

Toward Systemic Disarmament: Resetting Global Priorities

The global arms trade, and its accompanying glut of military spending, continues to represent the single most significant perversion of worldwide priorities known today . . . It buttresses wars, criminal activity and ethnic violence; destabilises emerging democracies; inflates military budgets to the detriment of health care, education and basic infrastructure; and exaggerates global relationships of inequality and underdevelopment. Without massive and coordinated action, militarism will continue to be a scourge on our hopes for a more peaceful and just 21st century.¹

Oscar Arias, Former President of Costa Rica, Nobel Peace Laureate

If we are serious about nuclear disarmament – the minimum technical requirement for real safety from extinction – then we must accept conventional disarmament as well, and this means disarmament not just of nuclear powers, but of all powers, for the present nuclear powers are hardly likely to throw away their conventional arms while non-nuclear powers hold on to theirs. But if we accept both nuclear and conventional disarmament, then we are speaking of revolutionizing the politics of the earth. The goals of the political revolution are defined by those of the nuclear revolution. We must lay down our arms, relinquish sovereignty, and found a political system for the peaceful settlement of international disputes.²

Jonathan Schell

Introduction

Part of a fundamental global transition to the peaceful settlement of international disputes, to a full collective security model replacing the unilateral use of force,

¹ As quoted in de Zayas, Alfred-Maurice. 2014. *Report of the Independent Expert on the Promotion of a Democratic and Equitable International Order*, July, p. 3.

² Schell, Jonathan. 1982. *The Fate of the Earth*, London, Jonathan Cape, p. 226.

and to an international order based on a genuine rule by law, is to design and implement a clear, ambitious and systemic program – the “massive and coordinated action” referred to by Arias, above – of international arms control and disarmament.

The UN Human Rights Council has, for example, affirmed that an equitable and democratic international order requires, among other things, the realization of the “right of all peoples to peace,” stating that:

all States should promote the establishment, maintenance and strengthening of international peace and security and, to that end, should do their utmost to achieve general and complete disarmament under effective international control, as well as to ensure that the resources released by effective disarmament measures are used for comprehensive development, in particular that of the developing countries.³

In this chapter, as well as providing framing background perspectives relevant to tackling the very fundamental international problem of systemic disarmament, we sketch the outline of and starting points for robust new proposals, which would include UN Charter amendment, for the essential restructuring of global practices in relation to the current “glut of military spending.” There have been, indeed, recent calls for the reform or revitalization of Article 26 of the UN Charter, which allotted to the Security Council a responsibility to develop comprehensive and concrete plans for a system for the global regulation of armaments.

In summary, in parallel with the creation of the International Peace Force (IPF), a new, consolidated and empowered Standing Committee on Disarmament should be established to develop, implement, and monitor a binding yet staged global disarmament process, to reduce national armaments to levels needed for self-defense only. During a preparatory period, an inventory of armaments would be undertaken, sites/facilities identified or constructed for their neutralization and decommissioning under UN monitoring and coordination, and the necessary budget and financial allocations organized. This would be followed by a phase of disarmament proper, which would be managed to be simultaneous and proportional among the greater powers in particular. Special attention would be given to nuclear arms and the long-term storage of the resulting wastes at neutral sites, as well as to new and emerging forms of weaponry such as programs for cyberwarfare. Unprecedented intensive global monitoring and verification would be needed to ensure that no arms are hidden or developed for later use.

Such an approach, indeed, forms part of the core of ensuring a stable and operable international collective security system (where the IPF is an effective

³ United Nations Human Rights Council, Resolution 25/15, March 27, 2014, paras 10 and 17.

“global policeman” rather than the “Big Four,” as envisioned at the end of World War II), and adhesion to such a system should be a condition for acceptance of any state by the international community as a “peace-loving nation.”⁴ Such systematic global arms control has long formed one of the core aspirations of the international community (see the following section), and is made ever more urgent given current destabilizing forces, some of which are described in this chapter. The disruptive and unpredictable forces seen today, including in relation to technological developments, make a fragmented and piecemeal approach to arms control and disarmament – which the international community has adopted to date – wholly untenable.

Background

Comprehensive and controlled disarmament among the community of nations has been an aspiration of the international legal project since its very early years. The first Hague Peace Conference of 1899 convened by Nicholas II, Tsar of Russia, had as a main agenda item military and arms limitation among the then great powers (particularly focused in Europe at that time). British Lord Salisbury, in a speech to the London Guild Hall in 1887 reportedly urged Nicholas II’s predecessor, Tsar Alexander III, to convene a major power disarmament conference, in the name of collective social progress.⁵ Pragmatically, it was understood that the unsustainably expensive and destabilizing arms races in Europe (e.g., with a *Triple Alliance* of Austria-Hungary, Germany and Italy evolving in opposition to the *Entente* of France and Russia), were prohibitive in cost and risky to all those involved. World War I of course, would bear out these concerns, with the first and second (1907) Hague Peace Conferences proving themselves a failure on the core disarmament issues.

In terms of wasteful and destabilizing expenditures today implicated in the global arms trade, recent numbers are truly staggering. The Stockholm Peace Research Institute estimates world military expenditure in 2017 to have reached more than \$1.7 trillion (\$1,739 billion), representing “the highest level since the end of the Cold War, equivalent to 2.2 per cent of global gross domestic product (GDP) or \$230 per person.”⁶ According to the IMF, military expenditures are “unproductive” in relation to countries’ unmet needs and do not benefit productivity and economic

⁴ Membership in the UN is open only to “peace-loving” nations under Article 4(1) of the Charter. As noted by Albert Einstein: “[a] person or nation can be considered peace loving only if it is ready to cede its military force to the international authorities and to renounce every attempt or even the means of achieving its interests abroad by the use of force.” Albert Einstein. 1956. *Out of My Later Years*, New York, Philosophical Library, p. 138.

⁵ Eyffinger, Arthur. 2011. *T.M.C. Asser [1838–1913]: Founder of The Hague Tradition*, The Hague, T.M.C. Asser Press, p. 46.

⁶ Stockholm International Peace Research Institute (SIPRI). 2018. *SIPRI Yearbook 2018*. Stockholm, p. 6.

efficiency. The trade-offs or “opportunity costs” of countries’ spending on military versus more productive social expenditures for the national – and international – economy, such as education, health and child care, are dramatic.⁷

The classical “security dilemma” of individual states or alliances explains the danger and the seeming inevitability of intensifying, tit-for-tat arms races, as described by security scholar Christopher Browning:

The idea of the security dilemma suggests that in conditions of international anarchy, where states are ultimately dependent upon themselves for survival, states are necessarily prone to suspicion and worst-case scenarios. The security dilemma is characterized by a situation whereby a state fearful for its security, begins arming itself. Although for the state in question armament may be a purely defensive measure, this may appear unclear to other states who may interpret it as threatening, even despite – or perhaps precisely because – of proclamations otherwise. Indeed, armaments procured for defence can usually also be deployed offensively. Fearful that their own security is being undermined these states may respond in kind, in turn legitimizing the first state’s concerns but requiring a further response later on. In this way a spiral of insecurity can develop, with war looming in the background as an ever-present possibility.⁸

Article 2(4) of the UN Charter prohibits the “threat or use of force” of member nations in their international relations, and the excessive or nontransparent build-up of armaments can present serious problems in this respect. As noted by Browning, it can be difficult to distinguish between the defensive and offensive nature of armaments acquired by a given nation. The International Court of Justice has explored, for example, in an Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*, whether a nation possessing nuclear weapons could be considered to be in violation of Article 2(4) of the Charter, by posing a threat of use of force and violating requirements of necessity and proportionality in the deployment of weapons under international law, even if anticipated to be used defensively.⁹

In relation to the overall global system today and the precarity of shifting global power dynamics – in particular but not only in relation to the US–China configuration – various authors have raised the alarm as to the care and focus currently required to navigate these new power constellations, to ensure that war

⁷ Ke-young Chu, Sanjeev Gupta, Benedict Clements, Daniel Hewitt, Sergio Lugaresi, Jerald Schiff, Ludger Schuknecht, and Gerd Schwartz. 1995. *Unproductive Public Expenditures: A Pragmatic Approach to Policy Analysis*, Pamphlet Series, No. 48. Washington, DC, Fiscal Affairs Department, IMF, p. 1. www.imf.org/external/pubs/ft/pam/pam48/pam4801.htm.

⁸ Browning, Christopher S. 2013. *International Security: A Very Short Introduction*, Oxford, Oxford University Press, p. 20.

⁹ [1996] ICJ Rep 246f, para 48 et seq.

(“cold” or “hot”) is not inevitable.¹⁰ One report notes the contemporary shifting “geostrategic relationships” where bipolar (Cold War) or unipolar (post–Cold War) models are no longer helpful, noting that while “it is clear change is under way, it is not clear what the outcome will be.”¹¹ Given current dilemmas, it is urgent to devise effective, systemic solutions in order to halt spirals of insecurity and arms races, and to put in place a coherent, transparent, thorough and well-designed *global* security regime for the control and limitation of armaments, as was envisioned in the specific provisions on arms control and disarmament in the current UN Charter (see next section).

Key framing provisions of the 1945 UN Charter were in fact intended to lay the groundwork for a general international enabling environment to build sustainable trust among nations, in order to transcend traditional interstate security dilemmas and maximalist military competition. For example, the goal of the Charter is to create conditions necessary for the respect of international law (Preamble) and the peaceful settlement of international disputes under Chapter VI (to resolve, for example, territorial disputes, which have been a major cause of interstate wars; see Chapter 10), in order to transcend anarchic international conditions, which are the basis of “realist” thinking on the inevitability of war. The Charter requires that all members of the United Nations be “peace-loving” as a condition of membership (Art. 4(1)), should “live together in peace with one another as good neighbours” (Preamble), should “develop friendly relations” (Art. 1(2)), and must fulfill “in good faith the obligations assumed” under the instrument (Art. 2(2)).

All of these provisions, alongside the Charter articles relating to collective security,¹² undergird the contemporary international striving to move beyond anarchic conditions and irrational cultures of unhealthy military competition and opaque mistrust that drove the senseless wars of the past. These are the fundamental tenets of the modern international order that still must be made fully incarnate in state practice and institutions, and in practical, newly ambitious commitments in the sphere of arms control.

The UN Charter Provisions on Disarmament/Arms Control

The UN Charter gives both the Security Council (Article 26)¹³ and the General Assembly (Article 11(1)) specific mandates in the sphere of arms control and

¹⁰ See, for example: Allison, Graham. 2017. *The Thucydides Trap: When One Great Power Threatens to Displace Another, War Is Almost Always the Result – But It Doesn’t Have to Be*. Foreign Policy, June 9.

¹¹ SIPRI Yearbook 2018, p. 1.

¹² The Charter stipulates that “armed force shall not be used, save in the common interest” (Preamble), and prohibits members from the threat or use of force (Art. 2(4)), with narrow exceptions: Security Council action for the purpose of international peace and security (Art. 42), and a narrow right to self-defense (Art. 51), only if an armed attack occurs, and only until the Security Council has taken measures necessary.

¹³ Article 47 of the Charter stipulates that the Military Staff Committee advise and assist the Security Council on its work on “the regulation of armaments, and possible disarmament.”

disarmament, clearly recognizing that these projects are integral to international peace and security, and also have a diversionary effect on the “world’s human and economic resources” (see also discussion in Chapter 4 on GA engagement in disarmament issues).

The Security Council was tasked with the responsibility of formulating, with the assistance of the Military Staff Committee, “plans to be submitted to the Members of the United Nations for the establishment of a system for the regulation of armaments.” Needless to say, no such plan was developed. Military competition – ironically – between key members of the Security Council intervened. Despite efforts in the later 1940s to begin to attempt to draft such plans, lack of unity among the permanent members of the Security Council, by 1952, essentially arrested these efforts, which have not been revived in a serious way since that time.

The General Assembly was tasked, in parallel, with the power to “consider the general principles of co-operation in the maintenance of international peace and security, including the principles governing disarmament and the regulation of armaments, and may make recommendations with regard to such principles to the Members or to the Security Council or both.” Again, while there have been many excellent and aspirational statements issued by the General Assembly (and admirable piecemeal/incremental progress on disarmament which may be linked to a General Assembly initiative; see Box in this chapter), no significant comprehensive progress as anticipated by the Charter has yet been effected. One independent expert, calling the urgent need to reduce military expenditures worldwide an “endemic” barrier to development, has noted:

The United Nations has adopted countless resolutions reflecting that understanding shared by think tanks and civil society alike. Nevertheless, in spite of accurate diagnoses, there has been little progress in redirecting military expenditures toward peaceful industries. Indeed, one of the challenges faced by the present mandate is precisely how to transform the ethically obvious into the politically feasible. [Continued examination is required of] this vast issue as a component of the overall strategy to overcome obstacles to the establishment of a just international order.¹⁴

Recent Developments in Arms Control

Against this backdrop, there have, however been some notable, positive recent developments in the disarmament field. For example, in relation to efforts to promote the nonproliferation of nuclear weapons, the Treaty on the Prohibition of Nuclear Weapons (TPNW; see Box) was adopted in 2017, as the first binding international treaty comprehensively prohibiting nuclear weapons. Talks had been

¹⁴ de Zayas, *Report of the Independent Expert*, p. 6. <https://wilpf.org/wp-content/uploads/2014/09/report-De-Zayas.pdf>.

opened on the negotiation of this treaty in 2016 (mandated by a General Assembly resolution), impelled by the frustration of many states with the lack of progress of nuclear weapons states to make progress on nuclear disarmament in conformity with their obligations under the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT; see Box below). Commentators note the significance of the adoption of the TPNW as follows: “[t]he humanitarian initiative and attendant effort by a large group of non-nuclear-armed states and civil society actors to institute a global ban on nuclear weapons constitutes a process of collective resistance to entrenched power structures that perpetuate the existence of nuclear weapons.”¹⁵ The TPNW, adopted by 122 states (excluding the nuclear weapons states and their allies), is expected to have a normative and longer-term impact on the development of international law and the further stigmatization of nuclear weapons. Additionally, the broad-based civil society and non-nuclear weapon state efforts to convene negotiations and adopt the TPNW may have catalyzed a greater sense of urgency in various areas of global disarmament.¹⁶ For example, there has been some recent movement on a number of topics at the Geneva-based Conference on Disarmament, the only standing international forum for negotiating arms control and disarmament agreements, with a new initiative to break through the gridlock that had left it, since 2009, unable to adopt a work program. The UN Secretary General has also released, in May 2018, a 73-page “non-paper,” *Securing our Common Future: An Agenda for Disarmament*, outlining possible strategies on a wide range of current international disarmament issues, including an analysis of the deteriorating international security environment, addressing weapons of mass destruction, chemical, biological, outer space and new types of destabilizing strategic weapons, as well as conventional weapons, and challenges posed by new technologies, AI and cyberspace.¹⁷

However, against this backdrop of the apparent “coalition of the many” desiring to move forward proactively in global arms control, there have been worrying developments in particular on the bilateral plane. The United States has announced that it may withdraw from the Treaty on the Elimination of Intermediate-Range Nuclear Forces Treaty (INF Treaty) with Russia, a Soviet–US agreement from 1987, which facilitated the elimination of thousands of Soviet missiles based in Europe and paved the way for the end of the Cold War. Also, neither Russia nor the US have committed to extending the New START (the 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms), limiting strategic

¹⁵ Ritchie, Nick and Kjølvy Egeland. 2018. “The Diplomacy of Resistance: Power, Hegemony and Nuclear Disarmament.” *Global Change, Peace & Security*, Vol. 30, No. 2, pp. 121–141.

¹⁶ Hamel-Green, Michael. 2018. “The Nuclear Ban Treaty and 2018 Disarmament Forums: An Initial Impact Assessment.” *Journal for Peace and Nuclear Disarmament*, DOI:10.1080/25751654.2018.1516493.

¹⁷ Office for Disarmament Affairs. 2018. *Securing Our Common Future: An Agenda for Disarmament*, New York, United Nations.

nuclear forces, before its 2021 expiration, nor negotiate additional reductions under the regime. Since the US has withdrawn from the 2015 Joint Comprehensive Plan of Action (JCPOA) for Iran to limit its nuclear program, Iran hesitates to implement the arrangement (as of mid-2019), while the other partners to the agreement, the EU, France, Germany, the UK, China, and Russia, continue to honor the agreement. The US has also, subsequent to its 2018 “nuclear posture review,” begun to manufacture new, low-yield nuclear warheads for Trident missiles, prompting some to suggest that this more flexible weaponry could lower the threshold for the instigation of a nuclear conflict.¹⁸

The current deterioration of the significant post–Cold War achievements in bilateral disarmament among the two involved “great powers” (which helped to make the world a safer place) has prompted Mikhail Gorbachev to write a *New York Times* opinion piece entitled *A New Nuclear Arms Race Has Begun*, citing the demise of the INF as the “latest victim in the militarization of world affairs.” He issues the following warning to contemporary leadership’s seeming compulsion to repeat old mistakes:

Yet I am convinced that those who hope to benefit from a global free-for-all are deeply mistaken. There will be no winner in a war of all against all – particularly if it ends in a nuclear war. And that is a possibility that cannot be ruled out. An unrelenting arms race, international tensions, hostility and universal mistrust will only increase the risk.¹⁹

Currently, it does seem that, with an increasingly unstable international security environment where regression to previous patterns is a substantial risk, sober minds are turning their attention to the real, practical need for the international nonproliferation of a wide range of weapons types, existing or yet to be invented, with worrying new weapons technologies on the horizon. Uniquely ambitious comprehensive plans “for the establishment of a system for the regulation of armaments,” that were to be the responsibility of the Security Council under the Charter, should be undertaken, taking advantage of the expertise and technical skill acquired in the field of arms control since the advent of the Charter (see Box). As with the adoption of the TPNW in 2017, a broader and more decentralized collective leadership is currently needed to push ahead on this topic. Early efforts by such bodies as the Commission on Conventional Armaments (CCA), established in 1947 as a subsidiary organ to the Security Council (upon recommendation of the General Assembly) and disbanded in 1952, could serve as an inspiration and starting point for modern efforts. For example, working papers and reports of the CCA began to analyze what it considered to be essential elements of an international system of

¹⁸ See Borger, Julian. 2019. “US Nuclear Weapons: First Low-Yield Warheads Roll off the Production Line.” *The Guardian*, January 29.

¹⁹ Gorbachev, Mikhail. 2018. “A New Nuclear Arms Race Has Begun.” *New York Times*, October, 25.

verification and control of armaments, and also the delineation of the range of basic challenges inherent to the regulation of armaments. New perspectives on “human security” can frame contemporary initiatives, alongside a consolidation and rationalization of the presently fragmented and outdated multilateral efforts developed since the Cold War, that are not fit for present needs and potentials.²⁰

The Challenge

The challenge presented by ambitious and comprehensive global disarmament regimes – unlike anything the world has seen to date in this field – is a significant one, as systemic change in the global acquisition and use of arms would also represent a paradigm shift in social organization and a range of traditional cultural assumptions. A fundamental attribute of national sovereignty, before the era of the Charter’s legal regime and precursor instruments, has been conceived to include the right to wage war on other nations in the defense or advancement of national interests, in a presumed anarchic environment. Apart from some indigenous societies, warfare has been part of human experience since before recorded history; and recorded history is largely the history of wars.²¹ There is a certain “path dependency” in considering war and mass armed conflict to be inevitable.

Furthermore, war, or national war-readiness, as a demonstration of the ultimate use of force and display of power can play to the (mostly masculine) ego,²² inflating the self-worth of autocrats and powerful elites, and even corrupting democratically elected leaders. The pride and glory that can be associated with military parades show this only too well. The instruments of war find their extension in militarized dictatorships, police states and repressive regimes, where the institutions of government are turned to the benefit of those in power rather than to the welfare of the population. Such governments, within a global intergovernmental system, will themselves become obstacles to the functioning of that system in general, and to

²⁰ See, e.g., the perspectives presented in: Borrie, John, 2008. “Tackling Disarmament Challenges,” in Williams, Jody, Stephen D. Goose, and Mary Wareham (eds.), *Banning Landmines: Disarmament, Diplomacy, and Human Security*. Lanham, MD, Rowman & Littlefield, pp. 263–280.

²¹ Keeley, Lawrence H. 1996. *War before Civilization: The Myth of the Peaceful Savage*. Oxford, Oxford University Press; Turchin, Peter. 2006. *War and Peace and War: The Rise and Fall of Empires*, New York, Plume Books (Penguin).

²² Indeed, a landmark Security Council Resolution 1325 recognized “the important role of women in the prevention and resolution of conflicts, peace negotiations, peace-building, peacekeeping, humanitarian response and in post-conflict reconstruction and stresses the importance of their equal participation and full involvement in all efforts for the maintenance and promotion of peace and security [...] urg[ing] all actors to increase the participation of women and incorporate gender perspectives in all United Nations peace and security efforts” (see description at www.un.org/womenwatch/osagi/wps/). UN Security Council, *Security Council Resolution 1325 (2000) [On Women and Peace and Security]*, October 31, S/RES/1325 (2000). www.refworld.org/docid/3boof4672e.html.

disarmament in particular, as genuine arms control may threaten the basis of their authority and facilitate their exit from power. An external enemy is important for some governments, and even for the identities which have been cultivated within certain nations.²³ However, such predispositions and historical tendencies only support the argument for strong international initiatives and mechanisms to hold national leaderships to account (for example under international criminal law or in relation to a new international anti-corruption court; see Chapters 10 and 18), to facilitate trust among peoples and nations, as well as intercultural knowledge, and to further shared international norms (see Chapter 20), including democratic and participatory governments at the national level, within a framing “culture of peace.”²⁴

Ending traditional security dilemmas and achieving disarmament are therefore also a human and social challenge, requiring changing minds and hearts, including, importantly, in leadership – and in the public conception of what leadership entails. Outdated political concepts of power as domination, and the control of substantial armies and navies and the power of life and death as instruments of that domination, have attracted certain personality types to leadership positions, often with the ends justifying any means. History is full of such examples. Where such people are in power today, they will cling to outdated notions of national sovereignty as a defense of their association with power. More mature concepts of leadership as service to one’s country and its people (see Chapters 19 and 20), and as responsible, constructive and rational actors on the international stage, will be needed to engage governments in ambitious proposals for the reform of our current international system. More prominent leadership from the representatives of “middle powers,” who may be more committed to and better understand the rational basis for a strengthened international system, are badly needed. Generally, reforms in many national government structures, changes in education, and broad civil society engagement are all necessary to move forward effectively and to reduce the number of countries which may feel threatened by global governance reforms (e.g., which suffer from insufficient democratization or legitimacy of leadership), and the international community must re-double its efforts to assist such countries.

Abolition of War

All this implies that a precondition for successful disarmament will be a general consensus among governments and in public opinion that, as war is prohibited as an anachronistic and unnecessary human institution (one can already see clear signs of

²³ It is noted that: “[m]ultiple studies suggest that identifying threatening enemies is often central to crystallizing a sense of purpose, community, and identity. As such, the enemy may even be something to be cherished and cultivated.” Browning, *International Security*, p. 22.

²⁴ For example, further reinforcing and disseminating UNESCO’s admirable range of “culture of peace” initiatives (e.g., see description of a range of initiatives on programming for building a culture of peace and non-violence at <https://en.unesco.org/themes/building-peace-programmes>).

this consensus; see Chapter 10), the means for its waging should be eliminated, with global armaments strictly controlled and subject to monitoring, in conformity with Charter norms. Credible alternatives to settle disputes must be available, and processes established to punish violators of key international norms and to bring recalcitrant governments into line. This chapter outlines some approaches that may be necessary to enable this transition and to reap the benefits of a global peace economy. For generations, many have hoped for a world without war, especially after suffering through one. We are convinced that, in the 21st century, this is now a realistic possibility for the following reasons.

First, with modern technology, the nature of warfare and its capacity for destruction have fundamentally changed. Yes, there were times in the past when a city was besieged and overwhelmed, its men and boys slaughtered and its women raped and taken into slavery, but the scale was different. War as combat only between large armies of soldiers or fleets of warships is largely a thing of the past. The distinction between military combatants and civilians has increasingly disappeared. Weakening “the enemy” means firebombing or laying waste to whole cities, targeting hospitals and schools, and driving out entire populations. Some attempts have been made to outlaw chemical and biological weapons, and antipersonnel mines that go on killing long after the end of a conflict, with moderate success. However, with the development of nuclear weapons with the capacity to vaporize whole cities, contaminate the atmosphere and trigger a nuclear winter wiping out most of the human race, war has given us the potential and the risk of collective suicide. The fact that the nuclear powers still contemplate war with these weapons and prepare for it defies logic and underlines the fundamental flaws in national governance as presently practiced.²⁵ Even those who believed that nuclear weapons “were essential to maintaining international security during the Cold War” based on the doctrine of deterrence, have argued that they now pose immense dangers to global society.²⁶

²⁵ Recent reporting has tracked a worrying trend in this respect: “Speaking to reporters last week, former [US] defence secretary William Perry, an arms control advocate, said he was less worried about the number of nuclear warheads left in the world than by the return of cold war talk about such weapons being ‘usable’ ... ‘The belief that there might be tactical advantage using nuclear weapons – which I haven’t heard that being openly discussed in the United States or in Russia for a good many years – is happening now in those countries which I think is extremely distressing,’ Perry said. ‘That’s a very dangerous belief’ (Borger, “US Nuclear Weapons”).

²⁶ See, for example: Shultz, George P., William J. Perry, Henry A. Kissinger, and Sam Nunn. 2007. “A World Free of Nuclear Weapons.” *Wall Street Journal*, January 4. They note that: “Nuclear weapons today present tremendous dangers, but also an historic opportunity. US leadership will be required to take the world to the next stage – to a solid consensus for reversing reliance on nuclear weapons globally as a vital contribution to preventing their proliferation into potentially dangerous hands, and ultimately ending them as a threat to the world.” Others, such as UK Commander Robert Green (Royal Navy, Retired), have argued for the unsoundness of the doctrine of nuclear deterrence generally, advocating more “credible, effective, and responsible” alternatives. Green, Robert. 2010. *Security without Deterrence*, Christchurch, New Zealand, Astron Media.

Second, recent technological transformations are changing the nature of warfare in fundamental ways. The latest technologies of autonomous weapons guided by artificial intelligence are further shifting the strategic balance from deterrence to attack, as they make possible the simultaneous destruction of all or most of an adversary's retaliatory capacity.²⁷ The capacity of computers to process masses of data and to explore options allows them to make decisions almost instantaneously with no human intervention, empathy or ethical values. It may seem logical to program autonomous weapons for particular missions, but it would be impossible to model or control the simultaneous deployment of thousands of such weapons by both sides in a conflict. Such a war would rapidly spiral beyond any human control. As a result, the risk of war, intentional or accidental, is again increasing, in particular given the current unpredictable shifting of the geopolitical tectonic plates.

Third, war is no longer restricted to conflict between nation states or civil wars within a state. Many other actors are now involved, including terrorist organizations, fanatical religious movements, extremist groups situated on the far reaches of the political spectrum, and (transnational) organized criminal syndicates, all of which may be ready to kill and destroy without discrimination to reach their ends. Achieving peace no longer just means settling a dispute between countries, but must involve wider circles of participants and address many more causal factors.²⁸

Fourth, technology has not only created new armaments, but also new capacities to organize for collective good, to communicate and understand multiple perspectives, to search for common solutions, to build wide public understanding and support, and thus to create trustworthy institutions to resolve disputes peacefully and to create and maintain peace. Technology has also given us the means for unprecedented, highly reliable monitoring and oversight for new, internationally-agreed arms control measures.

Finally, for those who believe that we have always made war and shall continue to do so, we can provide the contrary example of various systems evolving to maturity, as for example, noted in studies of aggregate data in relation to the decline in violence generally across societies.²⁹ We should be now striving to reach a point of social maturity at a planetary scale of organization, beyond irrational systems based on ad hoc violence and contested domination, which, indeed are dangerously anachronistic given current interdependence and the global challenges we are facing. One important part of this is to leave warfare behind and to create more rational, civilized forms of dispute prevention and settlement (see Chapter 10). Modern scholars have exposed the constructed nature of international relations

²⁷ Payne, Kenneth. 2018. AI, warbot. *New Scientist*, Vol. 239, No. 3195, pp. 41–43, September 15.

²⁸ See, for example, Part V of the recent UN Secretary General's document, "Strengthening Partnerships for Disarmament." Office for Disarmament Affairs, *Securing Our Common Future*, pp. 61–72.

²⁹ See, e.g., Pinker, Steven. 2011. *The Better Angels of Our Nature: Why Violence Has Declined*, New York, Viking. See also the cross-disciplinary research discussed in Chapter 10.

cultures marked by mistrust, secrecy and fear, and “competitive strategic mindsets,” noting that “alarmist zero-sum thinking is not inevitable, but a self-fulfilling outcome of the tendency of political and military elites to unthinkingly accept realist worldviews” which consider conflict as inevitable.³⁰ With accelerating, looming environmental crises on the horizon, the only realist worldview today requires devising new “win-win” intensively comparative and collaborative problem-solving strategies at the international level.

Self-Defense

The maintenance of military forces is often justified as necessary for self-defense. In a world where governments cannot be trusted and aggression has been frequent, this is understandable given the anarchic global system without adequate governance mechanisms. At present, there exists under international law (e.g., the UN Charter and precedent-setting international decisions and analysis) a relatively well-defined concept of national self-defense and when it is legitimate and legal in response to an attack or imminent threat by another state or nonstate actor. However, there is no universally binding international rule of law or enforcement, where assessments of actions said to be made in self-defense can be regularly made by a supervising judiciary. Likewise, the current Security Council and its permanent members have latitude, when convenient, not to take preventive action, or to ignore belligerent activities which would cause a threat to a state, or would go beyond the more established definitions of self-defense under international law. A reformed international judicial system with compulsory jurisdiction, including over the international crime of aggression (e.g., universal jurisdiction of the International Court of Justice and the International Criminal Court; see Chapter 10) will largely cure any ambiguity in a definition of self-defense, an ambiguity which indeed may be deployed cynically – or in an over-broad way – by various actors.

Under the current UN Charter, states are entitled to defend themselves until such time as the collective security mechanism of the Charter takes effect (see Article 51). A future amended Charter should include a similar sensible provision, although with the collective security responsibilities shouldered by the UN IPF (see Chapter 8). During a transition period of staged international disarmament (see below), care will be needed to ascertain, based on objective/non-political peace and security expertise, the current, interim and future “self-defense” needs of states given the new paradigm of enhanced collective security. Ultimately, the national possession of armaments should be determined by a new standard of the need for “internal security” rather than for “self-defense,” as a genuine system of international collective security takes root and its institutions mature.

³⁰ Browning, *International Security*, pp. 21–22.

Past Multilateral Disarmament Measures and Proposals

One would think that the suffering from World War II would push the nations most involved into intense efforts at disarmament to prevent future wars, as stipulated by the Charter. Unfortunately, for the military establishments of the victorious countries, the reverse was the case. Particularly between the United States and the USSR in the decades following World War II, disarmament proposals were repeatedly exchanged in the knowledge that they would be refused by the other side. If one side unexpectedly accepted a proposal from the other, it was rapidly withdrawn. The bilateral agreements adopted not infrequently served to authorize continued weapons development and it has been observed that disarmament proposals were generally made in bad faith to placate the public and other states.³¹ This refusal of the major military powers to cooperate in reductions in armaments contrary to their strategic goal of wide spheres of influence continued for many years, with, however, the very important breakthroughs achieved in the late 1980s between the US and the USSR (beginning with the INF Treaty in 1987 signed by Reagan and Gorbachev). As noted above, these achievements are currently under serious threat.

It is in this context that intergovernmental efforts at disarmament, mostly within the framework of the United Nations, need to be evaluated. The Box below, “A short history of multilateral disarmament measures and proposals,” based largely on UN sources, highlights the great efforts that have gone into multilateral disarmament agreements. Very regularly, however, the states with the most – or the most destructive – armaments have refused to cooperate fully, and disarmament efforts remain piecemeal, fragmented and prone to slow or obstructed progress.

Box A short history of multilateral disarmament measures and proposals³²

After the chaos of World War I, the 1925 Geneva Protocol prohibited the use of asphyxiating, poisonous, or other gases (as well as biological weapons) in warfare, but little further progress was made on international disarmament until after World War II. The United Nations General Assembly, in its first resolution adopted January 24, 1946, established a United Nations Atomic Energy Commission and set forth the goal of eliminating all weapons “adaptable to mass destruction.”

The 1963 Partial Test Ban Treaty aimed to end nuclear weapons testing in the atmosphere, underwater, and in outer space, but allowed it to continue underground.

One of the most successful agreements is the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) which opened for signature in 1968 and entered into force

³¹ Leitenberg, Milton. 1977. Disarmament and arms control since 1945. *Cross Currents*, Vol. 27, No. 2 (Summer), pp. 130–139. www.jstor.org/stable/24458313.

³² Gillis, Melissa. 2017. *Disarmament: A Basic Guide*, Fourth ed., New York, United Nations Office for Disarmament Affairs.

in 1970. It may have discouraged some states from developing nuclear weapons, with a few obvious exceptions. On May 11, 1995, the Treaty was extended indefinitely. A total of 191 parties have joined, including the five originally recognized nuclear weapon states. Article VI of the Treaty requires all states parties to negotiate in good faith on effective measures related to the cessation of the nuclear arms race and to nuclear disarmament, as well as on a treaty on general and complete disarmament under strict and effective international control. In 1996, the International Court of Justice issued a unanimous advisory opinion ruling that Article VI of the NPT required nuclear weapon states parties to the Treaty “to bring to a conclusion, negotiations leading to nuclear disarmament.” Four years later, at the 2000 NPT Review Conference, nuclear weapon states agreed to an unequivocal undertaking “to accomplish the total elimination of their nuclear arsenals.” At the 2010 NPT Review Conference, a large number of states supported the idea of beginning work toward a comprehensive nuclear weapons convention. The Conference, however, was unable to reach agreement to pursue negotiations. The 2015 NPT Review Conference was unable to adopt a final document. Despite relative success in non-proliferation, the Treaty has failed to achieve nuclear disarmament.

The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, the Biological Weapons Convention (BWC), a new instrument to supplement the 1925 Geneva Protocol, was opened for signature in 1972 and entered into force in 1975. The BWC has no implementing body and no means of monitoring implementation or verifying compliance.

At the first special session of the General Assembly devoted to disarmament (1978), member states recognized that the “continued arms race” was a “growing threat to international peace and security” and declared that the build-up of arms “threatens to stall efforts at reaching the goals of development” (General Assembly resolution S-10/2).

The Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (more commonly called the Convention on Certain Conventional Weapons (CCW) and also known as the Inhumane Weapons Convention) entered into force in 1983. The CCW bans or restricts the use of specific types of weapons considered to cause unnecessary or unjustifiable suffering to combatants or to affect civilians indiscriminately. It has 125 states parties. The specific weapons targeted are described in protocols, which can be added as new risks are identified. They are the Protocol on Non-Detectable Fragments (Protocol I) with 118 states parties, the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as amended (Amended Protocol II) with 104 states parties, which is the sole legally binding instrument that explicitly covers improvised explosive devices; the Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III) with 115 states parties; the Protocol on Blinding Laser Weapons (Protocol IV) with 108 states parties; and the Protocol on Explosive Remnants of War (Protocol V) with 93 states parties.

In 1987 the United Nations Conference on Disarmament and Development was held without any significant effect.

The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, the Chemical Weapons Convention, was opened for signature in 1993 and entered into force in 1997. The Convention bans the development, production, stockpiling and use of chemical weapons. It requires states parties to destroy all stocks of chemical weapons within 10 years of its entry into force, and has been ratified by 193 states. To ensure compliance with the Convention, the Organization for the Prohibition of Chemical Weapons (OPCW) was established to carry out verification activities.

In December 1993, the United Nations General Assembly adopted by consensus a resolution calling for the negotiation of a verifiable treaty banning the production of fissile materials for nuclear weapons. The Conference on Disarmament (CD), which has been mandated to negotiate the Treaty, has long been considered to be the sole multilateral negotiating forum for disarmament treaties. The CD, however, has failed since 1998 to agree to commence negotiations or formal discussions on any topic. In 2009, the CD adopted a program of work for the first time in more than a decade, but was unable to implement it and remained deadlocked through 2016.

The Comprehensive Nuclear-Test-Ban Treaty, which bans all nuclear-related test explosions, opened for signature in September 1996 but has not yet entered into force.

The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, also known as the Anti-Personnel Mine Ban Convention or the Ottawa Convention, was developed through what has become known as the Ottawa Process, a partnership between civil society, governments, and the United Nations. It was adopted in Oslo, Norway, on September 18, 1997, and opened for signature in Ottawa, Canada, on December 3, 1997, with 122 governments signing the Convention at that time. It entered into force in March 1999 and has 162 states parties.

Small arms in global circulation are estimated to total at least 875 million. The trade in small arms has not been well regulated and is the least transparent of all weapons systems. More than 80 percent of the ammunition trade seems to remain outside of reliable export data. In 2001, two UN instruments on small arms control were agreed upon. Under the Convention against Transnational Organized Crime, countries adopted a Firearms Protocol. On the broader topic of small arms and light weapons, countries agreed on a program of action focusing on preventing the illicit trade in such weaponry. This politically binding instrument encourages all UN member states to adopt measures at the national, regional and global levels to prevent, combat and eradicate the illicit trade in these weapons.

Currently, there are no multilateral treaties that deal with missiles and their proliferation, and discussions about missiles in all their aspects at the United Nations have, thus far, resulted in no concrete policy recommendations. The two existing instruments are the Missile Technology Control Regime established in 1987 with 35 participating states, and the 2002 International Code of Conduct against Ballistic

Missile Proliferation (also called The Hague Code of Conduct or HCOC) which has 134 subscribing states.

The Convention on Cluster Munitions, which outlaws the use, development, stockpiling, production, acquisition, retention and transfer of nearly all cluster munitions is the result of what has become known as the Oslo Process, the collaboration among governments, the United Nations, the International Committee of the Red Cross and other civil society groups to address the problem of cluster munitions. The Convention was negotiated and adopted at the Dublin Diplomatic Conference on May 30, 2008, and was opened for signature in December 2008, when it was signed by 108 states. It entered into force August 1, 2010. As of August 2017, 108 states had signed the Convention, of which 102 are states parties.

Until recently, there was no global set of rules governing the trade in conventional weapons. While a variety of national and regional control measures on arms transfers existed, they were too often lax or unenforced. In April 2013, the General Assembly approved the Arms Trade Treaty (ATT), the first-ever global treaty to establish common international standards to guide governments in deciding whether or not to authorize arms transfers. The ATT promotes cooperation, transparency, and responsible action by states in the international trade in conventional arms. The Treaty, which entered into force on December 24, 2014, regulates the international trade in almost all categories of conventional weapons – from small arms to battle tanks, combat aircraft and warships. Ammunition, as well as parts and components, are also covered. By August 2017, the ATT had 92 states parties.

Annually, Improvised Explosive Device (IED) attacks kill and injure more people than do attacks with any other type of weapon except firearms. The UN General Assembly passed a resolution (71/72) in 2016 urging, among other things, that states develop national policies to counter IEDs and take appropriate measures to strengthen the management of national ammunition stockpiles to prevent the diversion of materials for making IEDs to illicit markets and illegal and unauthorized groups.

In 2016, the United Nations convened an Open-ended Working Group (OEWG) taking forward multilateral nuclear disarmament negotiations. Subsequently, based on the recommendation of the OEWG, the General Assembly on December 23, 2016, adopted resolution 71/258, “Taking forward multilateral nuclear disarmament negotiations,” in which it decided to convene a United Nations conference to negotiate a legally binding instrument to prohibit nuclear weapons. Subsequently, on July 7, 2017, the Treaty on the Prohibition of Nuclear Weapons, the first multilateral, legally binding instrument for nuclear disarmament to have been negotiated in 20 years, was adopted. The Treaty prohibits a range of nuclear weapon-related activities, such as undertaking to develop, test, produce, manufacture, acquire, possess, or stockpile nuclear weapons or other nuclear explosive devices, as well as the use or threat of use of these weapons. However, the 122 countries that have adopted it do not include the countries with nuclear weapons or their allies in NATO, for instance.

After all of these efforts, where are we today? Global military spending is currently higher than at any time since the end of the Cold War (upwards of \$1.7 trillion or 2.2

percent of global GDP). As of 2017, there were approximately 3,750 nuclear weapons deployed and ready for use globally. About 2,000 of these are reportedly kept on high alert, ready to be launched within minutes. In total, there are an estimated 14,465 nuclear warheads (operational, spares, active and inactive storage and intact warheads scheduled for dismantlement), enough to destroy civilization many times over and destroy most life on earth.³³

The costs related to nuclear weapons (to research, develop, build, maintain, dismantle, and clean up after them) are considerable. The United States spends about \$30 billion per year just to maintain its stocks.³⁴ The United States Congressional Budget Office estimates that the total cost to modernize the country's nuclear forces will be more than \$1.2 trillion over the next 30 years (this amounts to \$4.6 million per hour for 30 years.) And the United States Department of Energy reports that weapons activities have resulted in the production of more than 104 million cubic meters of radioactive waste.

Notwithstanding the critical, but seemingly momentary, progress associated with the close of the Cold War between the then two world superpowers, the major powers, and other states with military ambitions (also in regional contexts), have generally not signed or become parties to agreements that may limit their military capacity, and many other states have not respected them at one time or another. As a rule, there are significantly inadequate or non-existent international verification and enforcement mechanisms. What has also substantially been lacking, in addition to good faith commitments to the positive mutual goals of disarmament, is trust between states, as the Charter sought to establish. As noted, "security dilemmas" have strong psychological components.³⁵ What good is an agreement if you do not expect your competitors to respect it, and cheating is assumed to be the rule rather than the exception within a culture of cynical, low expectations? The progress made has been based on the good will of a majority of states, but not the most militarily endowed, who are often jockeying for relative power and influence.

DISARMAMENT IN TODAY'S WORLD: TOWARD SYSTEMIC ARMS CONTROL AND DISARMAMENT

Disarmament is necessarily a complex and expensive process in itself, even apart from the destruction and recycling of arms and military equipment. It involves

³³ SIPRI *Yearbook* 2018, pp. 6 and 10; Stockholm International Peace Research Institute (SIPRI), 2017. Military Expenditure Database. www.sipri.org/databases/milex.

³⁴ Nuclear Threat Initiative. 2013. US Nuclear Weapons Spending Compared to Other Government Programs, October. www.nti.org/media/pdfs/US_nuclear_weapons_spending.pdf?_id=1380927217.

³⁵ The Charter requires members of the UN to fulfill "in good faith" obligations assumed under the instrument (Art. 2(2)) and, as explained above, sought to create an enabling environment for states to live side by side in peace as good neighbors.

major industries and, not infrequently, an important part of national economies in countries with a significant military-industrial complex or arms sector. Local communities may be dependent on the spinoffs from the military presence. For millions of people, the military, as currently constituted, may be their profession and life, and millions of others are employed in the arms and related industries. Much research and technological development is funded for military ends and defense. Eliminating or repurposing such infrastructure may add up to some short or medium-term economic losses and a difficult transition for such economies. Disarmament is not just organizing the destruction of arms, but transforming a not insignificant part of society in some countries.³⁶

It is not that the military is an essential part of any government or economy. Costa Rica abolished its army in 1949 to prevent further military coups d'état and has remained peaceful when many of its armed neighbors suffer from chronic violence. It has devoted its resources to more constructive uses and stands out as a model for its region. Why has no other state copied its example?³⁷

As mentioned, disarmament cannot be undertaken if there is not already in place, or well on the way to being established, a binding alternative to war for dispute settlement and a legitimate international force sufficient to ensure collective security (see Chapters 8 and 10). The various processes of strengthening the international system need to be combined and carefully coordinated during a period of transition. Disarmament also needs to be integrated into a larger process of reallocation of national resources, redesign of certain aspects of the economy, and retraining of people. Funding will be necessary to provide both for the disarmament process itself, and for the alternatives to take the place of the military effort. Otherwise transformation may be resisted and the process blocked.

Proposals to Enable Modern Comprehensive Disarmament

At the international level, disarmament will only work to the extent that states feel that they are able to trust the process and objectively verify commitments; thus building trust through a range of the measures recommended here will be a necessary precondition and accompaniment to the disarmament process. "Confidence-building measures" are a necessary and common part of modern disarmament practice and should be employed systematically at the international level.³⁸ Each stage will

³⁶ However, it should be noted that many jobs are always being lost or redesigned as technologies change and industries evolve. Given the high level of expenditure for military purposes, there are ample funds available to finance economic transitions linked to de-militarization.

³⁷ A range of other sovereign states, however, do not have militaries or standing armies, many of which have long-standing agreements for defense with former occupying countries (for example, Monaco and France, and a range of small island states), usually not undergoing a process of demilitarization as was undertaken in Costa Rica.

³⁸ See, e.g., Meek, Sarah. 2005. "Confidence-Building Measures as Tools for Disarmament and Development." *African Security Studies*, Vol. 14, No. 1, pp. 129–132; and, Tulliu, Steve and

need to be carefully defined and balanced, and binding in application. Full transparency and regular monitoring and inspection will be necessary to assure governments that there is no evasion of obligations, and all governments are held to objective standards. As noted in Chapter 8, a UN IPF is envisaged to be established in parallel to the process of disarmament, not only so it can, in extreme cases, intervene if any country tries to destabilize the disarmament process to its own advantage, but also to deal with other conflicts and to significantly strengthen the UN's ability to fulfill its peace and security mandate.

A binding yet staged approach should be applied to the disarmament of all states for a reduction of armaments to those that are strictly necessary for self-defense,³⁹ an obligation that can be deduced from the language and intent of the current UN Charter (i.e., under which international use of force is strictly limited to self-defense or duly authorized collective security action). A revised Charter would make this norm clearer and binding on all states, with the corollary duty for states to disarm to appropriate levels within a certain timeframe. A special Standing Committee on Disarmament would implement and monitor this obligation. It could consist of 24 members representing all UN members. Following the proposal for membership in the Executive Council (see Chapter 7), five members (US, China, EU, Russia, and India) would get a single seat each and the remaining 161 members would be grouped in 19 clusters defined by geographical proximity and, to the extent possible, roughly equivalent voting power. Voting power for each of the 24 members would be identical to that in the General Assembly. Its first task would be to commission a transparent and arms-length scientific analysis by independent experts, without political interference, to determine the self-defense needs of each country, taking into account the existence of the new IPF. It has been noted that a key problem with multilateral disarmament processes to date is the extent to which they rely on consensus negotiations (in which parties try to maximize what they think to be in their own interests, to the detriment of a collective solution) without adequate mechanisms to ensure overall fairness in outcomes.⁴⁰ After the determination of appropriate limits, a staged approach of disarmament to required levels would then proceed, with a preparatory period⁴¹ and then a 10-year (or more) phase of disarmament proper (for most countries, depending on the weapons and equipment in need of decommissioning), all proceeding within the context of a thorough

Thomas Schmalzer, 2003. *Coming to Terms with Security: A Lexicon for Arms Control, Disarmament and Confidence-Building*. Geneva, United Nations, UNIDIR/2003/22.

³⁹ To be gradually transitioned, over time, to a new standard of their need for "internal security" rather than for "self-defense."

⁴⁰ See Borrie, "Tackling Disarmament Challenges," pp. 270–273.

⁴¹ These preparatory measures could, for example, include extensive regional training and the strengthening of regional peace and security mechanisms, as well as those at the international level. See proposals, e.g., in "The Global Action to Prevent War Project." 2008. *Preventing Armed Violence and Ending War: Program Statement 2008–2010*. www.globalactionpw.org/wp-content/uploads/program-statement-2008.pdf.)

monitoring and inspection system by independent experts empowered by the Standing Committee.⁴² The latest techniques of remote sensing and monitoring/intelligence-gathering should make it possible to ensure that disarmament is proceeding to completion and that no attempt is made to hide or disassemble arms for later use.

Disarmament, particularly of the “great powers,” would have to follow a path of simultaneous execution by all nations, with every nation disarming proportionately. The work of the Standing Committee could consolidate, extend and incorporate, as appropriate, the United Nations Office for Disarmament Affairs, the Conference on Disarmament and other UN bodies or treaties linked to disarmament issues (e.g., the range of arms and weapons related treaties, the International Atomic Energy Agency – IAEA and other relevant bodies).⁴³ It should build on the acquired expertise and norms already agreed upon, while taking into account the new binding obligations of states under the revised Charter and binding commitments in existing instruments.

Nuclear weapons would be universally banned as immoral weapons of mass destruction, as required by the 2017 Treaty on the Prohibition of Nuclear Weapons, recently adopted by the majority of the world’s states. However, as the countries with the most nuclear weapons have been opposed to the Treaty to date, it will take confidence building, delicate diplomacy and firm disarmament commitments set out in modern security regimes to bring all such countries to the table. Biological and chemical weapons have already been outlawed by treaty, but enforcement is difficult since they are so easily manufactured and used; enhanced mechanisms will have to be employed. New and emerging forms of weaponry and warfare, including autonomous weapons, military artificial intelligence systems, nanomaterials,⁴⁴ and cyberwarfare, would have to be anticipated and included. No state should remain with any means at its disposal that would allow it to force its will on other states. In exchange, its rights and security would be guaranteed by the system of collective security, with obligatory alternative peaceful means of dispute settlement.

Such a fundamental shift in a conception of the classical attributes of national sovereignty represented by the military will involve a paradigm shift that is difficult for some. The most difficult cases may be authoritarian governments for whom fear (linked with militarization and types of violence), both internal and external, is a key instrument with which they are able to maintain power. A number of such

⁴² There have previously been similar detailed proposals for staged disarmament. See for example Johnson, Robert. 1982. “Toward a Dependable Peace: A proposal for an Appropriate Security System,” in Falk, Richard, Samuel S. Kim, and Saul H. Mendlovitz (eds.) *Toward a Just World Order*, Vol. 1. Boulder, CO, Westview Press, ch. 18, pp. 271–283.

⁴³ Gillis, Disarmament and arms control; and the recent Office for Disarmament Affairs *Agenda for Disarmament* provide comprehensive overviews of the current UN and associated initiatives relevant to disarmament.

⁴⁴ Nanomaterials have potential for better armor and invisible camouflage, powerful explosives and miniature nuclear arms, and chemical weapons, among others.

governments have acquired, or sought to acquire, nuclear arms as the ultimate deterrent against any attempt to overthrow them from within or without. The military may be the principal instrument through which their power is exercised, when it is not the military itself that pulls the strings of government; such governments may see disarmament as prejudicial to their own power. The international community will need a strategy of positive incentives and stepped sanctions, or other coercive measures, if all other attempts to reason with such governments fail. Poor or dysfunctional national governance, in this domain as in all the other areas of the transition, will be a significant obstacle that may slow the application of comprehensive disarmament proposals.

Technical and Financial Challenges

Clark and Sohn considered in detail the main changes that would be needed in the UN Charter for effective disarmament, including a technical annex on the mechanics of disarmament that would be an inseparable part of the Charter.⁴⁵

As mentioned above, the level of and specifics applied to the disarmament of individual states, and a common collective standard for such disarmament, in the light of the new capacities and collective security responsibilities of the IPF, will have to be determined by an independent expert body, which would devote significant study and technical expertise to determining these standards, as well as to standards for the crucial ongoing verification and inspection criteria. Importantly, such an international expert body will have to be insulated from political, entrenched bureaucratic military and other pressures (e.g., those of the business sector presently engaged in the lucrative manufacture of weapons), in order to ensure that its determinations and proposals are truly independent and impartially based on *technical* expertise. The financing of the transition from a system based primarily on national defense to a genuine international collective security system could also be addressed by such an international expert group, making fair and realistic assessments of the amounts of international funding needed for countries and the international community to transition, and at what points national governments, for example, could start transferring (very substantial, in some cases) national defense expenditures to investments in collective security.

Disarmament is a technically difficult and expensive process. Most military equipment has no other more productive uses, and is too specialized to be modified, and so must be disarmed, dismantled, and recycled. In any case, equipment that could easily be reconverted for military purposes should not be retained. Munitions in particular were never designed to be dismantled, and the explosives within them can become unstable over time. Dumping in the sea was practiced after the two

⁴⁵ Clark, G. and L.B. Sohn. 1966. *World Peace through World Law: Two Alternative Plans*, Cambridge, MA: Harvard University Press, pp. 203–280.

world wars, and created major problems later, so this is not an option. Nerve gases and biological weapons present special challenges requiring highly specialized facilities and precautions to neutralize them.

The military has usually been exempted from environmental regulations; many military facilities and arms factories are highly polluted and will require expensive clean-up. Firing ranges may be contaminated with duds and unexploded munitions. Returning such spaces to civilian uses will be a long and expensive process for which budgeting will have to be arranged.

Nuclear disarmament is a special case because of the dangerousness and toxicity of radioactive materials. The nuclear arms race has created an enormous burden that will inevitably weigh on future generations, producing large quantities of highly radioactive substances, which must be kept isolated from all contact with living things for many thousands of years, while ensuring that there is no risk of contamination over such a long period. The challenge in neutralizing the damaged Fukushima power plant is one example, as is the looming cost of dismantling the many nuclear power plants coming to the end of their useful lives. Adding the much greater quantity of radioactive isotopes from nuclear weapons and the facilities to manufacture them will make the problem much larger, especially since countries are still struggling to find safe places to store radioactive wastes. The risk of accidents is never zero.

It will be necessary to decide whether dismantling arms and storing the resulting wastes would benefit from economies of scale, suggesting the need for centralized facilities under United Nations control, or alternatively the risk of transporting such materials is too great and disarmament should take place close to the present locations of the arms. According to the “polluter pays principle,” the countries that manufactured or purchased the arms should pay for their elimination, but there may be cases where the burden would be more than a country could bear and some sharing of costs would be justified.

Since the financial costs of disarmament will be very high, military budgets should first be diverted to finance the disarmament process and the return of industrial capacity, facilities, and personnel to civilian uses. The peace dividend will not be immediate but will only emerge over time as the disarmament process advances.

Another challenge will be the resistance of the arms industry and defense contractors that have long benefited from the present situation and will shrink dramatically, if not disappear, with substantial, effective disarmament. To the extent that their technologies have other peaceful uses, they should be assisted to diversify in that direction. Another short-term transitional option would be to use them to destroy existing stocks of arms and munitions, military vehicles, aircraft, and naval vessels. It will be important in the long term that no country retains the capacity to manufacture arms and rearm itself rapidly. As noted in Chapter 8, arms production for the IPF would be controlled, monitored, or directed by the United Nations and distributed so that no country could seize significant capacity and turn it to its own uses.

Accompanying Measures

While disarmament would be a specific responsibility under the revised UN Charter, it will have many larger implications that cannot be ignored. A major part of the world economy, and its allocation of financial, industrial, and human capital, is devoted to the arms industry and related supply chains, not to mention the number of people presently employed in the armed services of states. People fight for their jobs, and those who are armed professionally, especially, must be offered alternatives before they will willingly give up their present occupations. As arms factories are closed or transformed, those employed need to be offered equivalent or better options. The disarmament process should be accompanied by a major retooling of the economy toward constructive ends, such as improvements in infrastructure, the transition to renewable energy sources, environmental restoration, resettlement of displaced populations, and other major needs.⁴⁶ In this respect, the global 2030 Agenda and Sustainable Development Goals offer an excellent blueprint to guide reinvestment and retooling of economies worldwide.

As military forces are demobilized or remobilized to work on global common challenges, they should be moved immediately into alternative occupations, with appropriate retraining, making use of existing skills whenever possible.⁴⁷ For some, skills from air forces and navies may be directly transferable to their civilian

⁴⁶ It is not inconceivable that over the longer term the transition to an economy with a smaller military industrial complex might actually be a job-creating process, with new industries emerging that would be more wealth-creating than weapons manufacturing. The experience of the Soviet Union in this respect is illustrative. With the end of the Cold War the Soviet military industrial complex collapsed and, in the short term, this led to massive dislocations and a sharp contraction of output and employment. By 1999, however, the Russian economy had entered a robust period of expansion, including the emergence of thousands of new firms in the industrial, services and agricultural sectors. This transition in Russia was disorderly and chaotic and is certainly no model for the rest of the world. The social costs, in particular, were made worse by misguided policies in a number of areas but, without question, the transition in the end was beneficial for the country, as highlighted by a substantial increase in income per capita measured in dollars.

⁴⁷ For example, one recent proposal is to redirect military capacities and personnel to regional Peace Engineering Corps to assist with civilian infrastructure projects in support of the Sustainable Development Goals and humanitarian assistance. (Sky, Jasper. 2018. Repurpose the Military Initiative (RMI): A call to re-allocate 15% of military troops and spending to building civilian infrastructure where it's needed most. November 12, 2018. <https://medium.com/@jaspersky/repurpose-the-military-initiative-rmi-a-call-to-re-allocate-15-of-military-troops-and-spending-7cbobf846ea9>). While it did not involve a transition out of the military industries, the experience of Spain in the first half of the 1980s is relevant here. Faced with overcapacity in steel, ship-building, textiles, and other sectors and with little prospects for a sustained recovery, the Spanish government implemented a program of industrial reconversion. It involved the shutting down of many of these industries – which had been a great burden on the budget – and the retraining of tens of thousands of workers to enable them to transition into other more promising sectors, as well as adequate compensation for those workers near the age of retirement. From the mid-1980s onwards Spain had one of the best performing economies in Europe. For further details see López-Claros, Augusto. 1987. *The Search for*

equivalents, and others will readily find a place in the security, emergency, and medical services. Leadership experience should also be easily incorporated into public institutions and the private sector. Since military personnel have always been paid from public funds, without the military contributing to the more productive economy, it should even be possible for the public funding to continue for a reasonable transition, so that financial security can be guaranteed to the personnel and their families. Similarly, communities that have benefited from the presence of military installations will need assistance in adapting their local economies, unless alternative uses for the facilities can be found immediately.

THE CURRENT CROSS-ROADS AND OVERCOMING POLITICAL OBSTACLES

As noted by Gorbachev, the risks we now face together with respect to renewed – and, in some corners, relatively new (e.g., with increased military spending in parts of Asia)⁴⁸ – arms races are deeply troubling. The 2018 non-paper on disarmament of the UN Secretary General, in its wide-ranging scope and urgency in tone, indeed reflects this reality.⁴⁹ At the same time, we are facing an unprecedented planetary climate change and environmental crisis which has no parallel in human history.⁵⁰ Both the current trends with respect to renewed and new/pending weapons development, and climate change and global environmental degradation suffer from fundamentally incomplete, inadequate and ineffective international governance regimes.⁵¹ To confront the climate crisis, we badly need immediate and coordinated global investment in green technology, a proper green infrastructure to transition to

Efficiency in the Adjustment Process: Spain in the 1980s, Occasional Paper 57, Washington DC, International Monetary Fund.

⁴⁸ The SIPRI *Yearbook 2018*, p. 6 reports that: “Military expenditure in East Asia continued to rise, for the 23rd year in succession, and was up by 4.1 per cent compared with 2016.”

⁴⁹ The report notes: “We are living in dangerous times. Protracted conflicts are causing unspeakable human suffering. Armed groups are proliferating, equipped with a vast array of weapons. Global military spending and competition in arms are increasing, and the tensions of the cold war have returned to a world that has grown more complex. In today’s multipolar environment, the mechanisms for contact and dialogue that once helped to defuse tensions between two super-powers have eroded and lost their relevance. . . . This new reality demands that disarmament and non-proliferation are put at the centre of the work of the United Nations.” Office for Disarmament Affairs, *Securing Our Common Future*, p. vii.

⁵⁰ We are told that we currently have a 12 year window to act. See: IPCC. 2018. Global Warming of 1.5°C (SR15), Special Report. Summary for Policy Makers. Geneva: Intergovernmental Panel on Climate Change, October 2018. www.ipcc.ch/report/sr15/. UN Environment. 2018. Emissions Gap Report 2018. Nairobi: United Nations Environment Programme. www.unenvironment.org/resources/emissions-gap-report-2018.

⁵¹ The 2015 Paris Agreement, negotiated within the UN Framework Convention to address climate change, while admirable in aims and intentions, has no reliable enforcement mechanisms to ensure that targets with respect to global warming will be met.

a global *negative* carbon economy, as well as other mass investments for mitigation and adaptation to changing planetary conditions; all of this requires unparalleled international cooperation rather than a shockingly wasteful, distracting and destabilizing military contest. Indeed, it not only appears that major powers are again irresistibly being drawn into a suicide embrace with respect to weapons of mass destruction, but also in relation to the unabated and accelerating climate and global environmental crisis.⁵² We are truly at a global cross-roads.

The problem of global systemic and comprehensive disarmament must be faced squarely, with new ambitious plans, if we are going to be serious about sustainable international security, and the freeing of requisite resources and energies for urgent needs.

On the positive side, since World War II, we have seen significant advances in arms control and disarmament science and techniques, with a great deal of knowledge and expertise acquired at the international, national and regional levels.⁵³ Also, as noted above, we have seen a proliferation of worthy attempts at international arms control/disarmament (however piecemeal and incomplete), which could form the basis of and be consolidated into new, genuinely comprehensive, binding and universal plans for the international community.⁵⁴ Additionally, there are the recent notable and encouraging successes of transnational civil society efforts and “smart coalitions” (of civil society groups working with “like-minded states”), which have achieved important progress in arms control, including the 1997 Mine Ban Treaty, and the 2017 TPNW on nuclear weapons, among others. It remains to be seen whether the normative “soft power” of civil society actors and coalitions of countries considered to be middle powers might be more willing to take substantial action toward the “ethically obvious,” stepping into an enhanced leadership role for the benefit of the entire international system. As Gorbachev notes, “[f]aced with this dire threat to peace, we are not helpless. We must not resign, we must not surrender.”⁵⁵ Another voice of moral authority, Pope Francis, has recently warned, at an inter-religious cooperation event among Christians and Muslims, that the future of the human race is in peril unless religions resist “the logic of armed power . . . the arming of borders, the raising of walls There is no alternative: we will either

⁵² E.g., with the US and other states threatening to pull out of the Paris Agreement, and/or blocking consensus on key reports of implementing measures for the agreement.

⁵³ See, for example, the comprehensive knowledge presented in guides such as that developed by the United Nations Institute for Disarmament (UNIDIR), among many other resources, in Tulliu and Schmalgerger. 2003. *Coming to Terms with Security: A Lexicon for Arms Control, Disarmament and Confidence-Building*.

⁵⁴ The 2018 UN Secretary General’s document, *Securing Our Common Future: An Agenda for Disarmament*, seeks to present a comprehensive plan, albeit with the frame of existing UN institutions and the current UN Charter.

⁵⁵ Gorbachev, “New nuclear arms race.”

build the future together or there will not be a future.”⁵⁶ A serious plan for comprehensive international disarmament represents not only an ethical shift from the false and seemingly inexorable “logic of armed power,” but would represent, if well-designed and implemented, a transition to more stable and practical international security, alongside the freeing up of substantial financial and human resources. Moreover, the Charter has laid the foundation and shown the way; it is up to us to complete its system.

⁵⁶ “Pope in UAE: Reject Wars in Yemen, Syria, Iraq and Libya.” *Al Jazeera*, February 4, 2019. The article notes that, “At the end of the interfaith meeting, Francis and Sheikh Ahmed al-Tayeb – the grand imam of Egypt’s Al-Azhar, the highest seat of learning in Sunni Islam – signed a joint statement on ‘human fraternity’ and their hopes for world peace They then laid the cornerstones for a new church and mosque to be built side-by-side in the UAE capital, Abu Dhabi.” www.aljazeera.com/news/2019/02/pope-uae-reject-wars-yemen-syria-iraq-libya-190204155801553.html.