## 8. Nuclear disarmament, arms control and non-proliferation

## Overview

The importance of arms control agreements and commitments was underlined early in 2022 by a joint statement by the leaders of the five permanent members of the United Nations Security Council (the P5) on 'Preventing nuclear war and avoiding arms races'. However, the full-scale invasion by one of these nuclear weapon states—Russia—of a neighbouring non-nuclear weapon state—Ukraine—led to significant setbacks in bilateral and multilateral engagement on nuclear arms control throughout the rest of the year.

The war presented unprecedented nuclear safety, security and safeguards challenges for the International Atomic Energy Agency (IAEA), the Ukrainian authorities and the personnel of nuclear installations in Ukraine (see section V). Never before had operating nuclear power plants been attacked by shelling or missile strikes by state militaries, nor occupied by military forces. The IAEA undertook multiple missions of technical experts to Ukraine in 2022, and subsequently established a permanent presence at all four nuclear power plants there. The IAEA also put forward a conceptual framework—the 'seven indispensable pillars of nuclear safety and security'—for addressing threats to nuclear installations in wartime.

Although bilateral talks between Russia and the USA continued in early 2022, they found differences between their positions on several key issues to be intractable (see section I). The invasion in February prompted the USA to suspend the dialogue, and there was subsequently only limited bilateral engagement between the two countries. The broader situation also affected the implementation of their 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START) and negotiations of a potential follow-on framework. Although Russia and the USA continued to implement most elements of New START in 2022, in August Russia notified the USA that it was not ready to resume on-site inspections of its nuclear weapon-related sites. Suspension of the strategic stability dialogue also meant there were no talks on an arms control framework to succeed New START on its expiry in 2026.

In the case of proposed bilateral strategic stability dialogue between China and the USA, there was no movement (see section I). China remained unwilling to engage in arms control talks without preconditions.

Iran's military support to Russia meant that the war in Ukraine even overshadowed the talks on reviving the Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear programme. The talks that had started in

Vienna in April 2021 continued in 2022, without leading to a solution (see section IV). The talks were further complicated by an IAEA investigation into Iran's past nuclear activities and a government crackdown on protests in the country. Even though it is hard to see any alternative that would address the key concerns of both Iran and the USA as effectively as the JCPOA, voices on both sides continued to question the long-term benefits of reviving it. Instead, the parties seem willing to live with the status quo despite the costs and risks.

Negotiations between the United States and North Korea have proceeded sporadically for decades but have failed to halt the advance of North Korea's nuclear and missile programmes. The last round of denuclearization negotiations collapsed in 2019, and in 2022 North Korea test launched more ballistic missiles than ever before in a single year (see chapter 7).

The international community came close but failed to reach agreement at the 10th review conference of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in August 2022 (see section II). Nearly all states parties were willing to reach consensus on a substantive outcome. A compromise text was produced despite disagreement over issues that have been obstacles at past review conferences (e.g. the 1995 Middle East Resolution) or had been expected to be obstacles at this conference (e.g. the 2021 trilateral security pact between Australia, the UK and the USA, known as AUKUS, and the relationship between the NPT and the 2017 Treaty on the Prohibition of Nuclear Weapons, TPNW). The lack of consensus was largely attributed to Russia, resulting in what has been referred to as 'consensus minus one'. With two consecutive review conferences now having ended without a consensus substantive outcome or recommendations, the parties agreed to establish a working group on further strengthening the NPT's review process in advance of the 2026 review conference.

The first meeting of states parties to the TPNW reached agreement on several key issues (see section III). As well as establishing a Scientific Advisory Group, the parties unanimously adopted a political declaration and an action plan. The latter contains 50 specific actions, including actions on universalization; victim assistance, environmental remediation and international cooperation and assistance; scientific and technical advice in support of implementation; supporting the wider nuclear disarmament and non-proliferation regime; inclusion; and implementation of the treaty's gender provisions. However, since all the nuclear-armed states remain non-parties, the challenges for the treaty's core objective—nuclear disarmament—remain formidable.

Despite these limited successes, by the end of 2022 even the P5 dialogue had been put on hold, with the process reportedly limited to expert-level engagement. Unless diplomatic trends reverse, a new and more dangerous phase in arms control is on the horizon.