

EXECUTIVE SUMMARY

Chapter 1: Rhetoric vs. reality: the political economy of nuclear weapons and their elimination

A state's interest in acquiring and retaining nuclear weapons is the product of multiple institutions and constituencies dispersed throughout its government, corporate, academic, and political spheres of power. All nuclear-armed states wield these weapons because specific constituents benefit from investment in the weapons' production and maintenance. Further, these interests within nuclear-armed states reinforce and invigorate similar interests in other nuclear-armed states.

This institutional inertia that maintains the nuclear-armed state and militates against concrete steps toward disarmament is itself encapsulated in a specific geopolitical and domestic order best understood as imperialism. States with imperial ambitions utilize nuclear weapons, as one means among many, to coerce other states on virtually every matter of international relations. Seen from this angle, nuclear arsenals are not "stockpiles" hidden away in silos and subs awaiting a dreaded day of possible use, but instead are one of many tools used by imperial states to maintain global inequalities between states and within states.

The United States provides an excellent model to explore both the institutional and imperial underpinnings of the nuclear-armed state. The US is the hegemonic nuclear-imperial state. It provides the clearest illustration of the strategic value of these weapons within the current global political economy. While the other nuclear-armed states have similar interests and constituencies, US nuclear weapons exist within the broader context of the country's unrivaled military supremacy—its military budget, foreign military bases, and history of military interventions. US nuclear weapons are uniquely entrenched in the apparatus and theology of the United States' hegemonic world order. Other nuclear-armed states fit into this order; their policies both take direction from the United States and help provide cover

for US policy. Thus, they stand together at international fora, confirming each other's need for a strong "nuclear deterrent" and demanding stricter measures to stem further proliferation. Despite this, the international community looks to the US government to "take the lead" in nuclear disarmament. Yet a careful analysis reveals that the *direction* the United States is leading—which other nuclear-armed states either implicitly or explicitly support—is not toward disarmament at all, but toward the indefinite retention of nuclear weapons in order to preserve the present global order.

Although the Obama administration has committed the United States to nuclear disarmament in stronger rhetorical terms than any administration in recent memory, its nuclear weapons programmes and policies are actually designed to lock in a virtually insurmountable advantage over other nations in the area of nuclear weapon technologies, while legitimating a more bellicose conventional military and diplomatic stance against accused proliferators. This foreign policy is being given ideological cover by a group of elder (Cold Warrior) statesmen who have in recent years donned a mantle of sober anti-nuclearism, but who remain politically, administratively, and financially invested in the long-term maintenance of the US nuclear weapons complex. The same strategy is being mirrored by the other principal nuclear weapons states, also seeking to use anti-nuclear rhetoric as a weapon against non-nuclear states, particularly those that would transgress the established geopolitical order.

At face value the goals of this political project include non-proliferation, achieving new arms control treaties, new stringent fissile material controls, and the eventual elimination of nuclear weapons, all ostensibly to make the world universally more secure. These aims—to the extent that they are genuine, especially in the case of the last one—are in fact entirely subordinate to the two instrumental goals driving current US nuclear weapons policies.

The first is to secure domestic political conditions ensuring the long-range funding of nuclear weapons programmes. This means that arms control treaties and platitudes that aspire to a "nuclear free world" will be traded for multi-billion dollar infrastructure investments in the nuclear weapons complex, as well as the programmatic authority to design new weapons. This is entirely about supporting and placating the politically powerful laboratories, corporations, universities, Congress members, and military branches that embody the nuclear weapons complex.

The second instrumental goal of this political project is to preserve asymmetric military dominance for the nuclear weapon states, a dominance which is inversely related to waning economic and political hegemony. This massive boosting of “defence” spending relative to all other nations is itself a means toward another end: to sustain a world in which the richest one percent of adults own more than 40 percent of all wealth, while almost half the planet’s population own less than 1 percent. Thus the international and domestic politics surrounding nuclear weapons are, in the most straightforward sense, about political economy, the distribution of wealth, and control over social and economic development.

Within this context “disarmament” is promoted as a vague “vision,” which can only be reached through the rigorous pursuit of preconditions—the absolute assurance that no state will seek to develop nuclear weapons at any point in the future under any circumstances. In the meantime, the United States claims that as long as nuclear weapons exist, it will need to maintain an “effective deterrent” to any possible nuclear “outbreak”. More than just keeping nuclear warheads in its quiver, this “hedge,” as it has been called by all post-Cold War American administrations, means investing billions of dollars in a modernized nuclear weapons complex capable of maintaining existing weapons indefinitely.

US leadership against any real de-valorization of nuclear weapons has been more or less matched by Russia and has prompted other nuclear-armed states, such as the United Kingdom and France, to begin outlining policy recommendations for a “nuclear weapon free world” that do not actually include steps for disarmament. Like the United States, these governments focus almost exclusively on strengthening or demanding new non-proliferation restrictions to be imposed on non-nuclear weapon states, while at the same time maintaining the status quo (i.e. no real progress) on nuclear disarmament.

In the context of the nuclear Non-Proliferation Treaty (NPT), this spells danger for the 2010 Review Conference. Trading disarmament rhetoric for practical measures on non-proliferation will be unlikely to satisfy most non-nuclear weapon states. Putting some arsenal reductions on the table as proof of intent to move toward eventual disarmament, while simultaneously investing heavily in nuclear weapons research and production facilities capable of building the nuclear threat anew, and far into the future, is

not disarmament. If the danger of nuclear war is to be eliminated, ceasing to plan and build for an eternal nuclear threat must come early, not late, in the process, and it will have to be linked to a more general demilitarization and demobilization of US, Russian, European, and other major military forces.

Recommendations from Chapter 1:

- If the danger of nuclear war is to be eliminated, ceasing to plan and build for an eternal nuclear threat must come early, not late, in the process, and it will have to be linked to a more general demilitarization and demobilization of US, Russian, European, and other major military forces. All states possessing nuclear arsenals should halt research, development, testing, and component production while reductions of arsenals are in progress, not afterwards. Production and research facilities should be subject to an intrusive verification regime at the earliest possible time. States should reduce nuclear arsenals in a manner that supports concurrent general disarmament of “conventional” forces.
- Civil society and government leadership in non-nuclear weapon states need to recognize the dangers of uncritically endorsing the rhetorical “vision” espoused by the Obama administration, four horsemen, and other nuclear elites, and instead push forward a concrete agenda for nuclear disarmament to be pursued in tandem with non-proliferation measures. Within this concrete agenda for nuclear disarmament, these actors should recognize the paradoxically pro-nuclear weapon aims of the United States that can be accomplished through ratification of the Comprehensive Test Ban Treaty (CTBT) under current conditions.
- Taking this into account, disarmament NGOs in the United States and other nuclear weapon states should rigorously oppose funding for nuclear weapons research, design, and production and should oppose construction of any new nuclear weapons complex facilities as a condition of CTBT ratification. If this cannot be accomplished, perhaps it would be best to forgo CTBT ratification entirely, focusing instead on budget and infrastructure developments within nuclear weapon states.

Chapter 2: NATO nuclear sharing: an anachronistic obstacle to nuclear disarmament and regional security

The North Atlantic Treaty Organization (NATO)'s 1999 Strategic Concept asserts that strategic nuclear weapons provide the "supreme guarantee" of Alliance security. Three NATO members—the United States, United Kingdom, and France—possess over 10,000 nuclear weapons between them. Four NATO members that are formally non-nuclear weapon states parties to the nuclear Non-Proliferation Treaty (NPT)—Belgium, Germany, Italy, and the Netherlands—maintain "nuclear sharing" arrangements under which they could be given wartime use of some of the 200 American-owned and controlled nuclear free-fall bombs believed to be still stored in Europe. Until 2001, Greece, and until 2005, Turkey, also participated in nuclear sharing. Neither of these countries maintain active nuclear forces now, though Turkey still hosts US nuclear weapons on its soil.

During the Cold War, NATO nuclear sharing was credited with persuading some European countries to give up their national nuclear weapons programmes and join the NPT. Twenty-five of NATO's 28 member states, nominally non-nuclear, rely on nuclear weapons for their national defence. However, this policy now stands in the way of more effective non-proliferation approaches and progress towards building a world free of nuclear weapons.

Since the end of the Cold War, NATO has dramatically reduced the number of nuclear weapons deployed in Europe. However, the weapons, policies, and doctrines that remain in place are disproportionately damaging to relations with Russia and to the non-proliferation regime. They are a Cold War anachronism that undermines European security. Furthermore, nuclear sharing practices are a *prima facie* violation of Articles I and II of the NPT because they involve the eventual transfer by the United States to non-nuclear weapon states control over nuclear weapons. The legal justification for this was set unilaterally by the United States and many states parties to the Treaty acceded to the NPT without being aware of this policy. NATO policies run counter to much of the Programme of Action adopted by NPT states parties at the 2000 Review Conference, notably the commitments to transparency, further reductions in non-strategic weapons, reductions in the operational status of these weapons, and a diminishing role for nuclear weapons in security policies.

Since 1985, many states parties to the NPT, including more than 100 nations in the Non-Aligned Movement, have criticized NATO nuclear policies and have called on NATO members to transform their doctrine and policies to bring them into conformity with their NPT obligations. There are increasing calls from government figures, parliaments, and citizens groups—including in Germany, the Netherlands, Belgium, Italy, and Turkey—for NATO nuclear weapons to be removed from Europe. The NATO Strategic Concept review, to be concluded in late 2010, provides NATO countries with an excellent opportunity to live up fully to their obligations under Articles I and II and to strengthen the NPT by allowing the loophole on nuclear sharing to be closed once and for all.

Recommendations from Chapter 2:

- NATO's non-nuclear members should cease equipping their aircraft and training to use US nuclear weapons in times of war. This would be timely and economically attractive, since all nuclear sharing nations must replace their aging fleets of aircraft over the next decade, and could use this opportunity to reorient defence budgets while giving up the anachronistic nuclear role.
- As part of its Strategic Concept review, NATO should remove US tactical nuclear weapons from Europe and end the policies of nuclear sharing and deterrence based on the potential first use of nuclear weapons. NATO should use this decision in a leverage strategy to persuade Russia to mothball and eliminate its tactical nuclear forces as well.
- These actions should be publicly announced (unlike recent withdrawals) to contribute to a positive atmosphere at the NPT. NATO members should then initiate a further programme of action to strengthen the NPT, including committing to the goal of a nuclear weapon free world and practical steps to achieve this aim.
- To begin this process, at the 2010 Review Conference, NPT states should strengthen the Treaty by declaring that it is binding on all state parties "under any circumstances". NATO member states should issue a joint declaration accepting this and stating their intention to comply promptly.

Chapter 3: US-UK nuclear sharing: deterring disarmament

For over 50 years, the US and UK governments have shared information on the design of nuclear weapons and have traded warhead components, most of which has been unnoticed and unquestioned. The dialogue and trade is not only hidden from nuclear Non-Proliferation Treaty (NPT) meetings and other disarmament conferences—it is often even concealed from diplomats in the two participating countries.

The primary mechanisms for US-UK nuclear sharing are the 1958 Mutual Defence Agreement (MDA) and its amendments—which facilitate the exchange of blueprints, special nuclear material, and components for nuclear weapons—and the 1963 Polaris Sales Agreement, which, with its amendments, has given Britain access to US Polaris and Trident missiles and all the support systems that they require.

These agreements have led to direct collaboration between the United Kingdom's Atomic Weapons Establishment (AWE) and the United States' nuclear weapon laboratories. AWE is now two-thirds owned by two American companies, Lockheed Martin and Jacob's Engineering. The US National Ignition Facility and the UK laser Orion were designed to complement each other in the development of nuclear warheads. The UK Trident warhead is both British and American in design and in terms of its components, several of which were procured from the US labs. The UK had input to plans for the US Reliable Replacement Warhead. US scientists have “borrowed” the hydrodynamic test facilities at Aldermaston. US scientists and software engineers working on simulations of nuclear explosions exchange experimental data and information with their UK counterparts. The two countries are also working together to develop new ballistic missile submarines.

The US has assisted, encouraged, and induced the UK to manufacture and deploy sophisticated thermonuclear weapons. Had the UK been a non-nuclear weapon state, this would be a flagrant breach of Article I of the NPT, which prohibits any nuclear weapon state from assisting a non-nuclear weapon state to develop a nuclear capability. The Treaty is less rigorous in regulating exchanges between those countries which acquired nuclear weapons prior to 1970. However, the Non-Aligned Movement has challenged the legality of the US-UK nuclear sharing practice. While the two countries argue that the MDA pre-dates the NPT, neither country made

this clear prior to the negotiation of the Treaty and did not formally communicate their “special relationship” to other states when they signed and ratified the Treaty.

A case could be made that the exchanges of nuclear weapon components, designs, and information are so comprehensive that they constitute the transfer of nuclear explosive devices in breach of Article I. However, even if this trade was not formally prohibited by Article I, it is damaging because it reinforces the widely-held impression that the Treaty is an unfair bargain. US-UK nuclear sharing also contravenes the obligations of both countries under Article VI, in the context of the preamble of the Treaty. The preamble recognizes the need to make every effort to avert the danger of nuclear war. The effect of the nuclear sharing arrangement is to increase rather than reduce this risk. The preamble also calls for the cessation of the nuclear arms race. The nuclear sharing arrangement has encouraged the UK to produce sophisticated nuclear weapons which Britain would not otherwise have developed, which is inconsistent with ending the arms race.

The US and UK governments are also obliged to fulfill the 13 practical steps agreed at the 2000 NPT Review Conference. In the context of their nuclear sharing arrangements, this includes in particular: increasing transparency of nuclear weapon programmes and stockpiles; reducing operational status of nuclear forces; reducing the role of nuclear weapons in security policies; and making progress towards the elimination of their nuclear arsenals.

Recommendations from Chapter 3:

- The US and UK governments should end their exchange of nuclear weapons information and materials in the interest of respecting their obligations under the NPT and promoting rather than deterring disarmament and non-proliferation.
- Other governments and civil society should hold the US and UK governments accountable to their obligations under the NPT and should encourage the US and UK governments to promote disarmament by ending their nuclear sharing arrangements.

- The US and UK governments should instead increase their collaboration on verification, non-proliferation, and disarmament technologies.

Chapter 4: Nuclear energy and the fuel chain: shackling progress toward a nuclear weapon free world

The continued reliance on nuclear power and its possible expansion to accommodate rising energy needs pose a challenge to non-proliferation and to verification of a nuclear weapon free world. With some adjustment, the same facilities and equipment used to produce low-enriched uranium fuel for power reactors can produce high-enriched uranium suitable for use in nuclear weapons. In addition, plutonium by-product from commercial reactors, once separated and reprocessed, can be directly usable in nuclear weapons.

The only truly proliferation-proof “safeguard” would be the global phase-out of nuclear power. In the meantime, proposals to mitigate the risks posed by the proliferation of sensitive nuclear technology should be explored, including a prohibition on plutonium reprocessing and on enrichment of uranium beyond 20% U-235 and the transition of nationally-controlled fuel cycle facilities to international control.

Article IV of the NPT refers to an “inalienable right” of non-nuclear weapon states to develop nuclear energy for peaceful purposes. However, any right must be exercised in conformity with international law, as is illustrated by the NPT itself, which makes the exercise of the Article IV right contingent on obligations not to manufacture or acquire nuclear weapons. More broadly, the Article IV right is subject to limits based upon the environmental and security rights of other states and the global community. Further, while states surely are entitled to develop energy sources as part of the sovereign right of development, that right is subject to restrictions—including on particular energy sources—in the common interest. Accordingly, the qualification of the NPT right to peaceful nuclear energy as “inalienable” should be understood in the context of the NPT bargain, and not as a claim that it is a fundamental aspect of sovereignty. It therefore may be limited or extinguished over time by subsequent developments and agreements.

Recommendations from Chapter 4:

- Governments should increase their support for development of commercially viable renewable and non-carbon emitting sources of energy, and for energy conservation. They should join the International Renewable Energy Agency and work for a rapid transition to the widespread and sustainable use of renewable energy worldwide.
- Governments should work for establishment of a multilateral framework for the production of nuclear fuel that precludes the construction of nationally-controlled fuel cycle facilities and transitions existing facilities to international control, pending the phase-out of nuclear power.
- Governments and industry should phase-out nuclear power and refrain from promoting nuclear power as a means to combat climate change.
- Citizens should work with each other and their governments to promote a carbon-free, nuclear-free future: see www.carbonfreenuclearfree.org for information and ideas.

Chapter 5: The US-India nuclear deal: violating norms, terminating futures

In July 2005, US President George Bush and Indian Prime Minister Manmohan Singh issued a joint statement that laid the ground for a resumption of US and international nuclear aid to India (henceforth the “US-India deal”). Such international support was crucial to the nuclear infrastructure and capabilities developed previously by India. Even the 1974 nuclear weapon test used plutonium resulting from technology and materials supplied by the United States and Canada. Following India’s 1974 test, the United States and other countries formed the Nuclear Suppliers Group (NSG) with the aim of preventing exports for commercial purposes from being used to make nuclear weapons. NSG guidelines list specific nuclear materials, equipment, and technologies that are subject to export controls.

In 2008, the NSG, under intense pressure from the US government and other countries hoping to benefit from a nuclear expansion, decided to lift its ban on nuclear trade with India. This decision constituted a blow to the nu-

clear Non-Proliferation Treaty (NPT) and global non-proliferation regime. The NSG exemption will allow India to expand its nuclear arsenal, permitting it to buy fuel for nuclear power reactors on the international market while using scarce domestic uranium in nuclear weapons production. It will also further aggravate tensions with Pakistan, which has signaled that it will respond in kind to a more ambitious Indian nuclear weapons programme. It also serves to further legitimize the possession of nuclear weapons and to encourage nuclear weapon states to ignore their nuclear disarmament obligations under the NPT.

The US-India deal is a violation of both procedure and substance of the NPT. In terms of substance, implicit in the bargain underlying the NPT is that non-nuclear weapon states would get access to nuclear technology in exchange for not acquiring nuclear weapons. Procedurally, if such a deal were to be agreed to at all, it should have been voted on by all states parties to the NPT rather than just by a minority of countries that are members of the NSG. The deal also was the last nail in the coffin of UN Security Council resolution 1172 (1998), which responded to India and Pakistan's 1998 nuclear weapon tests with a series of demands to prevent further development or deployment of their nuclear weapons.

The US-India deal, as part of the larger package of agreements made in 2005 between the United States and India, opens the door for foreign investment and sales, not only in nuclear technology and services but in everything from banking to food and agriculture to big box retail stores. The ambitions of elites in the two countries to strengthen an array of military and economic ties and the socioeconomic impact that these ties will have on the mass of the populations in India and the United States are important for understanding how globalization will continue to effect north-south relations and economic disparities worldwide. The effect of the US-India deal—or deals—will be to reinforce the kind of global economy that is most favourable to those currently in power in both countries. India's development will be shifted further towards production of goods and services that serve global supply chains that are controlled by multinational corporations and that produce goods that only a small minority of the world's population can afford, reinforcing the general trend toward extreme polarization of wealth amidst growing economic insecurity for the majority in both India and the United States.

Despite claims to the contrary by US and Indian government elites, nuclear energy will not solve the energy needs of the vast majority of India's population, especially not in a way that offers any net environmental gains. Rather, nuclear power is most useful for serving the emerging production and service centres of the global corporate capitalist metropole and the consumption needs of the elites who profit from them. Nuclear power, as the most expensive form of centralized electricity generation, is an inefficient way to deliver energy to the populations living in rural villages. Instead, decentralized, renewable energy technologies provide a better chance of building an environmentally sustainable, socially equitable world, emphasizing a healthy dignified life for all over profits and consumption for a privileged few.

Recommendations from Chapter 5:

- Decisions about the expansion of nuclear power should be made with the explicit understanding that the technology used to generate nuclear electricity is intrinsically, and under the present circumstances, inextricably, linked to the ability to make nuclear weapons.
- Actors should refrain from engaging in trade and cooperation on nuclear power technologies that flout carefully crafted non-proliferation norms, which will only strengthen the linkage between nuclear power and nuclear weapons.
- NPT member states should establish an explicit prohibition on nuclear cooperation with non-states parties.
- Governments should focus efforts on developing decentralized and local sources of energy rather than promoting nuclear power, which is not the most efficient form of energy for poor populations. Decentralized and local sources of energy also provide a better chance of building an environmentally sustainable, socially equitable world, empowering the majority to live a healthy dignified and productive life.

Chapter 6: Nuclear futures for the Middle East: impact on the goal of a weapons of mass destruction-free zone

The goal of a zone free of weapons of mass destruction (WMD) in the Middle East has been confirmed at the highest political levels and by all relevant members of the international community, including all states in the region and the UN Security Council. All states parties to the nuclear Non-Proliferation Treaty (NPT) have acknowledged this goal through the 1995 NPT Middle East Resolution and the Final Document of the 2000 NPT Review Conference. However, WMD, specifically chemical weapons, have been used in region and the majority of countries in the region have some form of WMD-related research, development, or weaponization programme. Israel is the only state in the region to possess nuclear weapons, though it is Iran's nuclear programme, including uranium enrichment, that garners hostile international attention (see chapter on "Iran's challenge to the nuclear order"). Many other states in the region have expressed interest in pursuing nuclear power to "diversify their energy options" and resent the efforts of developed states to limit their access to proliferation-sensitive technologies, which are inextricably linked to nuclear fuel and power programmes. The spread of nuclear technology will affect regional security dynamics because of its inherent duality, its political prestige, and the demonstrated influence that nuclear capabilities can have, even without acknowledgment or proof of a weapons capability.

The issue of establishing a WMD free zone (WMDFZ) in the Middle East is further complicated by the broader issue of the Middle East peace process and Israel's relations with its neighbours. Israel's position is that peace and security must prevail in the region before nuclear issues can be addressed, while the Arab states' official position is that before arms control and regional security can be addressed, Israel's nuclear weapons must be dealt with.

In order to prevent nuclear proliferation and make concrete progress on nuclear disarmament in the Middle East, the prevailing concerns of each of the relevant players must be addressed. Peace process and WMDFZ efforts must be complemented by a process that addresses the past as well as the human, social, and psychological elements that undermine security. Political demands will need to be constantly checked against underlying security concerns, threat perceptions, and political and social realities. This process

will also require attention to energy needs and related security concerns, which can best be addressed through a combination of energy efficiency measures and renewable energy sources, primarily solar and wind.

Recommendations from Chapter 6:

- Governments in the region need to undergo a renewed assessment of the threats they perceive from each other and of the best approaches to defusing these threats. They should address each other's prevailing concerns with an aim to bolstering confidence that their security concerns can be addressed through the political process and show flexibility to create a real political opening. As a starting point, all governments in the region should make unilateral categorical commitments to no possession or no first use of WMD.
- Outside powers also have a responsibility in identifying and solving these threat perceptions and should particularly focus on avoiding double-standards, inconsistent policies, and practices that contribute to conflict in the region.
- Any country considering a nuclear power programme should undertake a comprehensive and critical review of potential proliferation, economic, environmental, and health consequences, as well as alternatives such as renewable energy. The potential contribution of wind and solar energy sources in the Middle East deserve increased support for research and development.
- All governments should examine the possibility of a verified suspension of their fuel cycle activities as a confidence-building measure, including the exploration of creative verification mechanisms that prevent the disclosure of sensitive or proliferation-prone information while establishing and maintaining confidence in adherence to commitments.
- The political peace process should provide opportunities for addressing the human, social, and psychological elements that undermine security, including the opportunity to voice historical grievances. For example, governments and/or non-governmental organizations could establish a

forum for airing past injustices; identify mechanisms for the promotion of social development and human rights; and undertake joint economic programmes around sustainable energy for the region.

- In the NPT context, all NPT states parties should consider steps that could pave the way toward implementing the 1995 Middle East resolution, such as convening a conference to explore the conditions necessary for achieving a zone in the Middle East free of nuclear and other weapons of mass destruction and appointing a standing NPT body to follow-up intersessionally and support efforts toward these ends.

Chapter 7: Iran's challenge to the nuclear order

Despite repeated confirmation by the International Atomic Energy Agency (IAEA) that no nuclear materials have been diverted from its indigenous nuclear fuel cycle programme, Iran is widely considered to be pursuing the development of nuclear weapons and is subsequently the target of ever increasing economic sanctions. No concrete evidence exists that Iran has either an atomic explosive device or an active programme to manufacture one. Iran's declared facilities related to uranium enrichment remain subject to IAEA inspection and accountancy. With notable exceptions, nearly all of the commentary directed to Iran's programme revolves around issues of "breakout," numbers of centrifuges, the launching of new ballistic missiles, or its non-compliance with UN Security Council resolutions demanding the cessation of all uranium enrichment.

Detached from historical context, Western media (and most politicians) portray Iran's efforts as one-sided, aggressive, threatening, irrational, and merely nationalistic. This viewpoint has only been exacerbated since June 2009, when Iran's internal turmoil following the elections exposed substantial cleavages within the Islamic Republic's political society. The question of Iran's ostensible quest for nuclear weapons is based upon perception and assumptions that are far more notional than objective. Unfortunately, further recent events have added to the West's apprehensions of an Iranian nuclear weapons programme, including the revelation of a second, underground uranium enrichment facility in late 2009 at Qom, and the Iranian

government's announced intention to enrich uranium up to 20% for use in a research reactor.

Iran's defence of its uranium enrichment programme, with assertions of national sovereignty and its rights under Article IV of the nuclear Non-Proliferation Treaty (NPT), is too easily misconstrued as evasiveness and secretiveness in a public discourse dominated by strident and increasingly bellicose Western voices. Technically, Iran has not yet violated any treaty, including the NPT. Yet as long as its government exhibits mannerisms consistent with a secret intent to develop nuclear weapons, the West's *impressions of Iran's unspoken intent* will take centre stage over whatever direct evidence (or lack thereof) is obtained by the IAEA and state intelligence agencies.

Iran presents a crisis, but also an opportunity, to re-examine the post-Cold War nuclear order, possibly with a more pragmatic endpoint of non-proliferation that involves, rather than exempts, the established nuclear weapon states that have ratified the NPT. Such a re-examination must confront the causes for the robust military-industrial interests in these countries, and in the United States in particular. It must examine the role of nuclear weapons in international relations, including the hard question of why, after so many years and statements of good intentions, nuclear weapons are so organically bound up as a lodestar measure of superpower status.

The global nuclear order presently accepts the *permanent* and preeminent status of nuclear weapon states and their nuclear institutions. Within this global order, the vast nuclear infrastructure is institutionally *animate*, capable of sustaining its own interests regardless of an external threat to which thousands of nuclear warheads have any relevance. These nuclear institutions operate much the same as large private corporations, serving constituents, seeking new missions, and acquiring political influence.

With the *permanency* of nuclear weapons institutions inevitably comes nuclear weapon proliferation. Since the first five acquired nuclear weapons, several others have tried to develop them—and some have succeeded. The superpowers have indicated that they are prepared to “live with” the second generation nuclear-armed states India, Israel, and Pakistan, not only because they believe they are powerless to do anything about them, but also because these countries for now are prepared to live within the unspoken rules of the established order, even though they have shunned the NPT and IAEA safeguards regime. This condition erodes the NPT as a non-proliferation instrument.

In contrast, Iran's uranium enrichment programme (subject to IAEA verification) is considered unacceptable and a threat to world peace in the Western polity. Casting Iran in such a light serves to enhance the position of elites in the US, France, and elsewhere with a stake in the reinvigoration of the nuclear weapons complex and related military sectors such as the manufacturers of global strike dual-use systems and anti-missile defence. On the diplomatic side, the United States' constant message that Iran is aggressively acquiring nuclear weapons has corroded domestic willingness to ratify the Comprehensive Test Ban Treaty and is exploited to justify American intransigence in considering further "concrete steps" to negotiate disarmament specified by Article VI of the NPT.

The terms of the NPT itself contribute to international uncertainty concerning non-proliferation. If the nuclear weapon states intend to promote the spread of peaceful nuclear energy within the NPT framework, that is a bed they have to be prepared to lie in. If the standard for a permitted atomic programme is whether you are considered an enemy or friend, this is not a legitimate universal treaty goal. Furthermore, not all articles of the NPT are respected equally. The nuclear weapon states have largely considered the disarmament directive of Article VI like a feel-good suggestion. At the same time, the non-nuclear weapon states have performed well under safeguards agreements with the IAEA. To date, the significant proliferators have been non-NPT parties. This imbalanced implementation of the Treaty cannot sustain itself, especially in the face of hypocritical, subjective accusations against other states parties to the Treaty.

The diplomatic and sanctions war directed to Iran further erodes the IAEA safeguards process. When subjective intent overpowers objective facts, states that are trying in good faith to ascertain precise "rules of the road" on regulated and declared nuclear activities will undoubtedly suspect that political interests are superseding technical guidance. The IAEA's verification that all declared nuclear material is accounted for has taken second chair to considerably less precise observations that Iran is "less cooperative" or provided "inadequate responses" to legacy issues. Simply denying the good faith of the opposite party in negotiations only guarantees a walkout. Punitive measures, also predicated on non-facts, only exacerbate the potential for failure.

Recommendations for Chapter 7:

- Within the United States and the E3 countries, opinion leaders and the public need to educate themselves and vigorously challenge the prevailing consensus among most political and media elites that Iran is either arming itself with nuclear weapons, or is on the verge of doing so.
- Iranian leaders can exhibit more genuine cooperation with the IAEA and transparency around their uranium enrichment programme. Instead of belatedly disclosing new programmes, Iran's government needs to exercise good faith in informing the Agency as soon as a decision to proceed with construction is taken. Whether or not such late disclosure is "technically" consistent with prior agreements, Iran's situation is beyond such fine lines and its leaders must exhibit good faith.
- The United States and Iran need to continue engaging in direct talks without preconditions and with the participation of European and Russian negotiators, to achieve a result that is consistent with national rights under the IAEA.
- Iran should reaffirm its prior Non-Aligned Movement statements and its official and secular commitments to forswear atomic weapons and promote regional and universal nuclear disarmament.
- The cycle of sanctions premised upon Iran's pursuit of nuclear enrichment should be suspended.
- The IAEA must remain technically neutral, employ sound expertise, and resist efforts to expand its jurisdiction based upon influence by the declared nuclear weapon states.
- The US and Iran should take steps to de-militarize the Persian Gulf, particularly in the Strait of Tiran.
- The legal non-proliferation regime, and the NPT in particular, must be rigorously examined to address the permanence of nuclear weapon institutions and to discount the value of such weapons in international relations.
- Southeast and South Asian nations, without exception, should commit to a specific programme to defuse nuclear tensions and avoid a catastrophic

arms race, accompanied by a commitment by the nuclear superpowers to honour such programmes and not introduce nuclear weapons in the region or sponsor/assist local nations to stockpile theirs.

Chapter 8: Missiles and other threats: the illogic of missile “defence” and space weapons

Missile proliferation and its link to weapons of mass destruction and space weapons remains an international security concern. Ballistic missile technology has spread to more than 30 countries. The five nuclear Non-Proliferation Treaty (NPT) nuclear weapon states, along with India, Iran, Israel, North Korea, and Pakistan, have produced or flight-tested intermediate-range ballistic missiles (ICBMs) with a range of between 1000 km and 5500 km. All these states continue to develop and test their missile arsenals.

Prospects will remain dim for reducing, rather than merely slowing the growth of, missile threats so long as those states that already possess sophisticated missile capabilities continue to improve them. And in missiles and other long-range delivery systems, as in most areas of military technology, the United States far outstrips all other states in the scope and ambition of its efforts. At the same time, the United States has sought to counter the growing missile threat with improved capabilities for preemptive strikes and for missile defence, both of which are fuelling the missile arms race. The latter is not only outrageously expensive and prone to repeated development setbacks, but also impedes both nuclear and conventional disarmament and arms control efforts on a broader scale. In particular, the Russian government has objected strongly to US plans to establish missile defence systems in Europe, arguing that the system could be used against Russia's ICBMs and thus would undermine strategic stability. The missile defence issue has been one of the biggest obstacles in the negotiation of a new Strategic Arms Reduction Treaty between the US and Russia.

There is also a dangerous synergy between the development of missile defence and the threat of space weaponization. Since both missiles and missile defences have a capability to attack satellites, their control relates directly to the protection of space-based objects. Yet the high-tech appeal particularly for the United States of both missile defences and military space gener-

ally as “the ultimate high ground” help to sustain budgets for technologies such as space launch and hypersonic flight, contributing to a steady flow of incremental improvements in already highly dangerous and inherently destabilizing strategic weapons, such as highly accurate long-range missiles.

The international community has long been calling for the prevention of an arms race in outer space, seeking to strengthen international space law and arms control in space by introducing provisions against the weaponization of space. Comprehensive space arms control would seek to ban weapons against objects in space and from objects in space against any target, and would prohibit development, testing, and deployment of such systems altogether before more advanced weapons are tested or become operational. A comprehensive approach could integrate risk reduction measures and partial agreements in a phased approach. This would be also attractive to the general public and require an unprecedented degree of international cooperation.

Recommendations from Chapter 8:

- The United States should abandon its quest to maintain long-term military supremacy through modernization and development of missiles and other strategic delivery systems, anti-missile systems, and possible deployment of space-based weapon systems. As a starting point, the United States should re-join the Anti-Ballistic Missile Treaty.
- All governments should support the establishment of international controls on delivery systems and anti-missile systems as part of a global process of reducing and eliminating nuclear forces, banning weapons in space, limiting strategic weapons generally, and implementing a policy of “non-offensive defence”.
- To this end, governments should pursue a global treaty controlling missiles, and, as an interim step, explore a missile flight test ban, which would prevent new missile designs and limit modification of traditional technology.
- Governments should work with commercial and civilian space operators to develop best-practice “rules of the road” for outer space activi-

ties. They should also commit to transparency- and confidence-building measures guiding space activities while simultaneously discussing the nuts and bolts of a legally-binding treaty that would prohibit the weaponization of outer space.

Chapter 9: Dismantling discourses: nuclear weapons and human security

When the Cold War ended, nuclear disarmament advocates and the general public everywhere were relieved, believing that the threat of a nuclear holocaust was over. But the military-industrial-academic complexes that built the bombs and articulated strategies for their use survived and have even flourished since then, conjuring up new justifications to project the nuclear weapons enterprise into the future. The problems posed by nuclear weapons for the survival and security of our planet have not diminished.

Nuclear weapons act as an existential threat to humanity and life on this planet. The security of human beings is undermined by the creation, existence, and potential use of nuclear weapons. Yet nuclear weapons are nevertheless a central feature of the mainstream “national security” discourse in countries that possess them or shelter under the umbrella of those who possess them. “National security” thus refers to the security of the elites who benefit economically and politically from maintaining the nuclear military-industrial-academic complexes.

Nuclear weapons are instrumental for maintaining the structural inequalities between the elite, technologically-proficient classes and the rest of humanity, between those with power, money, and access and those without. Nuclear weapons establishments constitute a formidable set of institutions that are in turn part of a far broader constellation of powerful institutions that see their interests served by military power underwritten by nuclear weapons. This highly militarized order also benefits those who profit from all the other elements of an economically stratified world maintained in large part by force or threat of force.

In 2008, global military expenditure reached approximately \$1464 billion, which represents a 45 percent increase over the last decade and comprises 4.2 percent of the world’s gross domestic product—or \$217 per per-

son. While military expenditure increases every year, investment in conflict resolution, peace-building, and development lags far behind. For example, in 2008, Official Development Assistance amounted to only about \$145 billion. The UN Development Programme has found that an additional \$40 billion a year would be enough to achieve and maintain many if not all of the Millennium Development Goals. Yet, in 2008, the United States spent much more than that on nuclear weapons-related programmes alone.

Human security cannot be brought about through nuclear weapons and military might. It can only be ensured through the equitable distribution of adequate food, shelter, clean water and air, health care, education, and even the arts. Human security requires an environmentally sustainable, socially equitable world, empowering the majority to live a healthy, dignified, and productive life. If funding was shifted from armaments to fulfilling basic human needs, some of the root causes of violence would at the same time be addressed, thus reducing the excuse for military action or other expressions of violence.

Non-governmental organizations have a special responsibility to articulate a programme for a nuclear weapon free world that takes into account the economic, health, environmental, and democratic imperatives for the elimination of nuclear weapons and that identifies and addresses the root causes of the maintenance of nuclear weapons. NGO advocacy for nuclear disarmament must be linked to local, national, and international multi-issue campaigns, coalitions, and social movements promoting social justice, environmental protection, democratization, economic development, respect for human rights, conflict resolution, and comprehensive disarmament.

Recommendations from Chapter 9:

- Governments and NGOs should make nuclear disarmament the leading edge of a global trend towards demilitarization and redirection of military expenditures to meet human and environmental needs.
- The financial and human resources currently used to develop and maintain nuclear weapons systems should be used instead to meet social and economic needs consistent with the United Nations Millennium Development Goals.

- Only a comprehensive view of disarmament based on human security will lead to progress toward an equitable and secure nuclear weapon free world. The concept of security should be reframed at every level of society and government, with a premium on universal human and ecological security, multilateralism, and a commitment to cooperative, nonviolent means of conflict resolution. Civil society should actively seek to create a new discourse for nuclear abolition advocacy that illuminates the relationship between nuclear weapons and the structures that maintain them and that identifies the beneficiaries of nuclear weapons. Governments should reframe their approach to disarmament, employing a humanitarian perspective rather than a military one.
- Nuclear disarmament activists should link their efforts with those of activists working on a broad range of issues to draw a complete picture of security, peace, and justice, forging a stronger, more unified call for human and ecological security.
- NGOs should call on governments, the UN Security Council, and civil society to report on ways and means for implementing Article 26 of the UN Charter.
- All governments should contribute data annually to the UN Instrument for Reporting Military Expenditure and the UN Register for Conventional Arms and constructively participate in efforts to enhance and upgrade both instruments.

Chapter 10: The relevance of gender for eliminating weapons of mass destruction

Ideas and expectations about gender are woven through the professional and political discourses that shape all aspects of how nuclear weapons are considered, desired, and addressed. To address nuclear disarmament and arms control issues more effectively, it is essential to take into consideration how armament and disarmament policies and practices are influenced by ideas about masculinity and femininity. These qualifications are characterized socially and culturally to the effect of ascribing traits and values to male

and female bodies and unequally distributing power among men and women. Ideas about gender not only shape how we perceive men and women, they shape how we see the world and thus have political effects.

The political context within which nuclear weapons are situated is deeply gendered, as are the practical and symbolic dimensions of the weapons themselves. Political actors incorporate sexual metaphors in their representations of nuclear weapons as a way to mobilize gendered associations and symbols in creating asset, excitement, support for, and identification with the weapons and their own political regime. On the other hand, disarmament and peace are feminized and devalued as unattainable, unrealistic, passive, and weak.

Nuclear weapons are enshrined as an emblem of power not as a natural fact, but as a social one, produced by the actions of states and the discourses their elites develop to discuss nuclear weapons. When governments act as though their power and security are guaranteed only by a nuclear arsenal, they create a context in which nuclear weapons become the ultimate necessity for, and symbol of, state security. And when they work to ensure that other countries do not obtain nuclear weapons, they create a context in which they are perceived as keeping other nations down, to subordinate and emasculate the non-nuclear weapon states. The prevailing arguments against proliferation draw on Occidentalist portrayals of third world actors through the medium of gender-laden terminology. The terms of the debate are constructed to normalize and legitimate the current nuclear weapon possessor states while controlling and limiting the “uncivilized,” “irrational” others. This patronizing, ethno-racist approach to non-proliferation only serves to increase the risk of proliferation and reinforce the symbolism of nuclear weapons as the ultimate instrument of state power.

Ideas about gender shape, limit, and distort the discourses that have been developed to think about nuclear weapons and the national and international political processes through which decisions about nuclear weapons are made. They exclude a whole range of relevant inputs that could effectively amplify and deepen arguments for disarmament. Gender awareness makes it possible to confront traditionally constructed meanings and redefine terms such as “strength” and “security” so that they more appropriately reflect the needs of people and reveal the ways in which the notions of militarized security are underwritten and supported by an image of hegemonic masculinity.

Recommendations from Chapter 10:

- All government and civil society representatives should consider gender issues in their deliberations and use the tools of gender analysis to reform traditional behaviours and values expressed in negotiations and discussions on nuclear weapons.
- All governments should implement UN Security Council resolution 1325, including through increasing the participation by women at all decision-making levels, particularly in institutions and bodies dealing with security and disarmament.

Chapter 11: Reaching nuclear disarmament

While the nuclear weapon states parties to the nuclear Non-Proliferation Treaty (NPT) claim to be in compliance with their disarmament obligations under Article VI of the Treaty, under current official plans, they all intend to rely on large, modernized nuclear forces for decades to come as a central component of their security postures. Based on past performance and present plans, reductions in arsenal size appear more a matter of efficiency and rationalization than working for marginalization and elimination of nuclear weapons. The 1995 and 2000 NPT Review Conferences, along with the 1996 advisory opinion of the International Court of Justice, have decisively shown that the NPT requires the nuclear weapon states to eliminate their arsenals, not simply reduce them.

The most important means of revitalizing the NPT and the non-proliferation regime is good-faith implementation of the disarmament obligation as specified in 1995 and 2000. At some point, this will require an agreement or agreements that complete that obligation, integrate states outside the NPT, and institutionalize the elimination of nuclear weapons globally. In the meantime, what is most important is that disarmament—unilateral, bilateral, or multilateral—actually occurs and that investment in the production and design of nuclear weapons ceases.

In the UN and NPT context, much emphasis is placed on bilateral and multilateral negotiations as the path to accomplishing disarmament. Legal-

ly-binding agreements are necessary to make permanent and institutionalize disarmament measures. They are not, however, necessarily the best means to set in motion all aspects of the process of marginalization and elimination of nuclear forces. Negotiations can serve as a time-consuming detour, with unnecessary linkages to other issues, and with legislative approval becoming an occasion for forces opposing disarmament to extract a very high price in terms of maintaining design, production, and replacement capabilities for both warheads and delivery systems. It is the result of negotiations—their success—that provide the touchstone for assessment of progress, not negotiations themselves. States can take steps unilaterally, or coordinated politically with other states, on matters such as doctrine, reductions, and halting modernization.

A key step toward multilateral nuclear disarmament is for all nuclear weapon states—including those outside of the NPT—to cease all research, development, modernization, and production of nuclear weapons. In the United States, however, the trend is in the opposite direction. Strong efforts are already underway in the United States to tie ratification of the Strategic Arms Reduction Treaty (START) replacement and the Comprehensive Test Ban Treaty (CTBT) to commitments to modified or new-design warheads and new weapons production facilities, and also to modernization of delivery systems. The Obama administration's FY2011 budget request includes about a 10% increase in funding for nuclear weapons; its goal is to increase the nuclear budget by \$5 billion over the next five years.

Trading some arms control agreements or arsenal reduction for modernized nuclear weapons research and production facilities capable of building the nuclear threat anew is not disarmament. If the danger of nuclear war is to be eliminated, ceasing to plan and build for an eternal nuclear threat must come early, not late, in the process.

To this end, the role and value assigned to nuclear weapons by their possessors must be diminished. Security doctrines that include a prominent role for nuclear weapons signal the alleged security benefits of nuclear weapons derived by major powers and therefore promote proliferation. Until deterrence theory and associated active roles for nuclear weapons in strategic policies are left behind, nuclear weapons will continue to have perceived value and thus will be difficult to reduce, let alone eliminate. The policies of nuclear weapon states, and of the North Atlantic Treaty Organization

(NATO), should pave the way for the only lawful stance: that the weapons will not be used in any circumstance whatever. With regard to the geopolitical underpinnings of nuclear postures, it is particularly important that US allies communicate that “extended deterrence” is not a justification for an expansive role of nuclear weapons.

Fundamentally, only a binding global agreement can firmly establish the obligations not to possess, use, or threaten to use nuclear weapons. Unquestionably, there are major challenges to overcome in developing an institutional system that would reliably provide for verified and enforceable elimination of nuclear warheads and delivery systems. It is worth considering reaching agreement, through a framework approach, on the basic norms prior to detailed negotiation of all matters relating to verified elimination and its enforcement.

The call for undertaking a systematic approach to nuclear disarmament now reflects a mature understanding of the means to be employed and the challenges to be met. Governments and civil society should press for the NPT Review Conference to adopt a commitment to commencement of preparatory work, deliberations, and negotiations on a universal convention or framework of instruments for the sustainable, verifiable, and enforceable elimination of nuclear weapons.

Recommendations from Chapter 11:

All states with nuclear weapons should:

- reaffirm the NPT unequivocal undertaking to accomplish the total elimination of nuclear arsenals;
- reaffirm the principle of irreversibility and commit not to increase or modernize their nuclear forces and capabilities;
- reaffirm the principles of transparency, verification, and accountability in fulfilling disarmament obligations and agreements;
- declare that they will not design, develop, or produce new-design nuclear warheads, or modify or modernize existing warheads to add military capabilities;

- halt research, development, testing, and component production, with production and research facilities subject to an intrusive verification regime at the earliest possible time;
- close and clean up all nuclear test sites;
- commit to regular reporting on nuclear warhead and delivery system arsenals, fissile material stockpiles, spending on nuclear forces, and steps and plans for disarmament;
- reaffirm the NPT commitment to a diminishing role for nuclear weapons in security policies as a step toward non-use in any circumstance and the elimination of the weapons;
- agree to legally-binding security assurances not to attack non-nuclear weapon states with nuclear weapons;
- commit not to use nuclear weapons for pre-emptive strikes;
- reject counterforce and countervalue doctrines;
- phase out “extended nuclear deterrence” and strengthen regional cooperative security mechanisms;
- end deployment of nuclear weapons outside the territory of possessor states;
- reaffirm the NPT commitment to reduce the operational status of nuclear weapon systems and implement steps to take nuclear forces off quick-launch status; and
- commit to preparatory work for a nuclear weapons convention or framework agreement.

The US and Russian governments should reduce their arsenals on their own in a transparent and verified manner. To build a more stable bilateral relationship, and to move toward global nuclear disarmament, unilateral and bilateral reductions should achieve the following:

- maintain transparency and predictability;
- mandate steady reductions in all nuclear warheads, deployed and reserve, strategic and non-strategic;

- mandate reductions in strategic delivery systems, whether for nuclear or non-nuclear weapons, and prohibit multiple warhead missiles;
- require verified dismantlement of all excess warheads and delivery mechanisms;
- provide for international monitoring in addition to bilateral verification, to establish accountability to the entire community of states; and
- reach levels of total warheads low enough to allow the next phase to encompass other states possessing nuclear arsenals. All warheads—deployed, spare, reserve, awaiting dismantlement, etc.—must be counted in the total. The total likely will need to be in the hundreds on each side to attract meaningful participation from other possessor states, which should be consulted on this key point.

All governments should:

- negotiate for a fissile material (cut-off) treaty that bans production of fissile materials for nuclear weapons, brings all weapons-usable materials under safeguards, and fosters reduction of existing stocks; and
- renounce and/or oppose nuclear sharing arrangements and “extended nuclear deterrence”; and
- commence negotiations on a global treaty on missiles and anti-missile systems.

All governments and civil society actors should:

- oppose conditioning approval of the CTBT on deals for entrenching and expanding weapons complexes, retaining the option of designing and manufacturing modified or new-design warheads, and modernizing delivery systems;
- call for the closure of all nuclear test sites;
- seek an NPT commitment to establishment of a UN-based, comprehensive accounting system covering size of nuclear arsenals, nuclear weapon delivery systems, fissile material stockpiles, and spending on nuclear forces;

- demand a commitment not to modernize nuclear weapons or related infrastructures;
- support an NPT commitment to initiatives to create a zone free of nuclear, biological, and chemical weapons in the Middle East;
- work for cooperation among existing nuclear weapon free zones and the creation of new zones; and
- support an NPT commitment and a UN General Assembly resolution to commence preparatory work, deliberations, and negotiations on a universal convention or framework of instruments for the sustainable, verifiable, and enforceable global elimination of nuclear weapons.

Chapter 12: A nuclear weapons convention: framework for a nuclear weapon free world

A nuclear weapons convention (NWC) is conceptualized as an international treaty designed to prohibit all aspects of development and testing of nuclear weapons and to prevent the spread of technology and know-how in relation to the weapons. The convention would provide a framework for the elimination of nuclear weapons. It would also be the implementation of the universal societal condemnation of nuclear weapons and the codification of the customary norm against all weapons of mass destruction. The model NWC, developed by experts in law, science, disarmament, and negotiation in 1997 and updated in 2007, is a comprehensive draft of the international nuclear disarmament agreement required to achieve the nuclear weapon free world envisioned by the nuclear Non-Proliferation Treaty (NPT).

The aim of an NWC is not to provide an alternative to the NPT, but rather to develop an additional instrument that would build upon the NPT and other nuclear non-proliferation and disarmament measures. The model NWC provides a nondiscriminatory approach to nuclear disarmament and non-proliferation and opens the door for immediate engagement by the non-NPT nuclear weapon states. It has been designed to overcome the divide between incremental and comprehensive approaches to a nuclear weapon free world by providing an umbrella or goal for individual steps.

If the NPT is the “cornerstone” of the nuclear non-proliferation and disarmament regime, subsequent related treaties have provided mortar with which we can now secure the regime’s “capstone,” a nuclear weapons convention.

Recommendations from Chapter 12:

- Citizens should encourage their governments to work towards an NWC and educate each other about the benefits of abolishing nuclear weapons globally. Civil society groups should push the goal of a NWC into the mainstream and onto the negotiating agenda, where they can engage with governments on the legal, technical, and political aspects of such a convention. Before the Review Conference, civil society groups should push governments to identify the need for some sort of nuclear prohibition treaty in their statements and working papers. After the Review Conference, civil society groups should participate in the Nuclear Abolition Action Day on 5 June 2010 to inspire and keep up the momentum for a NWC.
- After the Review Conference, a group of like-minded states should initiate a series of preparatory conferences to examine the political, legal, technical, and institutional requirements for an NWC.
- The NWC and the elimination of nuclear weapons must be grounded in a broader movement toward political, economic, and social justice and equity in which the majority of the world’s people are empowered to live a healthy, dignified, and productive life. The elimination of nuclear weapons must serve as the leading edge of a global trend towards demilitarization and redirection of military expenditures to meet human needs and restore the environment.

Chapter 13: Toward a fissile material (cut-off) treaty

Controlling fissile materials has long been seen as central both to nuclear disarmament and halting proliferation, and, more recently, to reducing the risk of nuclear terrorism. The five nuclear weapon states parties to the nucle-

ar Non-Proliferation Treaty (NPT) have stopped highly enriched uranium (HEU) and plutonium production for weapons. Israel, India, and Pakistan continue to produce fissile materials for weapons purposes, and North Korea resumed production in 2009 after a two year suspension. The civilian stockpile of plutonium, which is weapon-usable, is growing at a significant rate because of large-scale reprocessing of spent fuel from nuclear power plants in France, India, Russia, and the United Kingdom.

In 2009, the Conference on Disarmament (CD) agreed to a programme of work that included a mandate for negotiating a fissile material (cut-off) treaty, or FM(C)T. However, the CD was unable to implement this programme before the end of the 2009 session or to adopt a new programme in early 2010. The core of the problem is a difference among states over the scope of a possible treaty, most notably whether and how the treaty might include the safeguarding and reduction of existing fissile material stockpiles. Pakistan's delegation in particular has been obstructing the start of negotiations, citing concerns about India's larger fissile material stockpiles.

A minimal FM(C)T, as sought by some nuclear-armed states, would aim only to prohibit production of fissile materials for nuclear weapons. This would place nuclear-armed states in the same position as the non-nuclear weapon states in the NPT as regards production of fissile material for weapons. However, an FM(C)T limited to ending production for weapons would serve to freeze the existing situation of nuclear-armed states holding stocks of fissile materials in weapons as well as stocks in the form of civilian fissile materials, weapon-origin material declared excess, and military reactor fuel reserves. Today, these non-weapon stocks together are sufficient to make tens of thousands of nuclear weapons.

A draft treaty proposed by the International Panel on Fissile Materials (IPFM) bars the use for weapons of civilian fissile materials, material declared excess, and military reactor fuel reserves. It would not compel reduction of nuclear weapons or weapons-usable stocks, but provides a mechanism for bringing under safeguards material that becomes excess due to reductions in warheads and in stocks dedicated for weapons uses. An FM(C)T that placed non-weapon stocks under safeguards would fulfill the commitment by NPT nuclear weapon states at the 2000 NPT Review Conference to place under safeguards all fissile material designated as no longer required for military purposes.

An FM(C)T that imposed safeguards on all non-weapon stocks would be verifiable. All the civilian activities in the nuclear armed states would be subject to the same IAEA safeguards used in non-nuclear weapon states, which aim to ensure fissile materials are not diverted from peaceful purposes to nuclear weapons programmes and that there were no undeclared fissile material production activities. Verification challenges involving weapon-origin material could be met by using techniques developed from the 1996 US-Russia-IAEA Trilateral Initiative. There would be need also to establish a system of managed access for inspectors to nuclear weapon sites and military reactor fuel facilities. There is a precedent for this in the Chemical Weapons Convention. The use of HEU for naval fuel would also pose a new verification challenge. Nuclear navies that use highly enriched uranium would need to agree to a system of safeguards or, like France, convert to low-enriched uranium naval fuel.

Recommendations from Chapter 13:

- States should commit at the Conference on Disarmament to implement the NPT 2000 Review Conference decision to begin negotiations on a verifiable FM(C)T with a broad scope—taking into account both disarmament and non-proliferation objectives—and complete them within five years.
- In parallel with an FM(C)T, states should declare a moratorium on all further separation of plutonium and all production of highly enriched uranium (HEU) and agree to phase out all such production for military and civilian use. This will prevent the stockpiling of weapons-usable fissile material as part of naval propulsion and civilian nuclear energy programmes after an FM(C)T comes into force.
- To assist the process of FM(C)T verification and to lay a basis for the future verification of nuclear disarmament, states should make complete and comprehensive public declarations of their HEU and plutonium stockpiles and production histories.

Chapter 14: Learn, adapt, progress: lessons from Ottawa and Oslo

While unique, the Ottawa and Oslo processes (leading to the Anti-Personnel Mine Ban Treaty and the Convention on Cluster Munitions, respectively) offer potential lessons for multilateral action in other areas of disarmament and arms control. Both processes established a strong link between specific weapons and their impact on human beings. Both processes focused on research, data, and field expertise to ground its work. Both processes were characterized by broad partnerships between civil society organizations, governments, and intergovernmental organizations, which advanced a common goal using the various tools at the disposal of the different actors. Together, these factors contributed to a shift in who bore the “burden of proof” in terms of the legitimacy of these weapons: producers and possessors were challenged by evidence that belied their claims about the versatility and acceptability of anti-personnel mines and cluster munitions. Discourse shifted from focus on the military utility of or necessity for such weapons to a broader one encompassing the political and legal acceptability (or not) of their use. All of this contributed to collective reframing to a state in which prohibition of the weapon in question could be envisaged.

These experiences are relevant to other international security issues, not least for nuclear disarmament efforts. It has also been observed that they are germane in the context of regulating the global trade in conventional arms, reducing the global burden of armed violence, advancing a science of human security, stigmatizing the use of explosive force in populated areas, and dealing flexibly with weapons contamination. Of course, ad hoc multilateral initiatives like the Ottawa and Oslo processes are not in themselves a comprehensive prescription for strengthening disarmament or humanitarian law or alleviating human insecurity. Both do, however, show that progress is possible. And they underline that “root and branch” reform of multilateral disarmament and arms control mechanisms is needed to foster creative problem-solving and better ensure that processes are aligned to security goals rather than simply shaped by the dictates of established process or held hostage by those who wish to obstruct meaningful progress.

Recommendations from Chapter 14:

- When thinking about their work, government representatives working on nuclear disarmament issues should consider what might be learned from recent international initiatives to address the human impacts of other weapons. These include the Ottawa and Oslo processes on anti-personnel mines and cluster munitions respectively, which each “re-framed” the discourse and acceptability of these weapons in broader terms than before. Although these are, of course, very different from the nuclear disarmament context, focusing on evidence of the human impacts of weapons alongside their purported military advantages or technical characteristics, engaging civil society, shifting the burden of proof for the continued acceptability of a weapon onto users and producers, and building legitimacy through inclusion of a diverse range of actors were all important to success on these issues. These factors also helped in overcoming the obstacles in traditional multilateral forums preventing effective progress in addressing the problems the existence and use of such weapons create.
- Civil society actors should also consider lessons from other international initiatives to deal with armed violence, with attention to those related to campaigning and building alliances. Gaps between various communities, like those between practitioners active in disarmament and those working in areas such as development, public health, and the environment should be bridged. Greater informal dialogue and a common vocabulary would help.
- Both governments and civil society should develop a discourse that draws attention to the impact of the development, production, deployment, and use of nuclear weapons rather than accepting untested claims or assumptions favouring inertia.