secretary-General's implementation plan for his agenda for disarmament, on the full and equal participation of women in decision-making processes.

Canada advocates the inclusion of increased gender perspectives in the Conference on Disarmament and in resolutions and decisions of the Disarmament and International Security Committee (First Committee) of the United Nations General Assembly. On 31 October 2019, 80 states joined a statement,³ authored and coordinated by Canada, Ireland and Sweden, reaffirming the importance of gender perspectives in the non-proliferation and disarmament machinery. Further, in 2020, Canada co-sponsored and voted in favour of

¹ See www.international.gc.ca/world-monde/issues_development-enjeux_developpement/gender_equality-egalite_des_genres/cnap_wps-pnac_fps.aspx.

² See <http://statements.unmeetings.org/media2/21491824/canada.pdf>.

³ See <http://statements.unmeetings.org/media2/23329274/74th-session-unga-1com-joint-statement-on-gender-and-the-disarmament-machinery-paper-smart-.pdf>.

Action Steps taken to implement commitments

General Assembly resolution 75/48, entitled “Women, disarmament, non-proliferation and arms control.”

Canada supports the Geneva-based International Gender Champions Disarmament Impact Group.⁴ In January 2019, the Impact Group published a gender and disarmament resource pack for multilateral practitioners,⁵ which contains key information on the relevance of gender perspectives and practical ideas to support diplomats in applying a gender lens to arms control and disarmament, as well as promoting gender equality and improving women’s meaningful participation and agency in arms control, proliferation and disarmament forums.

In 2020, Canada provided Can\$ 1.2 million in seed funding to IAEA to establish the new Marie S. Curie fellowship programme, leading the campaign for gender parity among international donors. This support provides two-year scholarship or internship opportunities to women from priority regions to pursue graduate-level degrees in nuclear security and non-proliferation. In 2020–2021, Canada’s permanent representatives to both the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development and the International Atomic Energy Agency were active participants in the International Gender Champions initiative.

Since 2018, Canada has partnered with the World Institute for Nuclear Security, a non-governmental membership organization working with IAEA, on initiatives to advance gender parity in nuclear security. Canada co-funded the Institute’s special report on gender and nuclear security and its international best practice guide on advancing gender parity in nuclear security, key documents outlining obstacles to gender equality in the field. Based on this research, Canada is now supporting efforts by the Institute to promote nuclear security as a dynamic career option for women, and promote and support the active involvement of women as experts and leaders in the discipline.

- 2 **Canadian promotion of principles of irreversibility, verifiability and transparency:** Canada continues to promote the principles of irreversibility, verifiability and transparency in the implementation of Treaty obligations. In terms of transparency, Canada, as part of the Non-Proliferation and Disarmament Initiative, contributes actively to the development of working papers on enhancing transparency through reporting and on strengthening the Non-Proliferation Treaty review process. For additional details, see action 20 (below).

United Nations General Assembly resolutions on irreversibility, verifiability and transparency: Canada supports General Assembly resolutions that advocate the principles of irreversibility, verifiability, and transparency in nuclear disarmament. Canada co-sponsored and voted in favour of General Assembly resolution 74/50 entitled “Nuclear disarmament verification”, which requests the establishment of a group of governmental experts to consider, in 2021 and 2022, issues related to nuclear disarmament verification and build on the 2019 report of the previous group of governmental experts (see action 19).

- 3 Not applicable
- 4 Not applicable
- 5 Not applicable

⁴ See <https://genderchampions.com/impact/disarmament>.

⁵ See www.unidir.org/sites/default/files/2020-01/IGC%20DIG%20Resource%20Pack_2020.pdf.

- 6, 7 **Subsidiary bodies in the Conference on Disarmament on nuclear disarmament and on negative security assurances:** Canada continues to support the creation of subsidiary bodies in the Conference on Disarmament to deal, inter alia, with nuclear disarmament and with negative security assurances. Between 2018 and 2021, Canada supported the creation of subsidiary bodies in the Conference on Disarmament to allow deeper and more detailed discussion on core agenda items such as comprehensive nuclear disarmament, a fissile material cut-off treaty and negative security assurances. While subsidiary bodies were created in 2018, and Canada actively participated in the discussions, there was no consensus for the creation of subsidiary bodies in 2019. In 2020, the work of the Conference on Disarmament was largely disrupted due to the global pandemic, and members were again unable to reach consensus on the creation of subsidiary bodies in 2021. Instead, thematic discussions on the areas of concern are being held.
- 8 Not applicable
- 9 **Implementation of the 1995 Non-Proliferation Treaty resolution on the Middle East:** Canada continues to strongly advocate the full implementation of the resolution on the Middle East, adopted at the 1995 Non-Proliferation Treaty Review and Extension Conference, and specifically for the establishment of a weapons-of-mass-destruction-free zone in the region. Canada regularly submits reports on steps taken to promote the achievement of a nuclear-weapon-free zone in the Middle East and the realization of the goals and objectives of the 1995 resolution on the Middle East. In November 2019, Canada attended the opening session of the inaugural Conference on the Establishment of a Middle East Zone Free of Nuclear Weapons and Other Weapons of Mass Destruction, which took place in New York. Canada continues to call for the establishment of a weapons-of-mass-destruction-free zone in the Middle East through an inclusive decision-making process that requires the full mutual consent of all States in the region.
- Establishment of nuclear-weapon-free zones:** In 2020, Canada voted in favour of General Assembly resolution [75/33](#), entitled “Establishment of a nuclear-weapon-free zone in the region of the Middle East”, and, in 2019, voted in favour of resolution [74/48](#), entitled “Nuclear-weapon-free southern hemisphere and adjacent areas”. Canada co-sponsored and joined consensus on General Assembly resolutions [75/30](#), entitled “African Nuclear-Weapon-Free Zone Treaty”, and [75/67](#), entitled “Treaty on a Nuclear-Weapon-Free Zone in Central Asia”. Canada also joined consensus on resolution [75/41](#), entitled “Mongolia’s international security and nuclear-weapon-free status”, on decision 74/510, entitled “Treaty on the South-East Asia Nuclear-Weapon-Free Zone (Bangkok Treaty)”, and on resolution [74/27](#), entitled “Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco)”.
- 10 Not applicable
- 11 **Canada’s ratification of the Comprehensive Nuclear-Test-Ban Treaty:** Canada signed the Comprehensive Nuclear-Test-Ban Treaty on 24 September 1996 and ratified it on 2 December 1998. Canada’s Comprehensive Nuclear-Test-Ban Treaty Implementation Act is being implemented provisionally pending the Treaty’s entry into force.

- 12, **Comprehensive Nuclear-Test-Ban Treaty universalization and entry into force:** Canada continues to be an active proponent of the Comprehensive Nuclear-Test-Ban Treaty. Canada co-sponsored United Nations Security Council resolution [2310 \(2016\)](#), which, inter alia, called for the Treaty's entry into force and for all States to maintain voluntary moratoriums on nuclear test explosions. In addition, Canada has, for more than 15 years, co-sponsored and voted in favour of the General Assembly resolutions entitled "Comprehensive Nuclear-Test-Ban Treaty" (resolution [75/87](#) in 2020). Canada is an active member of the Non-Proliferation and Disarmament Initiative, which has consistently advocated for the urgent entry into force of the Comprehensive Nuclear-Test-Ban Treaty, both in the First Committee and through working papers submitted to Non-Proliferation Treaty conferences.

Article XIV conferences and Friends of the Comprehensive Nuclear-Test-Ban Treaty:

Canada recognizes the ongoing contribution of the Conferences on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty, pursuant to article XIV of the Treaty and continues to participate actively in these conferences. Canada is also an active member of the ministerial-level Friends of the Comprehensive Nuclear-Test-Ban Treaty, which holds biennial meetings during the high-level week of the United Nations General Assembly in New York. In October 2020, Canada participated in the Friends of the Comprehensive Nuclear-Test-Ban Treaty global video call to end nuclear testing.⁶ In September 2019, Canada participated in the eleventh Conference on Facilitating the Entry into Force of the Treaty, co-chaired by Algeria and Germany. At that Conference, Canada supported the adoption of the Final Declaration and Measures to Promote the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty.⁷

- 14 **Comprehensive Nuclear-Test-Ban Treaty Organization and International Monitoring System:** Canada actively promotes the completion of the International Monitoring System for the Comprehensive Nuclear-Test-Ban Treaty. All of the 16 stations and laboratories hosted by Canada as a part of the International Monitoring System have been completed and certified by the Comprehensive Nuclear-Test-Ban Treaty Organization. Since December 2017, with Canadian funding, Canada and Kazakhstan have been collaborating to build and install a radionuclide monitoring station in Kurchatov, Kazakhstan. This station was delivered to the National Nuclear Centre of Kazakhstan in December 2020. Once it is operational, the monitoring station will be established as a cooperating national facility that will strengthen the ability of the Treaty Organization to detect nuclear explosions. Canada has continued its close collaboration with the Treaty Organization, co-hosting a training course in Canada in October 2019 on airborne additional overflight techniques required for on-site inspections to verify States' compliance with the Treaty.
- 15 **Continued leadership on a fissile material cut-off treaty:** Canada continues to call actively for the commencement of negotiations on a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices as an inclusive, pragmatic and concrete way to advance nuclear non-proliferation and disarmament. Canada believes that the act of starting negotiations after so many years of diplomatic deadlock could contribute to building much-needed trust and confidence in the international environment.

Canada has contributed significantly to efforts to pave the way for the start of fissile material cut-off treaty negotiations. Pursuant to General Assembly resolution [71/259](#), Canada chaired the high-level fissile material cut-off treaty expert preparatory group, which concluded its work in June 2018 with the adoption of a consensus report containing recommendations on substantial elements of a future treaty. Since then, Canada has

⁶ See www.ctbto.org/press-centre/news-stories/2020/friends-of-the-ctbt-group-issues-video-call-for-treatys-entry-into-force/.

⁷ See www.ctbto.org/fileadmin/content/reference/article_xiv/2007/CTBT-Art.XIV-2007-WP.1_final.pdf.

continued to advocate for the start of fissile material cut-off treaty negotiations, including through its participation in the Non-Proliferation and Disarmament Initiative and the Stockholm Initiative on Nuclear Disarmament. Both of these groups have produced statements or working papers that support commencement, as soon as possible, of fissile material cut-off treaty negotiations.

Canada regularly calls for fissile material cut-off treaty negotiations in its formal statements at disarmament and non-proliferation forums such as Non-Proliferation Treaty Preparatory Committee sessions and Review Conferences, the First Committee and the United Nations Conference on Disarmament. Canada also regularly encourages others States to actively and publicly support fissile material cut-off treaty negotiations; for example, in the lead-up to the 2019 session of the Non-Proliferation Treaty Preparatory Committee, Canada completed demarches on nearly all NPT State parties to encourage them to support the start of fissile material cut-off treaty negotiations in their respective national statements to the Non-Proliferation Treaty Preparatory Committee.

To ensure that fissile material cut-off treaty negotiations remain on the formal United Nations agenda, Canada regularly leads on fissile material cut-off treaty resolutions. At the seventy-third session of the General Assembly, in 2018, Canada, Germany and the Netherlands led on resolution 73/65 calling for progress on commencing negotiations on a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices. The resolution was adopted with a vote of 182 in favour and 1 against (Pakistan), with 5 abstentions (Democratic People's Republic of Korea, Egypt, Iran (Islamic Republic of), Israel and Syrian Arab Republic). At the seventy-fifth session of the General Assembly, in 2020, Canada, Germany and the Netherlands led on decision 75/515, entitled "Treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices." The decision was adopted with a vote of 173 in favour and 1 against (Pakistan), with 4 abstentions (Democratic People's Republic of Korea, Iran (Islamic Republic of), Israel and Syrian Arab Republic). Canada, Germany and the Netherlands successfully introduced the resolution on fissile material cut-off treaty at the seventy-sixth session of the General Assembly First Committee, in 2021.

16 Not applicable

17, **Fissile material for use in nuclear weapons:** Pursuant to Canada's legal obligations under
18 its comprehensive safeguards agreement and additional protocol with IAEA, Canada does not operate any facility that produces fissile material for use in nuclear weapons or other nuclear explosive devices. This is verified through regular IAEA inspections. Furthermore, Canada continues to support the development of appropriate legally binding verification arrangements, which are applicable to nuclear-weapon States, to ensure that surplus fissile material no longer required for military purposes is irreversibly removed.

19 **Longstanding support for nuclear disarmament verification:** For over 30 years, Canada has taken an active role in advancing multilateral discussions on the importance of disarmament verification. Over the years, this has included, inter alia, sponsoring regular resolutions at the General Assembly on verification in all its aspects, including the role of the United Nations in the field of verification; funding research and outreach efforts; contributing to the development of the 16 principles of verification released by the Disarmament Commission in 1988; chairing the 1995 Group of Governmental Experts mandated to examine verification in all its aspects; and chairing the 2006 Panel of Government Experts mandated to review further developments with respect to verification in all its aspects. As detailed below, Canada continues to be an active proponent of multilateral work on nuclear disarmament verification.

International Partnership for Nuclear Disarmament Verification: Canada strongly supports the International Partnership for Nuclear Disarmament Verification, an expert-level initiative that currently involves more than 25 countries, the European Union and IAEA. This support was reiterated by Canada in its statement on nuclear weapons at the seventy-fourth session of the First Committee.⁸ Since its inception in 2014, the Partnership has aimed to address the technical challenges associated with nuclear disarmament verification. Canadian experts participate actively in Partnership activities, including table-top exercises, taking into account the 14 steps of the nuclear weapon dismantlement process.⁹ For the period 2019–2022, Canada is providing Can\$ 1.22 million from Canada's Weapons Threat Reduction Program to the United States-based Nuclear Threat Initiative to support its activities as the secretariat of the Partnership, including publications, technical demonstrations and international meetings. In its efforts to support the activities, Canada also hosted 23 delegations for the sixth plenary meeting of the Partnership in Ottawa in December 2019. The programme included technical demonstrations at Chalk River Laboratories, attended by 35 international participants. Canada continues to encourage participation in the Partnership by all nuclear weapon states, and calls on China and Russia, in particular, to re-engage with the Partnership.

Group of Governmental Experts on Nuclear Disarmament Verification: Canada supported the work of the first United Nations Group of Governmental Experts on Nuclear Disarmament Verification, which concluded in April 2019 and released its consensus report in May 2019, and will take part in the next Group of Governmental Experts, expected to begin in February 2022. Canada's support for the work of the first Group of Governmental Experts was reflected in its statement on nuclear weapons at the seventy-fourth session of the First Committee, and by submitting its views for the Secretary General's report (A/75/126) on nuclear disarmament verification. Canada also co-sponsored and voted in favour of resolution 74/50 on nuclear disarmament verification, adopted by the General Assembly at its seventy-fourth session, to establish the new Group of Governmental Experts on Nuclear Disarmament Verification.

- 20 **Transparency and reporting:** Canada views transparency as indispensable to nuclear disarmament and for ensuring accountability on progress toward achieving a nuclear-weapon-free world. Accurate and complete national reporting by State parties to the Non-Proliferation Treaty, particularly by the nuclear-weapon States, is essential to build confidence and trust, to facilitate dialogue and to provide accountability on the implementation of commitments. Canada takes its commitment seriously and is one of only several countries to have submitted comprehensive national reports in every year in which Non-Proliferation Treaty meetings took place over the past two review cycles. Canada submitted national reports in 2012 (NPT/CONF.2015/PC.I/10), 2013 (NPT/CONF.2015/PC.II/9), 2014 (NPT/CONF.2015/PC.III/8 and NPT/CONF.2015/PC.III/9), 2015 (NPT/CONF.2015/34), 2017 (NPT/CONF.2020/PC.I/10), 2018 (NPT/CONF.2020/PC.II/10) and 2019 (NPT/CONF.2020/PC.III/5).

International engagement and advocacy on transparency: In addition to its national reporting, Canada engages other States on transparency and national reporting and capacity. As a member of the Non-Proliferation and Disarmament Initiative, Canada contributes significantly to the Initiative's efforts to advocate for regular reporting intervals and to establish a standard reporting form as a template. Canada played an active role in developing the Initiative's draft reporting form, submitted at the 2018 session of the Non-Proliferation Treaty Preparatory Committee and referenced in the 2019 working paper entitled "Enhancing national reporting as a key transparency and confidence-building

⁸ See <http://statements.unmeetings.org/media2/21999502/canada-unga74-1c-thematic-statement-on-nuclear-weapons-eng-fr-.pdf>.

⁹ See www.ipndv.org/learn/dismantlement-interactive/.

measure” (NPT/CONF.2020/PC.III/WP.24; see also NPT/CONF.2020/PC.II/WP.26). The proposed reporting form establishes baselines and common frames of reference for measuring progress on the implementation of the Non-Proliferation Treaty by all State parties, particularly the nuclear-weapon States. In 2019, Canada also spearheaded efforts by the Initiative to engage the nuclear-weapon States on transparency and reporting. This included conducting a comprehensive analysis of the 2019 national reports of China and the United Kingdom and subsequent demarches in Beijing and London to provide feedback on the level of transparency in those reports. Canada continued these efforts through participation in discussions with the P5 on the margins of the First Committee in October 2019 and the September 2019 Wilton Park event on the United Kingdom’s draft Nuclear Non-Proliferation Treaty implementation paper. Canada provided further feedback on the 2021 draft of the United Kingdom’s report.

21 Not applicable

22 **Disarmament and non-proliferation education:** Canada supports improved disarmament and non-proliferation education with a specific focus on engagement with youth. Canada co-sponsored resolution 74/64, entitled “Youth, disarmament and non-proliferation”, by the Republic of Korea, adopted for the first time at the seventy-fourth session of the General Assembly in 2019, and regularly co-sponsors the biennial General Assembly resolution entitled “United Nations study on disarmament and non-proliferation education”, most recently presented in 2020 (resolution 75/61). Canada actively promotes disarmament and non-proliferation education as part of the Non-Proliferation and Disarmament Initiative, which produced working papers on this topic for the 2012, 2013, 2017 and 2019 sessions of the Non-Proliferation Treaty Preparatory Committee.

In 2020 and 2021, Canada provided financial support to the British American Security Information Council to establish an inclusive network of next-generation leaders to collaborate on and develop innovative nuclear policy solutions. This network has developed policy proposals on a variety of nuclear policy issues, including for the upcoming Non-Proliferation Treaty Review Conference for consideration by the international community.

In 2019, Canada also made a financial contribution to British American Security Information Council through the Weapons Threat Reduction Program to support research that culminated in the publication entitled “Reporting on nuclear disarmament: success and failure in 25 years of disarmament diplomacy”.¹⁰

Global Affairs Canada engages with educational institutions in support of disarmament and non-proliferation education by participating in round tables, seminars or other learning activities. Between 2019 and 2021, officials participated in round-table events, graduate- and undergraduate-level seminars and outreach events at McGill University, Carleton University, the University of Ottawa and the University of British Columbia.

Since 2003, Global Affairs Canada has partnered annually with The Simons Foundation Canada to support disarmament and non-proliferation education through the Graduate Research Awards for Disarmament, Arms Control and Non-Proliferation. The Graduate Research Awards programme provides scholarship awards to graduate students in Canada, or Canadian graduate students studying abroad, with the aim of fostering a new generation of Canadian scholars on non-proliferation, arms control and disarmament issues. Four scholarships (of Can\$ 5,000 each) are awarded annually, totalling over Can\$ 345,000 since

¹⁰ See <https://basicint.org/wp-content/uploads/2019/12/Brixey-Williams-Reporting-on-Nuclear-Disarmament-2019-Nov-edit-WEB.pdf>.

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the programme's inception. Award recipients are invited to present their research to senior management at a dedicated ceremony at Global Affairs Canada.

Through its Weapons Threat Reduction Program, Canada contributed Can\$ 1.2 million to the new Marie Curie scholarship program to support graduate studies for women, specifically in the fields of nuclear security and non-proliferation.

On 28 March 2019, Global Affairs Canada hosted civil society, academia and industry in a day-long policy discussion, entitled the 2019 Global Affairs Canada Forum on Non-Proliferation, Arms Control, Disarmament and Space. Global Affairs Canada ensured the integration of disarmament education by inviting the 2019 Graduate Research Award laureates to contribute to the discussion by presenting their research on the topics of Canadian engagement with the Secretary-General's agenda for disarmament; dual-use technologies and civilian nuclear cooperation; attribution and accountability for chemical weapon use in international law; and gender in disarmament discourse and engagement. The importance Canada places on this programme was highlighted by a public awards ceremony attended by students, civil society, diplomats and officials, and which featured a keynote address by an eminent international expert in the field of nuclear disarmament and non-proliferation.

Nuclear non-proliferation

- 23 **Calls to universalize Non-Proliferation Treaty:** Canada continues to call upon States that have not yet done so to accede to the Non-Proliferation Treaty. Notably, as part of the Vienna Group of Ten, Canada regularly encourages all States yet to accede to the Treaty to do so as soon as possible.
- 24 **Comprehensive safeguards agreement and additional protocol:** Canada's comprehensive safeguards agreement with IAEA has been in place since 21 February 1972. Canada's additional protocol with IAEA has been in place since 8 September 2000.
- 25 **Calls to universalize comprehensive safeguards agreements and additional protocol:** Through its statements at the IAEA Board of Governors and General Conference, Canada continues to urge all States that have not yet done so to complete and implement a comprehensive safeguards agreement and additional protocol with IAEA, which Canada considers to be the verification standard under article III of the Non-Proliferation Treaty. In addition, during negotiations of the IAEA resolution on strengthening the effectiveness and improving the efficiency of Agency safeguards, Canada has worked with other States to resist attempts to eliminate the call for universalization of comprehensive safeguards agreements.
- 26 **Compliance with non-proliferation commitments:** Since 2005, IAEA has concluded on an annual basis that all nuclear material in Canada remains in peaceful activities, pursuant to Canada's comprehensive safeguards agreement and additional protocol. This provides the highest level of confidence that Canada continues to comply with its non-proliferation commitments under the Non-Proliferation Treaty. Canada uses its position on the IAEA Board of Governors to encourage IAEA to remain seized of cases of non-compliance by IAEA member States.
- 27 **Resolving cases of non-compliance with safeguards and legal obligations**
Iran and the Joint Comprehensive Plan of Action: Canada believes that the Joint Comprehensive Plan of Action, when fully implemented, is the best way to restrict the Islamic Republic of Iran's ability to attain a nuclear weapon and is essential for regional and global security, as monitored and verified by IAEA. Canada is a leading financial contributor to IAEA efforts to monitor and verify the implementation by the Islamic

Republic of Iran of its commitments under the Joint Comprehensive Plan of Action and its predecessor, having provided Can\$ 17 million since 2014.

Democratic People's Republic of Korea: Canada continues to call on the Democratic People's Republic of Korea to comply fully with all relevant Security Council resolutions, to return to compliance with the Non-Proliferation Treaty and with its safeguards agreement with IAEA, to fulfil its commitments to denuclearize and to accede to the Comprehensive Nuclear-Test-Ban Treaty.

Canada regrets that the Democratic People's Republic of Korea has yet to take steps that would meaningfully degrade the capabilities of its nuclear weapons programme. Canada calls on North Korea to take concrete steps toward the complete, verifiable and irreversible dismantlement of its weapons of mass destruction and ballistic missile programs. At the IAEA General Conference and the IAEA Board of Governors meetings in 2015, and in each subsequent year, Canada has reiterated its condemnation of the Democratic People's Republic of Korea's illicit nuclear weapons development programme, including nuclear testing; the production of fissile material, uranium enrichment and separated plutonium; and ballistic missile testing. At the IAEA General Conference in September 2021, Canada (along with Australia, France, Germany, Japan, the Republic of Korea, the United Kingdom and the United States) submitted the draft resolution on the implementation of the Non-Proliferation Treaty safeguards agreement between the Agency and the Democratic People's Republic of Korea. Canada led negotiations on behalf of the core group, resulting in a balanced final draft reflecting substantive developments in the Democratic People's Republic of Korea, as noted in the IAEA Director General's 2021 report on the application of safeguards in the Democratic People's Republic of Korea. The resolution was adopted by consensus with 66 co-sponsors.

Since 2018, Canada's Weapons Threat Reduction Program has committed over Can\$ 23 million to build capacity in partner countries to implement United Nations Security Council sanctions on the Democratic People's Republic of Korea and to use open-source information to identify entities that are involved in Democratic People's Republic of Korea sanctions evasion networks, particularly in the maritime context. This includes a Can\$ 2 million grant to IAEA to increase the readiness of its team on the Democratic People's Republic of Korea to conduct monitoring and verification activities.

Canada is also participating in a multinational initiative aimed at countering the Democratic People's Republic of Korea's maritime sanctions evasion by detecting and deterring illegal ship-to-ship transfers and gathering intelligence on the vessels and entities involved. In support of this effort, Canada deploys, on a rotational basis, a maritime patrol aircraft and a frigate under Operation NEON. The most recent deployment, including HMCS Winnipeg and a maritime patrol aircraft, was completed in December 2020. In April 2021, it was announced that Canada will continue periodic deployments of ships, aircraft and personnel until spring 2023.

Syrian Arab Republic: At the IAEA General Conference and IAEA Board of Governors meetings in 2015, and in every subsequent year, Canada has called on the Syrian Arab Republic to cooperate fully with the Agency to resolve all outstanding issues regarding its non-compliance with its safeguards agreement, particularly with regard to the Dayr al-Zawr site and other functionally-related sites identified by IAEA.

28 **Additional protocol:** Canada's additional protocol with IAEA was signed on 24 September 1998 and entered into force on 8 September 2000.

29 **Specific measures to advance universalization of comprehensive safeguards agreements:** Canada continues to support the G7 and other initiatives to advance the universalization of the comprehensive safeguards agreement and the additional protocol

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thereto. Canada continues to call upon all States to conclude and implement a comprehensive safeguards agreement and additional protocol. Canada has made it a prerequisite for partner countries to have safeguards agreements, including an additional protocol in force before entering into new bilateral nuclear cooperation agreements and nuclear trade with Canada.

30 Not applicable

31 Not applicable

32 **Support for improved safeguards:** Canada welcomes IAEA efforts to develop a State-level safeguards approach for each State with a safeguards agreement in force, as part of the continuing evolution of safeguards implementation to improve the effectiveness and efficiency of IAEA safeguards. IAEA and Canada are working collaboratively to develop and implement the practical arrangements pursuant to the revised State-level approach for Canada that will set expectations for IAEA, the State and the operators.

33 **Payment of assessed contributions to the Agency:** Canada pays its annual assessed contribution to the IAEA regular budget and its voluntary assessed contribution to the Technical Cooperation Fund on time and in full, in line with Canada's sustained efforts towards timely and predictable payments.

34 **Technical safeguards support:** Through the Canadian Safeguards Support Programme, Canada contributes to the research, development and support of safeguards equipment and techniques for both domestic and international use aimed at strengthening the effectiveness and efficiency of IAEA safeguards. This program invested approximately Can\$ 300,000 in support of safeguards in 2020 and 2021, with several projects impacted by COVID-19 restrictions, and anticipates providing Can\$ 500,000 in support in 2021 and 2022.

35 **Canadian participation in export control regimes:** Canada is an active member of the Nuclear Suppliers Group and the Zangger Committee and implements relevant commitments through a national export control system and bilateral nuclear cooperation agreements.

Canada is also an active member of the Group of Friends of Resolution [1540 \(2004\)](#) and regularly advocates the full and universal implementation of resolution [1540 \(2004\)](#), including by calling on other nations to fulfil their reporting and action plan obligations.

36 **Implementing multilateral guidelines and agreements on export control:** Canada's export control system is consistent with the procedures and guidelines of the Zangger Committee and the Nuclear Suppliers Group and covers the export of all nuclear items in the Zangger Committee and Nuclear Suppliers Group lists of items that trigger IAEA safeguards and the Nuclear Suppliers Group list of nuclear-related dual-use items.

The most recent amendments to Canada's Export and Import Permits Act received royal assent on 1 April 2021. Among the amendments is the creation of brokering controls and a requirement for the Minister for Foreign Affairs to assess export permits against the Arms Trade Treaty criteria (including peace and security, terrorism and transnational organized crime). Brokering controls will apply via regulation to items, including dual-use items, on the export control list when destined for end use as a weapon of mass destruction. Canada deposited its instrument of accession on 19 June 2019, and became a State party to the Arms Trade Treaty on 17 September 2019.

37 **Proliferation considerations in export decisions:** Canada's national export control system ensures that exports of controlled goods and technology, including nuclear and nuclear-related dual-use items, are not authorized where the proposed export would be inconsistent

with Canada's foreign and defence policy. This includes situations where there is deemed to be an unacceptable risk of diversion to a weapons of mass destruction programme or to an unsafeguarded facility, or when an export would be otherwise contrary to Canada's non-proliferation policy and international commitments and obligations.

- 38 **Support for States' right to peaceful uses of nuclear energy:** Canada's nuclear non-proliferation policy requires that all prospective nuclear partners, including both non-nuclear-weapon States and nuclear-weapon States, must agree to – and conclude – a binding nuclear cooperation agreement before cooperation can commence. Canada has 32 nuclear cooperation agreements in place, covering 48 States. These agreements commit Canada's nuclear partners to comply with a set of non-proliferation policy requirements, notably that Canadian nuclear exports would be used only for peaceful, non-explosive end uses. Other requirements include prior consent for the high enrichment of uranium, reprocessing of spent fuel or retransfer of Canadian-supplied items to third countries; adequate physical protection; and provision for bilateral "fall back" safeguards in the event that the IAEA safeguards system becomes immobilized. All provisions are fully reciprocal. Nuclear cooperation agreements are required before exports of nuclear material, equipment or technology can take place.

In addition, Canada supports the IAEA technical cooperation programme, as described in action 56 (below).

- 39 **Key policy criteria for nuclear cooperation with another State:** Cooperation by Canada with other countries in the peaceful uses of nuclear energy takes fully into account the non-proliferation credentials of the prospective recipient country, as well as its implementation of nuclear safety and nuclear security conventions, standards and guidance.
- 40 **Strengthening physical protection of nuclear facilities:** Canada maintains the highest level of effective physical protection of nuclear materials and facilities at the domestic level, through a robust regulatory framework that integrates relevant safety, security and safeguard elements, the implementation of strong physical protection measures and an industry that fully understands and fulfils its responsibilities. This is reinforced by close cooperation on nuclear security issues between the regulator, the Canadian Nuclear Safety Commission, federal and provincial law enforcement and intelligence agencies, industry, foreign Governments and international organizations.

Canada's Weapons Threat Reduction Program continues to fund the enhancement of nuclear and radiological security worldwide. This includes through projects to improve physical protection measures at facilities housing nuclear and radiological materials; combat the illicit trafficking of nuclear and radiological materials; promote the safe management and disposal of radioactive sources; strengthen transportation security; and enhance nuclear security regimes through promotion of the implementation of legal frameworks, cyber security measures and training and certification of nuclear security personnel.

Canada is currently collaborating with the United States Department of Energy on several initiatives to enhance physical protection systems at facilities in Asia, including providing Can\$ 3 million towards the construction of a long-term regional storage facility to consolidate all radioactive sources in Almaty, Kazakhstan, and in neighbouring regions. This contribution includes support for the secure transport of undersecured disused sources from temporary storage facilities to this new facility that will meet IAEA standards and guidelines.

41 **Strengthening physical protection of nuclear materials:** Consistent with the IAEA recommendations on the physical protection of nuclear material and nuclear facilities (including INFCIRC/225/Revision 5 and IAEA Nuclear Security Series No. 13), Canada maintains strong physical protection measures for its nuclear materials, including armed on-site response forces, constant threat monitoring, enhanced security screening, a comprehensive drill and exercise programme and robust perimeter protection. Physical protection in Canada is strengthened by a rigorous nuclear material accounting system that tracks nuclear materials, in line with Canada's international commitments. Canada participates in the Belgian and United States-led steering committee on advancing insider threat mitigation (see INFCIRC/908) as Co-Chair of the focus group on physical protection and technical measures. This international working group was launched at the occasion of the 2020 International Conference on Nuclear Security, in which Canada actively participated.

42 **Efforts to promote universalization of the Convention on the Physical Protection of Nuclear Material and its 2005 Amendment:** Canada ratified the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material in December 2013 and welcomed its entry into force on 8 May 2016. Canada advocates a strong multilateral framework for the global fight against nuclear terrorism and supports efforts by IAEA, the United Nations Office on Drugs and Crime (UNODC), the Global Initiative to Combat Nuclear Terrorism and Parliamentarians for Global Action to promote the universalization and effective implementation of the Convention, its 2005 Amendment and the International Convention for the Suppression of Acts of Nuclear Terrorism.

Canada supports activities, including national and regional workshops, outreach missions to provide direct assistance to countries with implementation, and has provided in-kind contributions on nine different occasions, for subject matter experts from the Department of Justice to share our national experience on the development and design of the Nuclear Terrorism Act, highlighting obstacles and how they were overcome in order to help other States with their legislative efforts (see action 44, below, for details on additional assistance projects).

During its 2018 G7 presidency, Canada brought renewed attention to the need for universalization and enhanced implementation of the 2005 Amendment and the commitments made by all G7 leaders in this regard at the 2016 Nuclear Security Summit. In both 2018 and 2019, Canada and G7 partners conducted joint outreach to a number of States that have yet to ratify the Convention on the Physical Protection of Nuclear Material or its 2005 Amendment to promote universalization and implementation of these agreements. Canada looks forward to the 2022 review conference of the 2005 Amendment and will continue to actively support the preparatory process. Since 2019, Canada has supported the Nuclear Threat Initiative's organization of the Global Dialogue series. These biannual meetings gather representatives from government, industry and civil society to provide a forum for developing ideas, tracking progress and encouraging action to strengthen nuclear security. Discussions during the 2020–2021 meetings have centred on developing procedural models to ensure all States are prepared to effectively participate in the review conference.

43 **Safety and security of radioactive sources:** Canada remains committed to the IAEA Code of Conduct on the Safety and Security of Radioactive Sources and its supplementary Guidance on the Import and Export of Radioactive Sources, as well as the Guidance on the Management of Disused Radioactive Sources, approved in September 2017. Canada made a political commitment at the IAEA General Conference in September 2018 to implement the supplementary Guidance on the Management of Disused Radioactive Sources, complementing existing commitments to implement the Code of Conduct itself, and the

Guidance on the Import and Export of Radioactive Sources. Furthermore, since 2016, Canada has provided nearly Can\$ 4 million to IAEA to promote the Code of Conduct. This includes support to convene international meetings; travel support for nuclear security experts from developing States in Africa, Latin America, the Middle East and South-East Asia to attend major international meetings on the Code of Conduct; the development and promotion of guidance documents and self-assessment tools for IAEA member States; and training for national points of contact to collaborate on the implementation of the Code of Conduct.

- 44 **Strengthening national capabilities against illicit trafficking of nuclear material:** See action 40 above. In addition, Canada is active internationally in providing assistance to promoting security and physical protection of nuclear materials and facilities. Since 2014, Canada has provided nearly Can\$ 50 million in support to Jordan, Colombia and Mexico to detect and respond to security incidents involving nuclear or radiological materials such as illicit trafficking or attempted theft. This support includes the provision of radiation detection equipment (fixed, handheld and mobile), operational and maintenance training, and assisting with the development of concepts of operations.

Proliferation Security Initiative: Canada has endorsed the Initiative and is a member of its Operational Experts Group. In July 2018 and February 2019, Canada engaged in outreach activities to Caribbean and African States, respectively, to encourage wider endorsement.

Global Initiative to Combat Nuclear Terrorism: Since June 2017, Canada has been the Chair of the Nuclear Forensics Working Group of the Global Initiative to Combat Nuclear Terrorism, which aims to enhance partner countries' nuclear forensics capabilities to improve material accountancy and investigations into material out of regulatory control, including trafficked materials. Canada has hosted exercises developed jointly with the two other Global Initiative working groups to more holistically build nuclear security capabilities through a whole-of-government approach. Canada also provides funding to support Canadian subject matter expert participation and support for participants and workshops via the Global Initiative secretariat.

Nuclear and radiological security programming abroad: Canada is providing assistance through its Weapons Threat Reduction Program to remove high activity disused sealed radioactive sources from six countries in Latin America and the Caribbean; to enhance regulatory frameworks for both nuclear security and radiation safety in States in Latin America and Africa; to strengthen nuclear security in Ukraine; to support the INTERPOL Radiological and Nuclear Terrorism Prevention Unit (as a major donor along with the United Kingdom and United States) furthering outreach, capacity-building activities and intelligence analysis; and to strengthen border security, counter nuclear smuggling and build critical incident response capacity in partner countries.

- 45 **Support for the International Convention for the Suppression of Acts of Nuclear Terrorism:** Canada ratified the International Convention for the Suppression of Acts of Nuclear Terrorism in November 2013. Fulfilling an action item in the 2016 Nuclear Security Summit action plan in support of the United Nations, Canada co-hosted, with UNODC, an event at IAEA in Vienna, celebrating the tenth anniversary of the entry into force of the Convention on 5 December 2017. States parties met to take stock of implementation efforts and to identify areas of complementarity between the International Convention for the Suppression of Acts of Nuclear Terrorism and the Convention on the Physical Protection of Nuclear Material. This event aimed to help State parties with implementation efforts and to raise awareness among States that have yet to ratify the International Convention for the Suppression of Acts of Nuclear Terrorism. Under Canada's 2018 G7 presidency and, in 2019, under France's G7 presidency, joint demarches were conducted to encourage countries to ratify the International Convention for the Suppression

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of Acts of Nuclear Terrorism, promoting the Convention's universalization and implementation. Furthermore, since October 2017, Canada and UNODC have been collaborating on project activities valued at over Can\$ 2 million to raise awareness of, and build capacity to implement, the International Convention for the Suppression of Acts of Nuclear Terrorism and the Convention on the Physical Protection of Nuclear Material and its 2005 Amendment. Current activities include the development of a scenario-based mock trial (to exercise criminalization proceedings) to be staged in July 2022. This will target Member States already party to International Convention for the Suppression of Acts of Nuclear Terrorism to assist judicial officials with the effective implementation of the criminalization provisions within the Convention.

- 46 **Regulatory control of nuclear materials:** The technical capabilities of a country's system and the nature and the scope of cooperation between that system and IAEA are two of the State-specific factors that IAEA considers when developing a State-level approach to safeguards. Canada continues to work with IAEA to implement the updated State-level approach for Canada.

A strong and reliable State System of Accounting for and Control of Nuclear Material is essential to implement safeguards effectively and efficiently. The Canadian regulatory body, the Canadian Nuclear Safety Commission, published a new comprehensive regulatory document on safeguards and nuclear material accountancy in February 2018, which consolidated all safeguards regulatory requirements into a single document.

Peaceful uses of nuclear energy

- 47 **Canada's peaceful uses of nuclear energy:** Canada has an indigenous nuclear power reactor system and a broad, diverse nuclear sector, which includes reliable suppliers of uranium, nuclear equipment and technology and radioisotopes. In November 2018, Canada published a Canadian road map for small modular reactors, which provides recommendations for the next wave of nuclear innovation in Canada. This was followed by the launch of Canada's small modular reactor action plan in December 2020, that includes concrete steps to be taken by the federal Government, provinces and territories, industry, academia and other interested stakeholders.
- 48 **Canada's policy on nuclear cooperation:** Canada has 32 nuclear cooperation agreements in place, covering 48 States, in addition to a wide range of memorandums of understanding facilitating increased nuclear cooperation with partner countries and institutions and helping to strengthen nuclear regulatory frameworks, especially in the developing world, through shared practices, lessons learned and expert exchanges. As part of efforts to promote and encourage peaceful uses of nuclear energy under the Treaty, and in a manner that is fully consistent with the international nuclear non-proliferation regime, Canada co-sponsored the French-led working paper entitled "Framework for peaceful nuclear cooperation" ([NPT/CONF.2020/PC.II/WP.8](#)), as a step to promote and share our policy for nuclear cooperation.
- 49 **Technical cooperation on peaceful uses:** Canada provides experts, equipment and technology to numerous IAEA member States through technical cooperation projects. In addition, Canada has nuclear cooperation agreements in place with many developing countries. Canada provides expertise to support IAEA technical cooperation activities and regularly hosts related events in Canada. Canada has been a leading contributor (having provided over Can\$ 68 million since 2012) to the IAEA Nuclear Security Fund, to implement capacity-building projects that strengthen nuclear and radiological security worldwide, particularly in developing regions, which has the effect of enhancing the accessibility of nuclear energy for peaceful purposes. This includes a Can\$ 4.53 million contribution in 2019 to build nuclear regulatory infrastructure in 15 States in Latin America

and the Caribbean and a Can\$ 7.7 million contribution in 2020 to build nuclear regulatory infrastructure in 38 States in Africa.

Canada has multiple memorandums of understanding with individual countries to collaborate on research and development of peaceful nuclear technologies. In addition, Canada participates in several multilateral forums, such as the Generation IV International Forum and the International Framework for Nuclear Energy Cooperation, that aim to enhance development of nuclear energy for peaceful purposes.

- 50, See actions 38, 39 and 49 (above) for information on Canada's nuclear cooperation and
51 nuclear cooperation policies, including with developing countries.

- 52 **Enhancing effectiveness of the International Atomic Energy Agency technical cooperation programme:** In the context of the IAEA Technical Assistance and Cooperation Committee, the Board of Governors, and General Conference, Canada regularly proposes initiatives to improve the governance and management of the technical cooperation programme. This includes greater strategic management of the programme; encouraging IAEA member States to pay their voluntary assessed contribution to the Technical Cooperation Fund in full and on time; encouraging countries in a position to do so to contribute to funding their own technical cooperation projects through the government cost-sharing mechanism rather than drawing from the Technical Cooperation Fund; and encouraging the implementation of outcome monitoring for all technical cooperation projects.

- 53 **Enhancing effectiveness of the International Atomic Energy Agency Technical Cooperation Fund:** Canada continues its long-standing efforts to improve governance and management of the IAEA Technical Cooperation Fund through the IAEA policymaking organs and relevant working groups. Despite some progress in recent years, additional work remains to be done in the areas of strategic management, outcome monitoring, which countries draw on the Fund and member State payment of contributions to the Fund. Canada will continue to engage IAEA member States to encourage positive changes in these areas, which also contribute to our mutual commitment towards the Sustainable Development Goals.

- 54 **Rate of attainment on assessed voluntary contributions to the Technical Cooperation Fund:** Approaching a 100 per cent rate of attainment of voluntary assessed contributions to the Technical Cooperation Fund is an important step towards ensuring sufficient, assured and predictable resources for IAEA technical cooperation activities. Canada pays its yearly voluntary assessed contribution to the Technical Cooperation Fund in full and on time and advocates consistently for all IAEA member States to do the same. In addition, Canada continues to advocate improved governance of the Technical Cooperation Fund, including strengthening the application of the due account mechanism.

- 55 **Contributions to the International Atomic Energy Agency Peaceful Uses Initiative:** Canada has contributed Can\$ 12.6 million to the IAEA Peaceful Uses Initiative since 2016 and provides in-kind resources to Peaceful Uses Initiative projects. In 2019, Canada provided Can\$ 406,500 towards international efforts to support the IAEA Renovation of the Nuclear Applications Laboratories (ReNuAL+) project.

- 56 **Capacity-building and human resource development on peaceful uses of nuclear energy:** Canada is an active and regular contributor to the IAEA technical cooperation programme and nuclear knowledge management activities, including through the provision of expertise and support. Canada continues to host fellowship participants and scientific visitors from the Americas, Asia, Africa and Europe, as well as technical cooperation programme meetings in the areas of nuclear safety and regulatory activities. Canadian lecturers and experts have contributed to technical training in the areas of human health,

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agriculture and food security, water and the environment, energy, radiation technology and security and safety.

Furthermore, Canada participated alongside partner countries in organizing regional workshops and webinars on the peaceful uses of nuclear technology throughout 2020 and 2021. Domestically, the University Network of Excellence in Nuclear Engineering was established in 2002 with the aim of ensuring qualified nuclear scientists and engineers to meet current and future needs of the Canadian nuclear industry. In 2021, Ontario Tech University was designated an official Collaborating Centre in support of IAEA activities.

- 57 **Domestic legislation on peaceful uses of nuclear energy:** The Nuclear Energy Act of 1985 (amended in 1997) relates to the development and utilization of nuclear energy in Canada.

The Nuclear Safety and Control Act came into force in May 2000, replacing the Atomic Energy Control Act. The Nuclear Safety and Control Act established the Canadian Nuclear Safety Commission as the national regulator and set out its mandate, responsibilities and powers. These include domestically regulating the development, production and use of nuclear energy and materials to protect health, safety, security and the environment and to implement Canada's international commitments to the peaceful use of nuclear energy.

See also actions 24, 28, 42 and 45 (above) and 59 (below) for information on safeguards agreements, nuclear security conventions and nuclear safety conventions.

- 58 **Multilateral approaches to the nuclear fuel cycle:** Canada supported the decision of the IAEA Board of Governors in December 2010 to establish an IAEA low enriched uranium bank. Canada welcomes the progress made to date in establishing the bank and in bringing it into operation. Canada will continue to assess any proposed multilateral approaches to the fuel cycle based on their individual merits.

- 59 **Ratification of key international conventions on nuclear safety:** Canada ratified the Convention on Early Notification of a Nuclear Accident in January 1990.

Canada ratified the Convention on Nuclear Safety in December 1995.

Canada ratified the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management in May 1998.

Canada ratified the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency in August 2002.

See actions 42 and 45 (above) for more information on the amendment to the Convention on the Physical Protection of Nuclear Material and the International Convention for the Suppression of Acts of Nuclear Terrorism.

- 60 **Sharing of best practices on nuclear safety and security:** Canada is providing funding through its Weapons Threat Reduction Program to the World Institute for Nuclear Security to develop a nuclear security support centre in Thailand. This centre will provide the South-East Asia region with additional support in enhancing nuclear security, including through the provision of certified training for nuclear security managers and personnel. Canada continues to provide in-kind support to IAEA for the development of IAEA safety standards and IAEA Nuclear Security Series documents. Canada actively participates in the review meetings of the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and presided over the 2017 Convention on Nuclear Safety review meeting. Canada is engaging in the Programme Committee in preparation for the 2022 International Conference on the Safety and Security of Radioactive Sources and preparing to undertake its role as Co-President of the Conference.

The Government of Canada regularly engages with the Canadian nuclear industry and other key stakeholder through various forums such as the federal nuclear science and technology committees, where best practices in the area of nuclear safety and security are discussed, among other topics.

- 61 **Reducing use of highly enriched uranium in civilian energy programmes:** Canada is making good progress on its initiatives to reduce stocks of highly enriched uranium (HEU), including by repatriating HEU to the United States of America, in accordance with previous Nuclear Security Summit commitments to repatriate HEU spent fuel originating from the United States in 2010 and HEU liquid in 2012.

At the 2014 Nuclear Security Summit, leaders agreed to continue minimizing the use of HEU in the production of medical isotopes, and, in October 2016, Canada ceased routine production of the medical isotope molybdenum-99 (Mo-99) at the National Research Universal reactor. The reactor was shut down in March 2018. The repatriation of HEU-bearing material to the United States is continuing as planned. Consistent with its Nuclear Security Summit commitments, Canada is also decommissioning HEU-fuelled research reactors at the University of Alberta and the Saskatchewan Research Council.

Canada participated in the International Symposium on HEU Minimization and Elimination, hosted by Norway in June 2018, to take stock of international minimization and elimination efforts to date and to share updates on minimization efforts. As of February 2020, Canada has successfully repatriated all United States-origin HEU fuel from our research reactors at Chalk River Laboratories. Canada therefore no longer maintains any HEU-fuelled research reactors, having also repatriated all United States-origin HEU fuel from the University of Alberta and Saskatchewan Research Council research reactors.

In September 2021, Canada launched a Can\$ 2.5 million project with the United States Department of Energy to support the removal of the remaining HEU from a research reactor in Kazakhstan and to transport that HEU to Russia for downblending and disposition.

- 62 **Regulations on transport of radioactive materials:** Canadian transport regulations for radioactive materials are based on the IAEA Regulations for the Safe Transport of Radioactive Material.

- 63 **Ratification of key international conventions on nuclear liability:** On 1 January 2017, Canada's Nuclear Liability and Compensation Act entered into force.

Canada ratified the Convention on Supplementary Compensation for Nuclear Damage in June 2017.

Canada hosted an inaugural meeting of the parties and signatories to the Convention on Supplementary Compensation for Nuclear Damage in Ottawa on 4 and 5 June 2019. Participants discussed matters relating to their implementation of the Convention, opportunities for expanded participation in the Convention and long-term engagement among Convention countries.

- 64 **Prohibiting and preventing armed attacks nuclear facilities devoted to peaceful purposes:** Canada notes and reaffirms the consensus reached at the fifty-third session of the IAEA General Conference that any armed attack on and threat against safeguarded nuclear facilities devoted to peaceful purposes constitutes a violation of the principles of the Charter of the United Nations, international law and the Statute of the International Atomic Energy Agency.