Article VI of the nuclear Non-Proliferation Treaty (NPT) obligates all states parties to “undertake to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament.” Nuclear weapon modernisation is the qualitative aspect of the “nuclear arms race.” Forty-five years ago the NPT required this practice to end “at an early date,” an outcome the Treaty paired with “good faith” progress toward nuclear disarmament. The NPT, especially as unanimously and authoritatively interpreted by the International Court of Justice, requires nuclear disarmament.1 The illegitimacy of nuclear weapons is a foundation of the NPT.

Yet as the chapters in this volume show, all of the nuclear-armed states are modernising their nuclear arsenals, and some are continuing to expand them.2 China, the Democratic People’s Republic of Korea, France, India, Israel, Pakistan, Russia, the United Kingdom, and the United States collectively possess approximately 15,650 nuclear weapons.3 Modernisation is driven largely by the quest for military advantage. Nuclear “deterrence” requires the threat of the use of nuclear weapons to be credible, and preparations for such use, legitimate. Modernisation, especially if new “military characteristics” are created, refreshes the perceived utility and credibility of nuclear use, both technically and politically. At the same time, modernisation, and specifically the investments necessary for it, is also a legitimacy-making exercise. The greater the investment and sacrifices necessary, the greater the perceived legitimacy of nuclear weapons in national policies.

Like other machines, nuclear warhead components and delivery systems do age, fail, or become incompatible with other modernised weapon system components. Having a nuclear weapon system at all implies modernisation and new capabilities to a greater or a lesser degree, sooner or later. Most weapon system components must eventually be replaced, and decades-old components will invariably be replaced by modern ones. These must sometimes be produced in one-of-a-kind facilities, which themselves must be renewed. Obsolete technologies will not be, and often cannot be, used. Meanwhile some of the skills involved are unique to the nuclear weapons enterprise and require years of training. Maintaining nuclear weapons means that these skills must be developed, maintained, and transmitted to new workers, which in turn implies some kind of continuous real work, certainly including evaluation, design, maintenance, production of some sort, and dismantlement. In short, modernisation is synonymous with long-continued possession of nuclear weapons.

Thus modernisation is inevitable as long as nuclear weapons exist. The only way to avoid modernisation is to prohibit and eliminate the weapons.

There is no comprehensive, explicit legal prohibition of the possession or use of nuclear weapons. And no treaty governs the total number of deployed nuclear warheads, their alert status, the number of maintained, working nuclear warheads held in reserve, the total number of warheads in the retired inventory or in a firm dismantlement queue, the number of warheads actually dismantled, or the number of reusable nuclear components held in inventory from those warheads. There are no treaty-based qualitative restraints on nuclear weapon system technology.

The programmes and policies of the nuclear-armed states are designed to perpetuate their possession of these weapons into the indefinite future. Internationally, these governments have backed the interests that sustain
these programmes by adopting inflexible political positions against pursuing initiatives to ban and eliminate nuclear weapons, or even in most cases to discuss the humanitarian impact of nuclear weapons. They have argued that any activities not explicitly found within the 2010 NPT Action Plan will distract and detract from “progress” on the actions articulated in that plan – which are based on steps that have been on the international agenda since the 1950s. However, most of the incremental steps that have been agreed to have not been implemented. And actions such as modernisation have actually resulted in steps backwards.

Failure by the nuclear-armed states to meet their legal obligation to end the nuclear arms race and eliminate their arsenals must be met with resolve for concrete action by non-nuclear-armed states so as to avoid further entrenchment of the indefinite possession of nuclear weapons. All governments have the responsibility to prevent a humanitarian tragedy.

We know that nuclear weapons represent just a tragedy. The immediate effects of even a single nuclear weapon detonation are horrifying and overwhelming. One detonation will cause tens of thousands of casualties and inflict immediate and irreversible damage to infrastructure, industry, livelihoods, and human lives. The effects will persist over time, devastating human health, the environment, and our economies for years to come. These impacts will wreak havoc with food production and displace entire populations.

The existence of nuclear weapons generates great risk. There have been many instances of near-misses and potential accidental nuclear detonations. There have also been a number of recent reports of the declining operational atmosphere and disturbing behaviour of those in supposed “command and control” of these arsenals. Furthermore, the policies of “nuclear deterrence” and military doctrines of nuclear-armed states and their allies require preparations for the use of nuclear weapons. The potential use of nuclear weapons in a conflict between their possessors or in pre-emptive or retaliatory strikes against others is not a threat of the past.

Nuclear weapons waste money. The money spent on nuclear weapons not only detracts from the resources available to tackle ecological, social, economic, and energy crises, but also reinforces the institutions that benefit from weapons and war. The maintenance and modernisation of nuclear weapons undermine development and the achievement of global economic and social equality.

The overwhelming majority of states have rejected nuclear weapons. They do not see them as instruments of security but rather of mutual destruction. Yet unlike the other weapons of mass destruction, nuclear weapons have not been categorically banned. Now is the time to address this anomaly, which has been allowed to persist for far too long.
Notes:

2. The Democratic People’s Republic of Korea is not included in this study due to lack of publicly available information on its programme.
4. Statement to the high-level meeting on nuclear disarmament on behalf of France, the United Kingdom, and the United States, delivered by the United Kingdom, New York 26 September 2013; Statement to the UNGA First Committee on behalf of France, the United Kingdom, and the United States, delivered by France, New York, October 2013; Statement to the UNGA First Committee by Russia, 22 October 2013.
5. A treaty banning nuclear weapons, Reaching Critical Will and Article 36, April 2014.