This conference has been examining the pathology of nuclearism in a disorderly world and seeking ways of eradicating the scourge of nuclear war. To put it bluntly, the world is in a mess. Throughout history, humankind has always survived pandemic disease, recurrent wars and natural disasters. Today, global trends strongly indicate that ecologically imprudent human activity is causing irreversible environmental damage and climate change, and that a growing culture of militarism and war, waged with increasingly destructive weapons, threatens to destroy civilization. In the past, humanity has muddled along from crisis to crisis, but we are now at a point where muddling along is no longer a viable option. Today, we face two serious threats to human and planetary survival: climate change and nuclear war.

Climate change is now visible and palpable, forcing governments and the public to reduce greenhouse gases. It would be reprehensible to wait for a nuclear explosion to occur, before we move resolutely to abolish nuclear weapons. We have lived with nuclear weapons for more than sixty years, without nuclear war, but we cannot remain complacent any longer. During the Cold War years, it was sheer good fortune, not good management, that an ideologically divided world avoided ‘mutual assured destruction.’ Politicians, military leaders and war-planners, on both sides, were locked into an insane strategy of mutual overkill and were prepared to gamble with global survival. Military mindsets spawned a nuclear arms race, which peaked at 70,000 nuclear warheads, and fashioned the doctrine of nuclear deterrence which rested on a knife-edge and very nearly failed.
The Cold War is over, but we still hear the depraved mantra of nuclear deterrence, knowing that deterrence can only succeed in an error-free and rational world, and will therefore ultimately fail in the real world. We continue to live with a deadly residue of 27,000 nuclear warheads, three thousand of which are still on high alert, primed for launch on warning in fifteen minutes. New nuclear policies have expanded the utility of nuclear weapons from deterrence to complementing conventional weapons on the battlefield. The world must no longer tolerate nuclear weapons as chips in an end-game of nuclear roulette. The Canberra Commission on the Elimination of Nuclear Weapons warned that “the proposition that nuclear weapons can be retained in perpetuity and never used, accidentally or by decision, defies credibility.”

It is time to redefine security in terms of cooperative, human security - security without war and bloodshed, security without nuclear weapons. Physicians know that any medical response to the pandemic of nuclear war would be futile and that the only solution is the abolition of nuclear weapons.

**Nuclear threats and options**

When the Cold War ended, the international community squandered a great opportunity to devise a new world order by eliminating nuclear weapons and establishing a new paradigm for human security. Instead, the nuclear weapon states have refused give up their nuclear arsenals. This has resulted in ‘mutually assured paralysis’ of the Nuclear Non-Proliferation Treaty (NPT) and stimulated nuclear weapons proliferation, as in India, Pakistan and North Korea.

The nuclear threat is now more complex, more volatile and more unpredictable. Today, we face major nuclear dangers from existing nuclear weapons, the proliferation of nuclear weapons, and the nuclear fuel cycle. The future holds three nuclear options:
• First, maintaining the status quo of an exclusive nuclear club of declared and undeclared nuclear weapon states, and implementing provocative ‘counter-proliferation’ measures.
• Second, living dangerously with nuclear proliferation and a possible cascade of nuclear weapon states.
• And third, reducing nuclear weapons progressively and abolishing them under a Nuclear Weapons Convention.

The first option of nuclear double standards and maintaining a discriminatory status quo is unsustainable. The club of five nuclear weapon states, recognized by the NPT, has now grown to nine. Counter-proliferation in an era of monstrous militarism, unilateralism, pre-emption, and international terrorism presents a dismal prospect of endless violent conflict and the possible use of nuclear weapons. For example, the Middle East has become a nuclear powder-keg, where a non-nuclear weapon state, Iran, is being threatened with military action for pursuing a uranium enrichment programme, while Israel, a non-member of the NPT, exists as an undeclared nuclear weapon state, with the support of the United States. This foreshadows similar nuclear crises in other regions in the future. In the long term, nuclear energy must be phased out for security and environmental reasons and global energy needs met with renewable sources of energy, coupled with energy conservation and efficiency.

The second option represents an increasing danger of nuclear war from horizontal nuclear weapons proliferation, as the nuclear contagion spreads and infects another 20 or 30 nuclear-capable states, particularly in the absence of a ratified Comprehensive Test Ban Treaty and a Fissile Materials Cut-off Treaty.

The third option, nuclear abolition through a Nuclear Weapons Convention, is the only viable option we have if we are to survive the nuclear age.
Obstacles to a nuclear weapons-free world

The road map to zero nuclear weapons is there for all to see, although the terrain is littered with psychological barriers, political obstacles and broken agreements. The fundamental challenge is growing militarism that seeks and claims legitimacy for pre-emptive use of force, including pre-emptive nuclear warfare.

In particular, the explicit nuclear policies of the United States, as articulated in its Nuclear Posture Review and National Security Strategy, represent the greatest obstacle to nuclear abolition. In 2002, the Bush administration, in declaring that the US could no longer rely on traditional concepts of nuclear deterrence, given the emergence of so-called ‘rogue states’ and terrorists, unveiled a new ‘pre-emptive’ or ‘preventive’ strategy. This emerging US nuclear doctrine allows for the use of nuclear weapons in three scenarios:

- against targets, such as underground bunkers, which are able to withstand attacks with conventional weapons;
- in retaliation for an attack with nuclear, biological or chemical weapons;
- and “in the event of surprising military developments,” such as an “Iraqi attack on Israel or its neighbours, or a North Korean attack on South Korea, or a military confrontation over the status of Taiwan.”

The doctrine advocates a New Triad of capabilities that will combine conventional and nuclear offensive strikes with missile defences, and a new nuclear infrastructure for the development, production and testing of new nuclear weapons. In effect, the US has expanded the role of nuclear weapons beyond their core function of nuclear deterrence to a war-fighting capability. It has blurred the distinction between nuclear and non-nuclear missions and has reserved the right to pre-emptive nuclear strikes against any non-nuclear weapon state, which poses a threat with biological or chemical weapons.
Taking their cue from the United States, Russia, Britain, France and China are also modernizing and upgrading their nuclear arsenals. It is crystal clear that the United States is the circuit-breaker, if the surge of nuclear proliferation is to be interrupted and nuclear weapons abolished. Somehow, the people of the United States of America must be made to realize that their great country has lost its way and strayed from the great ideals and principles of its founding fathers, which made the United States a beacon of freedom, democracy and justice. To paraphrase Gandhi, America must be the change we wish to see. In other words, an America that leads without dominating, reforms without destroying, and flourishes without exploiting.

**A second nuclear age**

The world has entered a ‘second nuclear age,’ more treacherous and more unpredictable, where a combination of nuclear weapons proliferation and a lower threshold for their use will increase the likelihood of nuclear war, where the availability of nuclear weapons technology and nuclear materials and the growing technical sophistication in terrorist weaponry will enhance the risk of nuclear terrorism.

The nine nuclear weapon states no longer enjoy exclusive access to nuclear technology or nuclear materials. There are at least twenty or thirty ‘virtual nuclear weapon states,’ with the capacity to develop and produce nuclear weapons in a very short span of time. All that it may take to tip the political balance in these states could be a nuclear threat, a change in leadership, an irresistible desire for national power and prestige, or an ambitious nuclear scientist.

The new nuclear policies of the United States, North Korea’s withdrawal from the NPT and its testing of a nuclear weapon, the crisis over Iran’s pursuit of uranium enrichment, and failure to secure a Comprehensive Test Ban Treaty and a Fissile Materials Cut-off Treaty are all part of a larger failure to eradicate nuclear weapons.
In 1947, scientists of the Manhattan Project set up *The Bulletin of Atomic Scientists* and introduced the Doomsday Clock, which has since become a universally recognized indicator of the world’s vulnerability to a nuclear catastrophe. On 17\textsuperscript{th} January 2007, the Bulletin’s Board of Directors moved the minute hand of the Clock from seven to five minutes to midnight, explaining that: ‘Not since the first atomic bombs were dropped on Hiroshima and Nagasaki has the world faced such perilous choices.’

**International Campaign to Abolish Nuclear Weapons**

Physicians are more than healers. They are also educators and leaders. When the 2005 NPT Review Conference ended with the cynical shredding of past agreements on nuclear disarmament, IPPNW decided it was time to think outside the NPT box and mount a parallel abolition initiative outside the paralysed NPT process. IPPNW has launched an International Campaign to Abolish Nuclear Weapons (ICAN), similar to the Ottawa process on landmines, where a partnership of like-minded governments, led by Canada, the International Campaign to Ban Landmines and the United Nations eventually succeeded in securing a Landmines Ban Treaty.

The Weapons of Mass Destruction Commission, chaired by Hans Blix, has asserted that abolition is not a utopian goal and can be achieved by setting benchmarks and agreeing definitions, timetables and transparency requirements. ICAN is now a primary IPPNW programme of education, research and advocacy, which aims to reinforce the nuclear taboo and generate a mass movement against nuclear weapons, by engaging with the public, civil society and decision makers and convincing them that nuclear abolition through a Nuclear Weapons Convention (NWC) is feasible, practical, verifiable, enforceable and achievable.

A Nuclear Weapons Convention (NWC) would help to bridge the contentious divide between the nuclear weapon states, which demand ‘non-proliferation-first,’ and the non-nuclear weapon states, which demand ‘disarmament-first,’ and help to break the deadlock in nuclear disarmament.
A Model Nuclear Weapons Convention, which was submitted to the United Nations in 1997 by Costa Rica, has since been revised and launched at the NPT Preparatory Committee meeting in Vienna last May. It clarifies the legal, technical and political requirements for achieving and maintaining a nuclear weapons-free world, now made more feasible by advances in verification technology and compliance procedures. Although the Model Nuclear Weapons Convention may not initially answer all questions, which may be raised, such questions could be answered while negotiations are under way.

The abolition of nuclear weapons must be a global endeavour, involving all states, but it cannot be achieved in isolation without also addressing the political and economic forces which shape a hegemonic world. Whatever process is followed, it must ensure that no state feels, at any stage, that further nuclear disarmament is a threat to its own security.

Generally, there are three ways by which a NWC can be achieved. The first, a step-by-step approach, entails negotiations on a limited number of initial steps towards nuclear disarmament, including bilateral reductions in stockpiles by the US and Russia, a Fissile Materials Cut-off Treaty, and a Comprehensive Test Ban Treaty.

The second approach calls for comprehensive negotiations on the complete elimination of nuclear weapons, under a time-bound framework.

A third hybrid approach is a combination of the elements of the step-by-step approach and the comprehensive approach, fashioned into an incremental-comprehensive programme, consisting of a series of unilateral, bilateral, plurilateral, and multilateral steps, which would lead towards the elimination of nuclear weapons through a Nuclear Weapons Convention or through a legally binding framework of instruments.

ICAN will work to persuade one or more governments to initiate measures, including an international conference, that would create the momentum and support for a Nuclear
Weapons Convention. In a humanitarian sense, a Nuclear Weapons Convention would affirm universal condemnation of nuclear weapons, uphold international humanitarian law, and erase the unconscionable legacy of nuclear weapons to future generations.

The future is not preordained. History is replete with examples of successful grassroots movements and the power of individuals to effect change, as in the abolition of slavery and apartheid, the American civil rights movement, and the ban on atmospheric nuclear testing. The lesson is clear and compelling. Hope without action is futile. Change is possible when an action is right and when people demand it and are committed to act on it.

Conclusion
The world today is largely shaped by dominant political and economic forces, backed up by military power, sustained by an annual global military budget of one trillion dollars. The challenges of inequity and poverty, militarism and deadly conflict, environmental damage and climate change require of governments a renewed sense of global responsibility and accountability. There is an urgent need for new thinking and a new global ethical agenda in international relations, a need to conceptualise ethics in politics, rather than ethics and politics. In other words, integrating ethics with politics.

Although moral codes shape individual behaviour and state laws govern citizens, ethics and international law do not have the power to challenge state sovereignty and constrain nation states, particularly militaristic superpowers. To paraphrase George Orwell, all states are sovereign, but some states are more sovereign than others.

There is an urgent need to reinforce the application of ethical norms to international relations. Each state can make a choice. If we agree that foreign policy is shaped by considerations and choice, then it is possible that ethical values can contribute to foreign policy, either because decision-makers are persuaded of their importance or because electorates are so persuaded.
The creation of a global ethical framework as a ‘global social reality’ will depend upon what is established, not so much upon the norms accepted by states, as upon the norms embedded in institutions and practices. The challenge would seem to be in articulating, advocating and establishing a consensus of universal values.

For humankind to survive in an environmentally challenged and nuclear-armed world, we must learn from the mistakes of the past and forge a common, cooperative future. The greatest moral challenge of our times is the unthinkable possibility of self-destruction on a global scale in a nuclear war or from climate change. The greatest priority is to uphold our humanity, protect the environment, abolish nuclear weapons, and ensure there will be a future.

To end, I can do no better than recall the brilliant eloquence of Bernard Lown in his acceptance speech at the Nobel Peace Prize ceremony in 1985: ‘We physicians, who shepherd human life from birth to death, have a moral imperative to resist with all our being the drift towards the brink. The threatened inhabitants of this fragile planet must speak out for those yet unborn, for posterity has no lobby with politicians ….We physicians have focused on the nuclear threat as the singular issue of our era. We are not indifferent to other human rights and hard won civil liberties. But we must be able to bequeath to our children the most fundamental of all rights which precondition all other rights: the right to survival.’

References
