The Australian government is showing renewed interest in nuclear non-proliferation and disarmament, as evidenced by the creation of the International Commission on Nuclear Non-proliferation and Disarmament (ICNND) last year.

But there is little evidence yet that either the government or the Commission is fully alert to the most momentous truth of the present era: Our best science now predicts that nuclear arsenals are fundamentally incompatible with continued human existence.

It is imperative that the message coming from scientists in the US, Russia and elsewhere about the environmental consequences of nuclear war be included in the general debate about the control and abolition of nuclear weapons.

Unfortunately, the nuclear weapon states apparently remain oblivious to the climatic, ecological and biological consequences of nuclear war. No "environmental impact statement" has ever been created for the US or Russian nuclear weaponry, which is one of the reasons why there still are 22,000 intact nuclear weapons in their deployed and reserve arsenals.

However, new peer-reviewed studies done at several US universities predict the detonation of even a tiny fraction of the global nuclear arsenal will result in major changes in the global climate and massive destruction of the stratospheric ozone layer (which protects the Earth from deadly UV light).

Even a "regional" nuclear conflict between India and Pakistan, fought with 100 Hiroshima-size weapons, is predicted to loft five million tons of smoke above cloud level; there it would block about 10 per cent of warming sunlight from reaching the surface of the Northern Hemisphere.

This would produce average surface temperatures colder than any experienced for the last 1000 years.

The smoke would remain in the stratosphere for more than a decade and seriously impact global climate. It would probably be too cold to grow wheat in Canada for several years; grain exports would likely cease from grain-exporting nations and global nuclear famine would result.

Within a few years, most of the already-hungry human populations could perish, and the populations of any nation dependent upon grain imports would be at risk.

One hundred Hiroshima-sized bombs contain about one half of one percent (0.05 per cent) of the explosive power of the deployed and operational nuclear arsenals of the US and Russia. The new studies predict that a war fought with any significant fraction of these arsenals would cause catastrophic changes in the global climate that would virtually eliminate growing seasons for a decade or more.

The US and Russia now have 900 missiles armed with 2200 strategic nuclear warheads on high-alert which can be launched with only a few minutes warning,
and another 5330 deployed warheads available for use within an hour or less.

According to a December, 2008, article in Physics Today, the detonation of 4400 of these warheads in urban areas would cause up to 180 million tons of soot from burning cities to rise into the stratosphere.

The smoke would block about 70 per cent of sunlight in the Northern Hemisphere and 35 per cent of sunlight in the Southern Hemisphere from reaching the surface of the Earth.

The resulting nuclear darkness would cause global Ice Age weather conditions virtually overnight.

Minimum daily temperatures in the large agricultural regions of the Northern Hemisphere would drop below freezing for at least one to three years. It would become colder than it was 18,000 years ago at the height of the last Ice Age.

Most humans and large animals would starve to death.

It is critically important that this information make its way into the general debate about the abolition of nuclear weapons.

Yet even within the NGO community, there has been little or no mention of these studies which predict nuclear war is suicide for the human race.

In fact, conventional wisdom now appears to assume that the US-Russian arsenals are somehow "safe from use". This deadly sense of complacency is reflected in the recent position paper by the prestigious Council on Foreign Relations, "US Nuclear Weapons Policy", which states in its preface that "...the world no longer lives under the threat of a global nuclear holocaust".

The failure to honestly evaluate the environmental consequences of nuclear war has created a near-universal failure to recognise and acknowledge that nuclear arsenals constitute a self-destruct mechanism for humanity.

As long as this fundamental ignorance persists, political and military leaders will continue to argue that their nuclear weapons must be maintained to ensure "national security".

To tacitly accept that thousands of nuclear weapons will remain with us for the indefinite future places all humanity at risk. We cannot allow our political and military leaders to continue to ignore the potential cataclysmic consequences posed by the use of nuclear weapons.

These considerations must be central in the ongoing debate about abolishing nuclear arsenals.

Yet there is almost nothing about them on the website of the ICNND. There is an impressive commissioned paper and draft treaty text there on the non-use of nuclear weapons by the Commission's research director. But the idea of nuclear weapon no-use (pun intended) has a deeper resonance than the Commission is apparently
going to allow when it reports to the government early next year in advance of the Nuclear Non-Proliferation Treaty Review Conference.

The whole strategically and legally dubious—also profoundly immoral, irresponsible and stupid—idea of nuclear deterrence by massive retaliation, which has sustained the nuclear arms race and nuclear proliferation for 64 years, has finally been given its quietus by the new scientific findings on the environmental consequences of nuclear war.

Massive retaliation, like massive attack, is inherently suicidal, and that must now be the point of departure for nuclear disarmament.