1. Reflections on the challenges of systemic disruption and the future of peace research

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I. A moment for reflection on SIPRI's 60th anniversary

This edition of the SIPRI Yearbook coincides with the 60th anniversary of the Institute's founding. Established in 1966 with a mandate to 'conduct scientific research on questions of conflict and cooperation of importance for international peace and security, with the aim of contributing to an understanding of the conditions for peaceful solutions of international conflicts and for a stable peace', SIPRI was meant to serve as an independent and impartial institute at the forefront of global peace research.[1] For over 60 years SIPRI has discharged its mission during times of tumultuous change: the height of superpower rivalry during the cold war; the United States-led unipolar order following the collapse of the Soviet Union; the global war on terror in the wake of the events of 11 September 2001; and the return of great power competition as the central dynamic driving international security politics throughout the last decade.

Each phase prompted the Institute to adapt its research agenda accordingly to address the shifting challenges to international peace and security. A core focus on weapons of mass destruction, the arms trade and arms control during the cold war gave way to a broader disarmament and non-proliferation agenda in the post–cold war era, alongside an emphasis on consolidating a security architecture for Europe. The realities of the new global conflict landscape would also prompt a greater research focus on multilateral peace operations and conflict management frameworks to address the growing number of intrastate conflicts.

With the onset of the new millennium, the scope of SIPRI's research expanded to cover a broader human security agenda encompassing issues such as climate change, food security and governance. Alongside this expanding agenda, the Institute maintained and adapted its traditional core focus on questions of arms and disarmament in addressing the evolving global arms control architecture, the role of export controls and non-proliferation frameworks, while continuing its long-standing role as the pre-eminent global

[1] SIPRI, Statutes, 22 Feb. 2018, §2.

provider of reliable data on military expenditure, arms production and arms transfers.

The transformative developments of the preceding decade have been no less challenging for SIPRI. Russia's 2014 annexation of Crimea followed by its 2022 full-scale invasion of Ukraine heralded the re-emergence of an East–West divide in Europe, and the denouement of the post–cold war project to integrate Russia into a new security framework for Europe. China's decades-long rise elevated its status to one of a peer competitor to the USA, ushering in a new era of great power competition. The acceleration of the global technology revolution added layers of complexity to these transformations as the maturation of emerging technologies exerted effects on global security politics, geo-economic and geopolitical dynamics, and approaches to warfare.

SIPRI's response to these transformations entailed adapting its traditional thematic areas of research to have a greater focus on China's security policies; evolving regional security dynamics in Europe, East Asia, the Indo-Pacific and sub-Saharan Africa; the changing role of arms control in the context of USA–China–Russia nuclear competition; and the emerging geo-economic and technological drivers of conflict. Notable in this regard was SIPRI's expansion of its research portfolio with the addition of new programmes dedicated to exploring the security implications of emerging technologies and war domains, especially artificial intelligence (AI) and autonomous weapons, quantum technologies, cyber space and outer space.

Six decades on from its founding, SIPRI finds itself at a similar moment of transformation. The normative and structural fraying of international order is hastening the onset of global security disorder.[2] Disorder, in turn, is giving way to a condition of systemic disruption and in some instances outright breakdown, with the political, legal, normative and geopolitical frameworks that have traditionally underpinned global security since the end of the second world war themselves in question. The cumulative effects of global disorder can be said to have reached a tipping point.

SIPRI's 60th anniversary therefore provides an opportune moment for a profound rethink of the Institute's future research agenda. This effort must now address a set of highly complex questions: understanding the sources of the current disruption; mitigating the mounting geopolitical and human insecurities that flow from this condition; and—when disruption has tipped into breakdown—formulate alternatives for constructing new frameworks for peace, stability and security once more propitious circumstances prevail, hopefully in the not too distant future.

[2] See the introductory chapter to the 2025 Yearbook. Smith, D., 'International stability, human security and the nuclear challenge', *SIPRI Yearbook 2025*, pp. 12–18.

This introduction offers an overview of the current trajectories of systemic disruption in sections II, III and IV. This overview is meant to be selective, drawing on the analysis offered in several of the chapters in this volume, highlighting those areas where the disruption is most apparent and potentially consequential for international peace and security. Section V attempts to sketch the contours of a proposed peace research agenda to address these various challenges.

II. The evolving nature of great power competition and the question of strategic stability

Opinion differs as to when the US unipolar moment that emerged after the end of the cold war gave way to the current dynamic of global great power competition. Some would point to the Obama administration's 2011 'pivot to Asia' to counter the growing power of a rising China, while others trace this earlier to Russian President Vladimir Putin's defiant 2007 speech before the Munich Security Conference marking the re-emergence of the East–West divide in Europe.[3] Others still highlight US President Donald J. Trump's first administration's formal acknowledgement in the 2017 US National Security Strategy of great power competition as the organizing principle for America's foreign and security policy.[4] Irrespective of its point of origin, few would argue that great power competition constitutes the overarching dynamic of contemporary global security politics.

What is most important is to understand the way in which this dynamic is evolving and to map the different trajectories of impact on international peace and security. The distinguishing feature of this current phase of great power competition relates to two overarching drivers. The first is the resurgence of large-scale interstate war between technologically advanced states after decades in which low-intensity violence and external intervention in intrastate conflicts dominated the international security landscape for much of the post–cold war period. As detailed in chapter 2 of this volume, 2025 saw the number of interstate armed conflicts double from three to six compared to 2024, involving at least 13 states. The Russian invasion of Ukraine war, the repeated rounds of US–Israeli confrontation with Iran starting from 2023 and culminating in the full-scale war initiated in February 2026, the

[3] Putin, V., Speech to the 43rd Munich Conference on Security Policy, 10 Feb. 2007.

[4] Goddard, S., 'The rise and fall of great-power competition', *Foreign Affairs* (May/June 2025); Strachan, H., 'The return of great power competition: From strategy to geopolitics', eds A. Baranets and A. Novo, *Turbulence Across the Sea: Transatlantic Relations and Strategic Competition* (University of Michigan Press: Ann Arbor, MI, 2024); and Lynch III, T. F., 'Historical insights into great power competition: Military alignments, economics, and institutions', ed. T. F. Lynch III, *Strategic Assessment 2025: Evolving Great Power Competition at Mid-Decade* (National Defense University Press: Washington, DC, 2025).

India–Pakistan clashes in May 2025, Saudi Arabia's intervention against the Houthis in Yemen, and Israel's war with Hamas in Gaza (the longest and by far the deadliest in the history of the Arab–Israeli conflict) and with Hezbollah in Lebanon constitute the defining examples of this trend. Although these latter examples are not formally categorized as interstate wars given that they involve conflicts pitting states against non-state actors, the high-intensity nature of conventional armed conflict, the technological sophistication of the weaponry employed by state and non-state parties alike, and the proximity to the homeland and extreme population density distinguish them from previous instances of external state intervention against non-state armed groups. For example, the US wars against the Islamic State in Iraq and Syria, and against Al-Qaeda and the Taliban in Afghanistan were defined by counter-insurgency often combined with urban warfare.

The second main driver unfolding in parallel is the fraying of the USA's relationships with its allies. At the risk of oversimplification, a cursory explanation of the underlying causes can be offered here. In Europe, the fraying can be attributed to the political crisis in the transatlantic relationship under the second Trump administration. In East Asia, it derives from the uncertainty regarding the credibility of US extended deterrence commitments in Asia in the face of China's rapid nuclear build-up, and the complex trade-offs Washington might be compelled to make to safeguard US interests in managing its highly interdependent relationship with Beijing.[5] In both cases, the dramatic departure of US foreign policy from its traditional role as guarantor of the 'rules-based liberal international order' constitutes the backdrop against which these trends are unfolding.[6]

The intersection of both drivers—the resurgence of state-on-state war, and eroding US alliance frameworks—is steering global security politics towards greater complexity and heightened levels of insecurity. The increase in complexity relates to the expanding multi-dimensionality of great power competition as it unfolds across a broader range of military, technological, geopolitical, ideological and geo-economic domains, alongside a marked absence of mechanisms for managing it. A self-reinforcing cycle seems to have taken hold: the different arenas of competition entail greater vectors of risk and multiple pathways for escalation, which further exacerbates the overall sense of insecurity and vulnerability. Both complexity and insecurity

[5] Carson, A., Metz, R. and Poast, P., 'Allies and access: Implications of an American turn from alliances', *International Organization*, vol. 79, no. S1 (2025); Lee, D. Y., 'Why reassuring allies is harder than deterring adversaries in extended deterrence: Evidence from US extended deterrence for South Korea', *British Journal of Politics and International Relations*, OnlineFirst (Dec. 2025); International Crisis Group (ICG), 'Embracing arms: Securing Japan in a "new era of crisis" ', ICG Asia Report no. 351, 12 Dec. 2025; and Allin, D. H. and Chivvis, C. S., 'Transatlantic relations: Is there a beginning after the end?', *Survival*, vol. 67, no. 2 (2025).

[6] Walt, S. M., 'The predatory hegemon: How Trump wields American power', *Foreign Affairs* (Mar./Apr. 2026).

therefore pose growing threats that if left unchecked can potentially undermine strategic stability. Preserving strategic stability thus emerges as the defining challenge for managing great power competition to ensure it does not devolve into great power conflict.

Three specific dimensions can be highlighted to illustrate the interlocking dynamics of complexity and insecurity derived from the analytical chapters offered in this volume: the patterns in global military expenditure reflecting shifting alliance relationships and the effect of interstate armed conflict; the insecurities resulting from the growing trend towards weaponization of critical minerals and global supply chains; and the technological trends affecting global armaments and the implications for global and regional military balances.

Patterns in global military expenditure and armed conflict

As shown in chapter 5 of this volume, global military expenditure for 2025 reached a record US$2.89 trillion. Despite consistent growth over the last decade—41 per cent since 2016—the rate of increase for 2025 (2.9 per cent over the previous year) is lower in comparison to 2023 (6.7 per cent) and 2024 (9.8 per cent). The main reason for the lower rate is the second Trump administration's decision to decrease military assistance to Ukraine, and to a lesser extent Israel and Taiwan, causing an overall decline of 7.5 per cent in US military expenditure. However, this decrease in US expenditure is expected to be only temporary and was offset by rising global military spending across several regions. This was evidenced most notably in Europe ($864 billion, a 14 per cent increase, more than doubling over the last decade), followed by Asia and Oceania (with a combined increase of 8.1 per cent, reaching $681 billion), while Middle East military expenditure remained mostly unchanged ($218 billion) mainly due to the October ceasefire in Gaza. Excluding the USA, global military expenditure increased by 9.2 per cent in 2025.

From this data emerge patterns that clearly track with the analysis offered in this section. The correlation between military expenditure and shifting US alliance relationships is not difficult to discern. The impact of alliance politics is evident in the significant decline of US military expenditure allocated to Ukraine. The surge in European military expenditure can be attributed to a combination of increased threat perceptions about Russia and mounting US pressure under President Trump on members of the North Atlantic Treaty Organization (NATO) to increase military spending. The latter culminated in the decision taken at the 2025 Hague summit for each ally to allocate 5 per cent of its GDP to core military requirements (3.5 per cent on direct military

expenditure and 1.5 per cent on defence and security-related infrastructure, civilian preparedness and supporting equipment).[7]

A similar correlation can be observed between rising levels of military expenditure and the incidence of interstate armed conflict in Europe and the Middle East, and the intensification of great power competition in East Asia. This correlation becomes especially apparent when tracking the trajectory of military expenditure over the last decade. In Europe, the trend reveals a clear divide between the rate of growth of military spending before and after Russia's invasion of Ukraine—surging from 15 per cent during 2016–21 to 75 per cent during 2021–25. Asia and Oceania registered the second-highest regional growth in military expenditure, rising 48 per cent during 2016–25, with much of this increase originating in East Asia (57 per cent). The Middle East witnessed an increase in military expenditure of 36 per cent over the last decade, with Israel alone more than doubling its military expenditure while Saudi Arabia retained its position as the region's top military spender.

Weaponization of critical minerals and global supply chains

SIPRI data also reveals an increasingly critical aspect associated with the rise in military expenditure. The increased reliance of global arms production on supply chains and availability of critical minerals is creating new dependencies that can be weaponized by adversaries.[8] This speaks to the growing multi-dimensional complexity of great power competition. Whereas the military, security, ideological, technological and geo-economic dimensions of great power politics have always been interconnected, the linkages between them have become ever tighter with the acceleration of globalization, deepening dependencies and, by extension, vulnerabilities. The insecurities revealed by these trends were starkly exposed by the Covid-19 pandemic, and only partially ameliorated in the post-pandemic period by the assumption that mutual interdependence would somehow temper any incentive by adversaries to exploit such vulnerabilities for their own advantage.[9]

The intensification of great power competition, coinciding with the resurgence of major interstate armed conflict, shattered that assumption. Mutual interdependence gave way to the increasing weaponization of trade,

[7] North Atlantic Treaty Organization (NATO), 'The Hague Summit Declaration', Declaration issued by the NATO Heads of State and Government participating in the meeting of the North Atlantic Council in The Hague, 25 June 2025.

[8] See chapter 6, section II, in this volume; Zhou, J. and Magalhães Teixeira, B., *Navigating Green Geopolitics: Perils and Promise of Energy Transition and the Case of Ukraine,* SIPRI Report (SIPRI: Stockholm, Dec. 2025); and Zhou, J. and Månberger, A., *Critical Minerals and Great Power Competition: An Overview*, SIPRI Report (SIPRI: Stockholm, Oct. 2024).

[9] On developments during 2025 relating to the origins of Covid-19 and efforts to strengthen global pandemic governance through the World Health Organization Pandemic Agreement see chapter 12, section IV, in this volume.

commodities, technology, supply chains, water and energy flows.[10] Russia's coercive leverage of its gas supplies to Europe in the wake of its invasion of Ukraine, eliciting a raft of Western sanctions against Russian hydrocarbon sales; the Trump administration's assertive use of tariffs to extract concessions from allies and rivals alike; China's resort to restricting exports of critical minerals and rare earths to leverage its dominant position on both; and the salience of techno-nationalism as an increasingly predominant feature of China–US rivalry, have all converged to usher in an era in which weaponization is now a seemingly permanent feature of global security politics.[11]

The attendant risks of this trend become obvious as states realize that the resort to weaponization does not simply affect their national economies or even their geo-economic position, but also their overall military–security posture. There is a growing awareness of the extent to which these vulnerabilities reach deep into the defence sector itself, with several leading global arms manufacturers citing the greater risks and rising input costs resulting from export restrictions and tariff measures. As these disruptions ripple through the arms industry, the cumulative effects on rearmament programmes and defence readiness may well prompt a response that increasingly relies on securitized and even militarized approaches to ensure access to critical materials—further exacerbating geopolitical tensions.

Technological trends affecting global armaments

A further element of complexity is revealed when factoring in the increasing sophistication of digital-driven military systems within current major rearmament programmes—although they remain heavily tethered to legacy platforms due to immense replacement costs and the slow pace of military procurement. Modernization is now a hybrid effort: while new investments prioritize AI, uncrewed systems and cyber capabilities, many states still rely on old platforms—some over 50 years old—that are being retrofitted with modern software and sensors to remain viable.

Precision-strike capabilities are also no longer the exclusive domain of advanced major powers. Sophisticated strike capabilities, which previously required billion-dollar aircraft or naval platforms, are being replicated by relatively inexpensive systems. As a result, the number of groups and

[10] Chen, L. S. and Evers, M. M., 'Wars without smoke: Global supply chains, power transitions, and economic statecraft', *International Security*, vol. 48, no. 2 (2023); and Mehling, M., 'In the vortex of great power competition: Climate, trade, and geostrategic rivalry in US–China–EU relations', Harvard Project on Climate Agreements, Belfer Center for Science and International Affairs, Apr. 2025. See also chapter 2, section III, in this volume.

[11] See Zhou and Månberger (note 8); and Zhou, J. and Magalhães Teixeira, B., 'Resource mercantilism and the great powers—perils for the global rest', SIPRI Commentary, 6 Mar. 2026.

nations capable of projecting power at range has increased significantly: over 90 countries and more than 65 non-state actors now operate some form of uncrewed vehicle systems (generally termed 'drones').[12] The increasing reliance on drones after their demonstrated performance in actual conflict settings; the qualitative and quantitative escalation of the missile race at the regional and global levels; and the use of AI technologies and space systems for decision-support, target acquisition and battle-management, have all become pervasive features of contemporary armed conflict. A detailed survey of the different applications of these technologies and military systems can be found in several of the chapters in this volume.[13] For the purposes of this analysis, the critical implication of these trends is the degree to which they blur the distinction between the tactical and strategic levels of conflict, and in some cases between the conventional and nuclear levels of military competition.[14]

The introduction or modernization of long-range precision-strike systems, hypersonic glide vehicles and hypersonic cruise missiles as a key feature of the ongoing 'missile race' in Europe and in Asia and Oceania provides a clear illustration of this 'blurring' effect. The accuracy, range, speed and lethality of these systems render them capable of delivering strategic effects—a quality that has given rise to their categorization as 'non-nuclear strategic weapons'.[15] With the ability to hold adversary nuclear forces at risk, these systems introduce new escalation dynamics into potential conflict scenarios, including escalatory pathways from the conventional to the nuclear level.[16] Moreover, the continued development of ballistic missile capabilities as nuclear delivery vehicles poses growing risks for nuclear stability. India's continued development of the Agni-V intermediate-range missile stands out as a clear example in this regard. With the potential to further develop the Agni as an intercontinental-range ballistic missile, India will acquire the ability to hold at risk the entirety of China's territory, giving it deterrence

[12] Clausen, M-L., 'Non-state armed groups in the sky', Danish Institute for International Studies (DIIS), DIIS Policy Brief, 15 Apr. 2024; and Schadlow, N., 'The three D's of mass: Decentralization, democratization, and deliverability', Hoover Institution, 25 Feb. 2026.

[13] On missiles and drones, AI and space systems see, respectively, chapters 9, 14 and 16 in this volume.

[14] Fox, A. C., 'Obstructive warfare: Applications and risks for AI in future military operations', Center for International Governance Innovation (CIGI), CIGI Paper no. 307, 25 Oct. 2024; and Burdette, Z. et al., 'How artificial intelligence could reshape future warfare', RAND Research Report RR-A4316-1, 22 Jan. 2026.

[15] Barrie, D., Gwadera, Z. and Hinz, F., 'Deep precision strike: Europe's quest for long-range missile capabilities', International Institute for Strategic Studies (IISS), Missile Dialogue Initiative, Research paper, 13 Nov. 2025; and Panda, A., 'Indo-Pacific missile arsenals: Avoiding spirals and mitigating escalation risks', Carnegie Endowment for International Peace, 31 Oct. 2023.

[16] Wan, W., 'Addressing multidomain nuclear escalation risk', SIPRI Research Policy Paper, Jan. 2026; Anderson, J. and McCue, J. R., 'Deterring, countering, and defeating conventional–nuclear integration', *Strategic Studies Quarterly*, vol. 15, no. 1 (2021); Mount, A., 'Conventional deterrence of nuclear use', *International Security*, vol. 50, no. 2 (2025); and Hoffmann, F. and Alberque, W., 'Non-nuclear weapons with strategic effect: New tools of warfare?', IISS Research Paper, 31 Mar. 2022.

parity but not numerical or overall strategic parity with China, as well as significantly complicating the China–India–Pakistan nuclear balance.[17]

As noted above, the rapid evolution of uncrewed aerial vehicle (UAV) systems and their employment in virtually every contemporary armed conflict adds a further layer of military complexity. The versatility of UAV technologies allows for a wide array of mission configurations on the battlefield, including reconnaissance support, swarm attacks and a variety of tactical strike roles. The battlefield effects of these capabilities have been transformative, rendering troop concentrations and large-scale manoeuvres in Ukraine virtually impossible and enabling Iran's asymmetric escalation in its conflict with the USA and Israel.[18] More important, for the purpose of this analysis, is the fact that the military applications of UAVs extend to the strategic level, again with potentially destabilizing effects.[19] The armed conflicts between India and Pakistan and the US–Israeli conflict with Iran witnessed the use of UAV attacks in combination with large-scale missile barrages to overwhelm missile defence systems.[20] Ukraine's use of drones to target Moscow's long-range strategic bomber fleet deep inside Russian territory—Operation Spider's Web—is indicative of how UAVs can be employed for deep-strike attacks against nuclear forces, creating escalatory pathways between the conventional and nuclear levels.[21]

The picture that emerges is one of mounting pressure from several different sources that push great power competition towards heightened tension, which if left unchecked could tip these dynamics into a situation of strategic instability. As militarization continues apace, driven by eroding alliances and interstate armed conflict, the technological drivers fuelling rearmaments and the vulnerabilities produced by weaponization of global supply chains will converge to produce multiple points of geopolitical friction and ultimately military risk—all against the backdrop of the continued breakdown of channels of political communication and crisis management across the various conflict divides in Europe and East Asia where these trends are most pronounced.

[17] See chapter 9, section III, in this volume.

[18] On the changes in Russian arms procurement as a result of these new battlefield realities see Cooper, J., 'A budget for a fifth year of war: Military spending in Russia's budget for 2026', SIPRI Insights on Peace and Security no. 2026/01, Mar. 2026, pp. 19–21.

[19] Javed, N. and Altaf, Z., 'India–Pakistan development of drones: Implications for strategic stability', *Strategic Studies*, vol. 44, no. 2 (2024); and Sauer, T., 'The potentially revolutionary impact of emerging and disruptive technologies and strategic conventional weapons on the nuclear deterrence debate', EU Non-Proliferation and Disarmament Consortium, Non-Proliferation and Disarmament Paper no. 91, Dec. 2024.

[20] Roy-Chaudhury, R., 'India–Pakistan drone and missile conflict: Differing and disputed narratives', IISS Online Analysis, 15 May 2025.

[21] Bondar, K., 'How Ukraine's operation "Spider Web" redefines asymmetric warfare', Center for Strategic and International Studies (CSIS), CSIS Critical Questions, 2 June 2025. On escalatory pathways see also Wan (note 16).

III. The fraying core foundations of global nuclear order

The consensus view among most Western analysts of global nuclear politics is that the current 'global nuclear order' rests on three core foundations that are interlinked. The strategic nuclear arms control framework constitutes the first foundation in the form of a series of bilateral treaty frameworks between the USA and Russia that has provided an important element of restraint alongside the relationship of mutual deterrence which has continued since its inception during the cold war. Nuclear restraint on the part of the two possessors of the world's largest nuclear arsenals—the USA and Russia—is complemented by the global non-proliferation regime which constitutes the second core foundation of global nuclear order. Anchored in the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT)—often cited as one of the most universally subscribed global treaty framework after the United Nations Charter—this regime entails: (*a*) legally binding obligations prohibiting the possession of nuclear weapons by the broad majority of member states of the treaty (non-nuclear weapon states); (*b*) a commitment to work towards general and complete nuclear disarmament by the five states formally designated by the treaty as 'nuclear weapon states'; and (*c*) guarantees of states' right to access, and an obligation to facilitate exchanges of, nuclear technology, material and equipment for peaceful uses (within a system of nuclear safeguards implemented by the International Atomic Energy Agency).[22] These two core foundations are reinforced by a third in the form of a series of US extended deterrence commitments to its NATO allies and key Indo-Pacific partners, reinforcing the obligation of nuclear restraint based on the assurance provided by the American nuclear umbrella.[23] Today, the global nuclear order is in a state of flux, with each of the three foundations facing varying degrees of erosion or instability.

The collapse of the strategic nuclear arms control framework

The expiration of the New Strategic Arms Reduction Treaty (New START) in February 2026 marked the passing of the last remaining strategic arms control agreement between the USA and Russia. It also marked the culmination of a decades-long process of erosion of the arms control architecture: the USA's withdrawal from the Treaty on the Limitation of Anti-Ballistic Missile Systems and the Treaty on the Elimination of Intermediate-range and Shorter-range Missiles in 2002 and 2019, respectively; and the demise of

[22] Miller, S., Legvold, R. and Freedman, L., *Meeting the Challenges of the New Nuclear Age: Nuclear Weapons in a Changing Global Order* (American Academy of Arts & Sciences: Cambridge, MA, Jan. 2019). On the NPT see annex A, section I, in this volume.

[23] Erästö, T., 'The role of umbrella states in the global nuclear order', SIPRI Insights on Peace and Security no. 2023/06, June 2023.

the Treaty on Open Skies following the near simultaneous withdrawal by the USA (2020) and Russia (2021), in parallel with the collapse of the Treaty on Conventional Armed Forces in Europe following Russia's formal withdrawal in 2023.[24]

With the lapse of New START, the process of disruption of this first foundation of nuclear order can be said to have tipped into breakdown—the absence of any qualitative or quantitative restraints governing the nuclear arsenals of any of the nuclear weapon states. The loss of structural limitations on nuclear weapons is not the only casualty of this breakdown. An oftentimes overlooked benefit of arms control is the predictability afforded by the verification mechanisms, data exchange protocols and confidence-building measures built into negotiated agreements, all of which have now passed with the expiration of New START. As such, the post-nuclear arms control world will be one in which knowledge about nuclear weapons will gradually diminish; over time less will be known about the numbers, operational deployment, capabilities and force postures of nuclear arsenals.[25] The growing lack of transparency may be an infection beyond US and Russian nuclear weapons. As shown in chapter 8, both the United Kingdom and France have announced that they will share less information about their nuclear arsenals, on top of the varying degrees of opacity that characterize the nuclear arsenals of India, Pakistan, North Korea and Israel—the latter not even officially acknowledging possession of nuclear weapons.

The removal of structural constraints is likely to pave the way to renewed arms race dynamics between the nuclear powers, driven by the US imperative to counter the demands of what nuclear planners define as the new 'two-tier deterrence environment'—countering the combined nuclear forces of both Russia and China. When factoring in the growing lack of transparency regarding nuclear weapons, these dynamics are likely to steer nuclear planning towards worst-case assumptions, rendering nuclear deterrence relationships more prone to unpredictability and potentially crisis.

Global non-proliferation under stress

The breakdown of the strategic arms control architecture will place significant stress on the second foundation of the global nuclear order—the global non-proliferation regime. With the prospect of deep nuclear cuts receding, the nuclear weapon states will increasingly be seen as in breach of their core

[24] Woolf, A. F., 'The past and future of bilateral nuclear arms control', United Nations Institute for Disarmament Research (UNIDIR), UNIDIR Nuclear Dialogue Series Paper no. 9, 21 Mar. 2023; and Brooks, L., 'The end of arms control?', *Daedalus*, vol. 149, no. 2 (2020). For each of these treaties see annex A in this volume.

[25] Haggag, K., 'After New START expires, Europe needs to step up on arms control', SIPRI Commentary, 4 Feb. 2026.

obligation to negotiate towards complete nuclear disarmament as enshrined in Article 6 of the NPT. This failing commitment erodes the overall legitimacy of the NPT, along with several other factors undermining the treaty: a series of non-proliferation crises most notably in Iran, North Korea and Iraq; the failure to achieve universality of the treaty, with India, Pakistan and Israel remaining as nuclear holdouts (and North Korea's withdrawal in 2003); and the emergence of the Treaty on the Prohibition of Nuclear Weapons as a competing nuclear framework.[26] These diverse factors have converged to produce what has generally been perceived as a decades-long state of crisis for the NPT manifested most clearly in the consistent failure to produce a consensus final outcome document for the last two cycles of the treaty's review process.[27]

Diminishing credibility of US extended deterrence

An added source of stress for the global non-proliferation regime is the weakening of the third foundation of the global nuclear order—the system of extended nuclear deterrence provided by the USA. Thus far, the erosion of this system—a by-product of the weakening of US alliance frameworks mentioned above—has produced varying effects. In Europe, NATO member states are exploring alternative deterrence arrangements such as relying on UK and French nuclear forces.[28] In East Asia, the absence of such options has prompted South Korea and Japan to seek more institutionalized consultative mechanisms on nuclear planning with the USA, and in the case of Japan to reassess the long-standing refusal to allow the deployment of US nuclear forces in its national territory.[29] Although these emerging modalities fall short of the nuclear sharing arrangements within the context of the NATO alliance—entailing operational control over nuclear weapons during wartime—they provide a measure of reassurance that ostensibly solidifies US nuclear guarantees in the absence of a formal deterrence commitment.

[26] On the Treaty on the Prohibition of Nuclear Weapons see annex A, section I, in this volume.

[27] Herrera, M., 'What future for the NPT? Scenarios for the treaty going forward', *Journal for Peace and Nuclear Disarmament*, 25 Feb. 2026; and Baldus, J., Müller, H. and Wunderlich, C., 'The global nuclear order and the crisis of the nuclear non-proliferation regime: Taking stock and moving forward', *Zeitschrift für Friedens und Konfliktforschung* vol. 10 (2021). See also chapter 10, section V, in this volume.

[28] Bunde, T. et al., 'Mind the deterrence gap: Assessing Europe's nuclear options—Report of the European Nuclear Study Group', Munich Security Conference, Feb. 2026.

[29] Sasakawa Peace Foundation, Japan–US and Security Studies Unit, National Security and Japan–US Program, 'Toward improving the effectiveness of extended deterrence in the Japan–US alliance: To make the "nuclear umbrella" be real', June 2025; Toh, J. and Jo, W., 'Rethinking South Korea's nuclear deterrence strategy', *Asia Policy*, vol. 20, no. 4 (Oct. 2025); and Kuramitsu, S., 'Revisiting Japan's non-nuclear principles: Between a nuclear allergy and umbrella', Carnegie Endowment for International Peace, 16 Mar. 2026.

Whether such developments constitute an outright violation of NPT prohibitions enshrined in Articles I and II of the treaty—against the transfer of nuclear weapons by nuclear weapon states to non-nuclear weapon states, and by non-nuclear weapon states to receive such weapons, respectively—is the subject of contention within the NPT review process. At the least, they do pose an indirect challenge to the treaty's core objective to reduce overall reliance on nuclear weapons, and the aspiration enshrined in the preamble of the treaty to 'achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament'. However, should the ongoing nuclear debates in various European and East Asian capitals favour those calling for the possession of an independent military nuclear capability as the only guarantor of security, this could prompt those states to withdraw from the NPT. Such an outcome would undoubtedly pose the gravest challenge to the integrity of the global non-proliferation regime since North Korea's 2003 withdrawal from the treaty.

This gradual erosion of the global nuclear order is taking place against the backdrop of other significant developments in global nuclear politics that will likely accelerate this trajectory. The three foundations of this order were fortified by several other reinforcing normative, political and legal frameworks: a taboo against the use—or threat—of nuclear weapons; complementary treaty regimes, notably the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which despite never entering into force led to a de facto moratorium on nuclear testing; and attempts at non-proliferation diplomacy to address the successive crises facing the NPT.[30] Each of these has suffered significant setbacks. Russia has repeatedly resorted to nuclear sabre-rattling in the context of the war in Ukraine.[31] The USA's recent accusations against China of conducting secret nuclear tests and President Trump's order to resume US nuclear tests in response threaten to undermine the current nuclear test moratorium.[32] And the failure of diplomacy to resolve the proliferation crises in North Korea and Iran led the former to successfully acquire a full-scale nuclear weapon capability and aggressive counter-proliferation against the latter that has intensified significantly following the US 2018 withdrawal from the Joint Comprehensive Plan of Action with Iran, shifting from long-term shadow warfare to direct, kinetic confrontations in 2025–26.[33]

Together, these setbacks convey the reality of a global nuclear order in a state of flux. The stability of the nuclear order established a mutually reinforcing relationship between strategic arms control, non-proliferation

[30] On the CTBT see annex A, section I, in this volume.

[31] Schepers, N., 'Russia's war and the global nuclear order', *CSS Policy Perspectives*, vol. 10, no. 6 (2022).

[32] Liang, X., 'US accuses China of nuclear test, preparations', *Arms Control Today*, Mar. 2026.

[33] On the Iran–Israel 12-day war in June 2025 see chapter 10, section III, in this volume.

and deterrence. However, the relationship between these foundations always involved tensions—even degrees of instability and unpredictability—rather than complementarity. Nuclear deterrence, in particular, is an inherently unpredictable and unstable theoretical construct.[34] For US allies, maintaining deterrence may require relaxing the constraints against proliferation in the form of deepening nuclear sharing arrangements, or abandoning these constraints entirely in the event of a decision to move towards acquiring independent military nuclear capabilities. Alternatively, some could choose to actively pursue 'deterrence by denial' through non-nuclear means, to compensate for a perceived shift in US security guarantees.[35] For the USA, preserving deterrence may entail moving towards a renewed arms race to counter China's nuclear build-up while deterring Russia—although adding more warheads provides no additional security and only increases global risk.

In the near term, the renewed salience of nuclear weapons in global security politics is likely to coincide with a trend towards nuclear hedging dynamics as states seek to acquire latent nuclear capabilities, that in turn will lead to increasing normative contestation of the global non-proliferation regime.

IV. The erosion of peace frameworks and the rise in threats to human security

The proliferation of global and regional conflicts coincides with a fundamental transformation in the political and institutional architecture of multilateral peace frameworks, together with a marked increase in the threats to human security. Tracking conflict trends must now be undertaken in the context of a more holistic assessment of the complex normative, legal and military transformations affecting the international conflict landscape.

The shift from the liberal paradigm of peacemaking

The point of departure for this assessment should focus on the implications of the evolving approach to international peacemaking now accelerated with the advent of the second Trump administration. Over the course of the last two decades, the shift from the liberal paradigm of peacemaking that dominated conflict resolution efforts since the 1990s has been gradual but unmistakable. Based on notions of broad societal inclusion and transitional justice, this approach was grounded in comprehensive agreements meant to address the root causes of conflict, with highly structured, long-term peace

[34] Unal, B. and Afina, Y. (eds), *Perspectives on Nuclear Deterrence in the 21st Century* (Chatham House: London, Apr. 2020); and Kolbin, A., 'Nuclear deterrence is dying. And hardly anyone notices', *Bulletin of the Atomic Scientists*, 30 Jan. 2026.

[35] See e.g. Park, J., 'From punishment to denial: Stabilizing deterrence on the Korean Peninsula', Quincy Institute for Responsible Statecraft, Quincy Brief no. 74, 5 May 2025.

processes supported by ambitious multilateral peace operations, culminating in elections to lend an air of democratic legitimacy to the outcome. This norm-driven approach would see its heyday in peacemaking efforts during the 1990s and 2000s in the Balkans, West and Central Africa, Sudan, Colombia, Timor-Leste, and to a certain extent Iraq in the aftermath of the 2003 US occupation.[36] Despite setbacks that often resulted in the relapse into armed conflict and the inability to adequately address root causes, this approach continued to dominate international peacemaking efforts up until the conflicts produced by the 2011 Arab uprisings.

The erosion of this paradigm gave way to a more power-based approach, dominated by elite bargains privileging armed groups or those who controlled the means of violence at the expense of broader societal inclusion. Rather than striving towards comprehensive peace agreements, this approach has stabilization as its driving consideration, as reflected clearly in the diplomatic efforts to address the intractable civil wars in Syria, Yemen and Libya, and to a certain extent Sudan. These efforts produced tenuous ceasefire arrangements, consolidating a fragile status quo based on the balance of power, that significantly hindered prospects for democratic transition or broader societal reconciliation.[37]

This gradual shift towards the power paradigm culminated in the distinctive approach that characterized US 'peace diplomacy' under the second Trump administration. Defined by a mix of transactionalism geared towards quick-win outcomes—dealmaking substituted for peacemaking; coercive diplomacy to maximize US leverage; a highly personalized diplomacy centred around the president himself; and an aspect of 'mercantilism' where peacemaking entails commercial agreements that often blur the distinction between public interest and corporate gain—this approach constitutes the antithesis of the liberal peacebuilding paradigm.[38] This shift in approach is not solely confined to the Trump administration. Many of the mediation roles undertaken by states such as Qatar, Egypt, Türkiye and Saudi Arabia, among others, for the conflicts in Ukraine, Gaza, the Democratic Republic of Congo, Syria, Iran and Venezuela had to adjust to the logic of short-term deal-making imposed by Trump.[39]

[36] Gowan, R. and Stedman, S. J., 'The international regime for treating civil war, 1988–2017', *Daedalus*, vol. 147, no. 1 (2018); and Kreutz, J., 'How civil wars end (and recur)', eds E. Newman and K. DeRouen Jr, *Routledge Handbook of Civil Wars* (Routledge: Abingdon, 2014).

[37] Costantini, I. and Santini, R. H., 'Power mediators and the "illiberal peace" momentum: Ending wars in Libya and Syria', *Third World Quarterly*, vol. 43, no. 1 (2022).

[38] Bjorkdahl, A. et al., 'Peacebuilding Round Table', *Peacebuilding* (in press); Raine, J., 'The deals-based international order?', *Survival*, vol. 67, no. 6 (2025); and Hynek, N., Richmond, O. P. and Senk, M., 'Ukraine and the end of peacemaking', *Washington Quarterly*, vol. 48, no. 4 (2025).

[39] See chapter 4, sections II and III, in this volume.

Outcomes of the new approach

Thus far, this approach has produced mixed outcomes. In Ukraine, it has failed to bring about a ceasefire or a negotiating process that could provide a pathway for an eventual settlement. In Gaza the framework that produced a tenuous ceasefire agreement anchored in UN Security Council Resolution 2803 (27 November 2025) has yet to transition to the subsequent phases entailing Israeli withdrawal, disarmament of Hamas, or the start of the urgent tasks of reconstruction or even wide-scale humanitarian relief. In Iran, failed negotiations to address the outstanding differences over the disposition of its nuclear programme rapidly gave way to a broad military assault by Israel (Operation Rising Lion) followed by a more targeted US operation against Iran's nuclear enrichment infrastructure (Operation Midnight Hammer) in June 2025.[40]

This latter development was indicative of a marked shift towards a more pronounced militarization of US foreign policy midway into the first year of Trump's second term. The June attack against Iran would be followed by the military operation to extract Venezuelan President Nicolas Maduro and his wife from the capital Caracas in January 2026, and a renewed attack on Iran the following month, this time as a full-scale joint US-Israeli campaign with shifting but clearly maximalist objectives that far exceeded the narrow focus on Iran's nuclear programme to include 'regime change', 'unconditional surrender', and degrading Iran's coercive capabilities to bring about some form of internal state collapse.[41]

It would be easy, but perhaps premature, to conclude that this shift towards the expansive use of force is inherently contradictory with transactional diplomacy under Trump, but warmaking is not necessarily irreconcilable with dealmaking. However, the stark incompatibility with traditional notions of peace is unmistakable. Untethered to any structured negotiating process designed to build confidence among adversaries and ultimately address the core issues between them, and shorn of any fidelity to normative, or even legal, frameworks of peacemaking, this approach makes no pretence of achieving anything resembling an enduring settlement of conflicts.

This transformation of peace diplomacy is part of a broader trend of the structural and institutional erosion of multilateral peace frameworks. The continued deadlock in the UN Security Council continues to stymie UN mediation efforts while undermining prospects for international consensus in formulating political frameworks for conflict resolution, giving rise to ad hoc attempts at conflict management outside of the UN system, with the

[40] See chapter 10, section III, in this volume.

[41] Rasmussen, S. E. and Stancati, M., 'They were promised regime change. Now many Iranians feel betrayed', *Wall Street Journal*, 14 Mar. 2026; and Bush, D. and Ireland, O., 'Trump demands "unconditional surrender" from Iran as Putin speaks with Iran's president', BBC, 6 Mar. 2026.

Trump-led 'Board of Peace' constituting a stark example of this trend.[42] The continued impasse in the Security Council, coupled with significant funding shortfalls, has severely hampered multilateral peace operations, resulting in weaker mandates, diminishing operational capacity, delayed renewal of several missions, and their replacement with private military and security companies in instances where host countries have withdrawn consent for their continuation.[43] Similar strains are affecting the broader institutional framework that anchors international multilateral peacebuilding efforts in the form of the UN peacebuilding architecture (PBA), comprised of the Peacebuilding Commission, the Peacebuilding Fund, and the Peacebuilding Support Office. The latest periodic review of the PBA in December 2025 (the fourth such review since 2005) demonstrated a welcome commitment of member states to enhance its overall effectiveness. However, the lack of consensus was reflected in weaker language on the need for sustainable financing, inclusivity of peacemaking efforts and a clearer relationship with the Security Council.[44]

Threats to human security

The retreat of multilateral peace frameworks coincides with a marked rise in threats to human security. The linkages between armed conflict and drivers of human insecurity are by now well established but growing. In its 2022 comprehensive survey on human security the United Nations Development Programme noted that despite the annual fluctuations in conflict levels, 'more people in more places are experiencing some kind of conflict, and . . . a majority of the global population feels insecure, often due to threats of violence'.[45] Conflict-related fatalities convey an important part of this story. As noted in chapter 2 of this volume, ACLED data shows only a slight reduction in fatalities over the past year from 249 000 in 2024 to 238 000 in 2025. The longer trend is revealed by Uppsala University data which shows that the four-year period between 2021 and 2024 was the highest in terms of

[42] Baldwin, G., 'Pursuing peace on a shoestring: Conflict management in an increasingly complex world', SIPRI Research Policy Paper, Oct. 2025; and Moitra, S., 'The Charter of the Board of Peace: A dubious legal personality and a regressive peacebuilding mandate unbound by law', *OpinioJuris*, 2 Feb. 2026.

[43] Pfeifer Cruz, C., 'Developments and trends in multilateral peace operations, 2024', SIPRI Fact Sheet, May 2025. See also chapter 4, section IV, in this volume and the SIPRI Multilateral Peace Operations Database.

[44] McGowan, L. and Carvalheiro-Santos, D., 'Key takeaways from the 2025 review of the UN peacebuilding architecture', IPI Global Observatory, 16 Dec. 2025.

[45] Tapia, H., Conceição, P. and United Nations Development Programme (UNDP), *New Threats to Human Security in the Anthropocene: Demanding Greater Solidarity—2022 Special Report* (UNDP: New York, 2022), p. 79.

conflict-related deaths in the previous 35 years, the only exception being the 1994 Rwanda genocide.[46]

It is also well established that armed conflicts are intersecting in complex ways with other drivers of human insecurity, most notably climate, food and poverty, exacerbating the overall human security condition. In sub-Saharan Africa, extreme weather events, energy shortages due to rising costs of fuel and acute hunger have been the source of mass displacement, producing waves of forced migration that in turn compound the effects of armed conflict. Sudan is one conflict arena where this intersection of forced displacement, disease, starvation and conflict was most evident, with over 40 per cent of the population facing acute hunger and 10 million people forcibly displaced, all compounded by the widespread outbreak of cholera which reached crisis levels due to a breakdown of the health system.[47]

Two additional factors are emerging that are likely to further exacerbate the detrimental effects on human security. The first is the convergence between the militarization of emerging technologies, and evolving trends of warfare at the tactical and operational levels, in many ways enabled by these technological drivers.[48] Among the many battlefield effects of this convergence, several in particular stand out. The increased reliance on AI-enabled decision support systems for target acquisition, intelligence fusion and operational planning has dramatically accelerated the tempo of the battlefield, with a consequent trend towards the automation of decision making cycles resulting in diminishing human oversight. Israel's wide-scale employment of AI technologies enabling the Israel Defense Forces to vastly increase the scope of its target acquisition in the war in Gaza has been well documented and provides a vivid example of this capability.[49] Closely associated with this trend is the dramatic expansion of the battlefield beyond the physical land, sea and air domains of traditional warfare, to encompass the domains of cyberspace and outer space. The overarching effect of this expansion is the integration of civilians and civilian infrastructure in military operations. Information generated from mobile phones used by civilians, social media platforms and civilian surveillance systems can now be fused with military sensors for the purposes of military planning including target

[46] See chapter 2, section II, in this volume.

[47] See chapter 3, section VI, in this volume.

[48] Stewart, R., 'The shifting battlefield: Technology, tactics, and the risk of blurring lines of warfare', Humanitarian Law and Policy Blog, 22 May 2025; and Reiss, R., 'A tsunami of new technologies is reshaping the battlefield', Begin-Sadat Center for Strategic Studies (BESA), BESA Center Perspectives Paper no. 2,357, 7 Dec. 2025.

[49] Gusterson, H., 'It's all Lavender in Gaza', *Anthropology Today*, vol. 40, no. 6 (2024); Andersin, E., 'The use of the "Lavender" in Gaza and the law of targeting: AI-decision support systems and facial recognition technology', *Journal of International Humanitarian Legal Studies*, vol. 16, no. 2 (2025); and Kozlovski, A., 'When algorithms decide who is a target: IDF's use of AI in Gaza', TechPolicy.Press, 13 May 2024.

identification and intelligence gathering. The recent application of AI algorithms for targeted assassinations and decapitation strikes indicate a notable pattern in this regard, with the US operation in Venezuela to extract Maduro, US–Israeli assassinations against leadership figures and nuclear scientists in Iran, and Israel's September 2024 pager attack against Hezbollah providing the most vivid examples.[50] Similarly, the huge demand for information processing generated by the digital battlefield is prompting greater reliance on civilian information infrastructure including commercial satellites, data centres and communication networks.[51] The blurring distinction between civilian and military infrastructure becomes especially pronounced in the cyber domain where networks supporting public health systems, financial centres and transportation systems become targets for cyber operations.[52]

The overarching trend highlighted by these developments points towards the erosion of the separation between the military and civilian domains of war, providing harbingers of what is to come. This becomes especially evident when assessed against the second converging factor contributing to the overall erosion of human security in situations of conflict. While technology has pushed the trajectory of conflicts towards breaking long-established constraints on the use of force, this is in turn enabled by the seemingly rapid dismantling of the normative and legal frameworks underpinning the conduct of war. The battlefields of Gaza, Ukraine, Sudan, Myanmar, Lebanon, Iran and Israel are testament to the sad reality that prohibitions against the weaponization of humanitarian aid, collective punishment, mass population displacement, and indiscriminate targeting of civilians and civilian infrastructure have seemingly been abandoned. These trends are the culmination of decades-long efforts to stretch the boundaries of international humanitarian law to accommodate a significantly more permissive application of the use of force.[53] No less alarming is the reality that none of the warring parties across these different conflict divides has been immune from these offences, often accompanied by dehumanizing rhetoric to justify extreme levels of

[50] Ramkumar, A., Hagey, K. and Bergengruen, V., 'Pentagon used Anthropic's Claude in Maduro Venezuela raid', *Wall Street Journal*, 15 Feb. 2026; Kweller, I., 'Israel hacked Tehran's traffic cameras, used AI to plan Khamenei's assassination—Financial Times', *Jerusalem Post*, 3 Mar. 2026; and Back, T. B., 'Weaponising "apparently harmless portable objects": Emerging categorisation of trust and risk in post "pager attacks" Lebanon', Small Wars Journal, vol. 36, no. 2 (2025).

[51] Hoffberger-Pippan, E. and Dahlmann, A., 'Digital battlefield: Concept, technology and prospects', eds R. Geib and H. Lahmann, *Research Handbook on Warfare and Artificial Intelligence* (Edward Elgar: Cheltenham, 2024).

[52] UNIDIR Security and Technology Programme, 'Securing cyberspace for peace: Insights into cyberthreats and international security in 2025', 9 Feb. 2026. See also chapter 15 in this volume.

[53] See Hathaway, O. A., Khan, A. and Revkin, M. R., 'The dangerous rise of "dual-use" objects in war', *Yale Law Journal*, vol. 134 (June 2025); and Hathaway, O. A., 'War unbound: Gaza, Ukraine, and the breakdown of international law', *Foreign Affairs* (May/June 2024).

violence, and by maximalist war objectives that frame conflicts in existential terms.[54]

The retreat of multilateral peace frameworks, the severe erosion of the legal, normative and technological constraints on the use of force, and the resulting increase of conflict-related threats to human security are converging to constitute a manifold interlocking crisis. The further breakdown of international law and associated norms will not only undermine military restraint threatening state security, but will also multiply the drivers of human insecurity, blurring the distinction between both. Against the backdrop of the weakening of processes for conflict resolution, and perhaps even conflict mitigation, this portends a future of open-ended wars prone to escalation and greater militarization, with the repeated rounds of conflict in Palestine, Sudan and Iran being a portent of this new reality.

V. Sketching a future peace research agenda

In her introduction to the SIPRI Yearbook on the occasion of the Institute's 40th anniversary, former Director Alyson Bailes highlighted the need to adapt peace research to accommodate what she then described as a 'transition from an East–West strategic polarity to a global system in which several other kinds of polarity or organizing principles have been mooted, but none has (yet) gained a clear ascendancy'.[55] That adaptation required examining the implications of new geo-strategic models, broadening the scope of peace research to focus on the then emerging human security agenda, and the consequent need to address the interests and perspectives of a plurality of actors, beyond the nation state, that are capable of exerting impact on security agendas and conflict outcomes.

The framing of 'transitions' offered by Bailes provides a suitable juxtaposition to the theme of 'disruption' highlighted in this introduction. Both imply ongoing processes towards an undefined end-state providing a useful point of similarity, even continuity, across two decades of peace research. 'Transition', however, evokes a relatively stable trajectory of change unfolding at a manageable pace, affording some latitude to adapt existing security frameworks and peace approaches anchored in familiar legal and normative foundations. In stark contrast, 'disruption' implies sharper discontinuities, a more accelerated rate of (potentially transformative) change, and a far greater degree of complexity that raises vexing questions for researchers and policymakers alike as to what to preserve of the old frameworks, what

[54] Lauterbach, R., 'Year ahead—A year to refrain from destructive war rhetoric', *Articles of War*, 7 Jan. 2025.

[55] Bailes, A. J. K., 'The world of security and peace research in a 40-year perspective', *SIPRI Yearbook 2006*, p. 2.

to jettison, and what to build in their place when the foundations themselves are eroding.

Therein lies the challenge in any attempt to articulate the outlines of a future peace research agenda. Given the magnitude and pace of the ongoing disruption, the burden on peace research is now heavier. What is required is an ability not just to produce rigorous evidence-based analysis, but also to adapt the research with a view to imagining alternative futures—rebuilding frameworks in place of those that are fraying or no longer exist. The magnitude of the challenge can indeed seem formidable. Nonetheless, a future peace research agenda could be centred on a number of thematic issue areas presented below.

Stabilizing great power competition

Perhaps the most urgent task is to deepen understanding of the complex technological, geo-economic and security drivers of great power competition, coupled with a focus on mitigating the pressures that undermine strategic stability. For Europe, this would involve mapping the emerging landscape of military risk posed by NATO rearmament, the ongoing war in Ukraine and shifting alliance relationships between Europe and the USA. Conceptualizing a broad risk-reduction regime that can lay the foundation for imagining new forms of confidence-building measures (CBMs) and eventually some form of conventional arms control would constitute a key focus. For East Asia and the Indo-Pacific, a similar effort would be required, while acknowledging the significant difference in context—a military geography dominated by the maritime domain, a greater number of nuclear powers (China, North Korea, India, Pakistan, Russia and the USA), and alliances structured around bilateral relationships as opposed to formal collective security frameworks. These differences render the task of envisaging a risk-reduction and CBM architecture for different sub-regions in Asia significantly more complex.

Moreover, for both regions, mitigating proximate sources of risk will need to be undertaken in parallel with devising frameworks for managing conflict divides between Russia and much of the rest of Europe, and between the constellation of powers impacting the security landscape in East Asia: Japan, North Korea, South Korea, Taiwan, the Philippines and China. The objective here should remain minimal: to find ways to avoid or de-escalate conflict and to manage adversarial relationships, rather than aspire towards any consensus on common visions of security which, given the deep mistrust, would be premature. Even this modest goal will be challenging. The polarized politics and acute insecurity prevailing in both regions ensures that the policy agenda for the foreseeable future will remain narrowly focused on defence and deterrence. Here there is an opportunity for peace research to engage with key governments to foster a different concept of security, one in which

deterrence and reassurance are seen to be complementary—and indeed reinforcing—rather than in opposition or tension.

Envisioning a new arms control agenda

This would constitute an important research area that complements well the focus on stabilizing great power competition. Imagining alternative futures for what strategic arms control could look like entails addressing a set of highly complex questions. How could future arms control frameworks be structured around trilateral (USA, Russia, China) and potentially multilateral (e.g. France and the UK) configurations perhaps involving separate negotiating formats? How to untangle conventional–nuclear linkages brought about by non-nuclear strategic weapons? Are there ways to balance non-symmetrical nuclear force structures, which in turn bring in the aspect of regional strategic balances? How can future negotiations cover tactical nuclear weapons? What is the potential for utilizing new and emerging technologies to devise novel verification frameworks?

Addressing these and other questions is indeed a tall order. However, some solace can be found in the fact that this is not just an aspirational peace research agenda but has become an urgent matter of policy. On the occasion of the expiration of New START, US Secretary of State Marco Rubio issued a call for new multilateral nuclear arms control and strategic stability talks that would address questions similar to those posed above. Acknowledging the difficulty of this endeavour, he was clear in stating that 'just because something is hard does not mean we should not pursue it or settle for less'.[56]

A future arms control research agenda should not be confined solely to nuclear weapons. Envisioning frameworks of control for conventional missiles would be an important area of focus given the destabilizing effects of non-nuclear strategic weapons and the potential for nuclear–conventional entanglement, alongside the challenges associated with the potential widespread employment of conventional ballistic missiles in future nuclear scenarios. Efforts to limit these weapons have focused mostly on export control regimes rather than arms control limitations which have traditionally covered only nuclear armed missile systems. However, given that both nuclear and conventional missiles are based on the same underlying technologies, designing control frameworks to place limits on conventional systems is conceivable, whether with respect to limits on quantities, range, payload and warhead specifications. Envisioning frameworks for conventional arms control cannot be done in isolation from strategic nuclear arms control, and

[56] Rubio, M., 'The next era of nuclear arms control', US Department of State, 6 Feb. 2026. See also DiNanno, T., US statement by Under Secretary of State for Arms Control and International Security to the Conference on Disarmament, US Mission to International Organizations in Geneva, 6 Feb. 2026.

would need to be pursued in an integrated fashion as part of a broader effort to construct regional security architectures where they are most needed to stabilize great power competition—Europe and East Asia—and where conflict dynamics are particularly intense: the Middle East.

Addressing drivers of human insecurity

Mitigating increased human insecurity should occupy a prominent place in future peace research with a focus on addressing the diverse non-military drivers of conflict: the weaponization of food and humanitarian relief in particular conflict contexts; the erosion of international humanitarian law and implications for protection of civilians; and the impact of declining levels of international development assistance. An especially important area of focus is the impact of climate change on the shifting security landscape. The climate-related risk models, governance architectures and peacebuilding frameworks that underpin international security were built for a world that no longer exists. Responding effectively requires moving beyond narrowly defined technical questions and siloed interventions toward integrated governance approaches capable of managing the deep interlinkages between environmental disruption, fragility and violent conflict. The various issue areas under this agenda could include climate-sensitive peacebuilding and peace operations; governance of critical minerals and conflict-affected supply chains; and approaches to bridge the climate action and conflict prevention agendas. A particularly fertile area for research could focus on the environmental impact of war. Research on this issue has thus far taken the form of isolated case studies without a comprehensive assessment of the climate and environmental effects of armed conflicts.

Understanding the battlefields of the future

Peace research has been addressing the technological drivers of conflict, producing cutting-edge research on emerging topics such as the militarization of space and AI dating back to the late 1970s and 1980s. Today, the peace research community carries on this tradition through programmes on emerging technologies and conflict domains—AI, quantum technologies, cyberspace, and outer space—focusing on issues of technology governance, and the security and humanitarian risks associated with military technological innovations. A future peace research agenda would build on this strong foundation.

One important area of focus is the effects of the application of emerging technologies in particular conflict contexts, from large-scale state-based conflicts to intrastate wars. Deepening understanding of the dynamics associated with autonomous and semi-autonomous weapon systems can

help inform conflict management efforts. Similarly, tracking the evolution of AI decision support systems can provide insights into how to mitigate risks to civilian populations and infrastructure. Analysing the offence/defence balance between missile arsenals and anti-missile defence systems could be critical for understanding and mitigating risks to regional stability.

The 'nexus' effect between different technology systems presents a further field of research inquiry. Mapping the different escalation pathways along various nexus points could contribute to better understanding of the risks associated with multi-domain operations and potential measures for de-escalation. It could also better inform efforts to clarify and strengthen governance of the domains of outer space and cyberspace.

Looking beyond the specific focus on the direct military applications of technology systems and weapons, the broader question of the impact of emerging technologies for future warfare presents an important but challenging field of inquiry. The growing salience of 'cognitive warfare' driven by advances in neurological science that will enable control over 'mental space'; the expanding scope of 'hybrid' or 'grey zone' warfare involving a range of hostile acts, often enabled by technology, that fall below the threshold of armed conflict; and the transition to fully autonomous platforms in future battlefields, all pose critical questions for research. The transformative nature of these trends prompts a need to shift from a focus on weapons—and even the technologies themselves—to an effort that situates them in a broader geopolitical, legal and ethical context, while framing the policy questions that flow from this inquiry.

Resisting temptations

A final comment is in order. The challenges associated with conceptualizing and operationalizing the future peace research agenda as suggested above are formidable. The prevailing sense of insecurity in key governments will engender scepticism as to the utility of peace research, potentially seeing it as a distraction from the urgent imperatives of defence. An increasingly constrained funding environment will pose limitations on building and sustaining capacity. And the heightened political polarization surrounding debates on matters of peace and security will further entrench an environment in which claims to authoritative information and analysis presented by research will increasingly be contested.

In addressing these challenges, it is incumbent on the peace research community to resist succumbing to several temptations. The first involves resignation in the face of the enormity of the many setbacks to the international peace agenda resulting from the ongoing disruption as outlined in the preceding sections of this introduction. The daunting tasks involved in shoring up peace frameworks, or reconstructing them altogether, sometimes

make this temptation hard to resist. Peace research cannot be expected to provide readily available solutions to fix the damage that has been done. But it can and should live up to its calling to provide rigorous analysis and innovative approaches that can inform the public discussions and policy processes in this regard.

A second, related temptation relates to the pressures to subsume peace research under military and defence research.[57] Here the challenge is not so much that peace research will be dismissed, but rather that its value in terms of knowledge-production will be co-opted to support the requirements of national security. This is not to draw too sharp a distinction between peace research and war studies. Indeed, the line separating 'peace' and 'war' or 'strategic' studies is less clear-cut than one would assume. The need to understand questions of security, deterrence, weapons, the use of military force and the dynamics of armed conflict is common to both fields of inquiry. What distinguishes peace research is the purpose for which this knowledge is deployed: at a minimum to stabilize and manage adversarial relationships, while striving to eventually transcend conflict divides anchored in durable frameworks that accommodate—often varying—notions of 'peace'.

A final, related temptation is the urge to 'get back to basics': focusing on questions of hard security while relegating the broader human security agenda that has been integral to peace research for much of the post–cold war era to a lesser priority. The assumption here is that the challenges of controlling weapons of mass destruction, mitigating regional and global instability, reducing the prospect of armed conflict, and ameliorating the effects of military technologies, present immediate and existential challenges to international peace and security, while issues of human security should be seen as somewhat of a luxury in the face of the gathering storm. To the majority in the peace research community, this might present a false choice. However, in the face of mounting financial, institutional and political pressures, maintaining a holistic approach to security will be increasingly challenging.

[57] Bergtora Sandvik, K., 'Peace research is not defense research: Time to insist on tougher questions', Peace Research Institute Oslo (PRIO), 2 June 2025.