The Pugwash Council, meeting during the 55th Pugwash Conference held in Hiroshima, Japan from 22-27 July 2005, on the 60th anniversary of the nuclear devastation of Hiroshima and Nagasaki, is extremely concerned with the ever present threat posed by nuclear weapons to global security.

The decade since 1995, when Pugwash last met in Hiroshima, has been one of missed opportunities and a marked deterioration in global security, not least regarding the nuclear threat. In that time, additional states have acquired nuclear weapons, there has been little tangible progress in nuclear disarmament, new nuclear weapons are being proposed, and military doctrines are being revised that place a greater reliance on the potential use of such weapons.

Hopes in the immediate post-Cold War period in the 1990s that a new global order might be emerging have been dashed by the rise of radical international terrorism, unilateral military interventions and threats of pre-emption, and the lack of progress in meeting basic human security needs.

All of these issues will require a renewed commitment to the tenets of international law and equity, true multilateral cooperation, and the strengthening of regional and international organizations that can give needed priority to the human security of all rather than the national prerogatives of some.

**Nuclear Weapons**

The Seventh Review Conference of the Nuclear Non-Proliferation Treaty (NPT), held in the spring of 2005 in New York, ended in deadlock. The five original nuclear-weapons states (US, Russia, UK, France and China) showed themselves unwilling to take decisive action to implement their obligations under Article VI of the NPT to move decisively toward the irreversible elimination of their nuclear arsenals. The obstructionist attitude of the US administration in particular pre-ordained the NPT Review Conference to failure. Other states must share the blame as well, however, for missing a solid opportunity at the Review Conference to resolve problems such as equitable access to civilian nuclear technologies, as
allowed under Article IV, while at the same time tightening protections that such materials not be diverted to military use.

The broad framework of nuclear weapons disarmament is in danger of collapsing. The Comprehensive Test Ban Treaty (CTBT) has not entered into force, the US and Russia need to accelerate and enlarge the reductions called for by the Moscow Treaty, and negotiations have yet to begin on a Fissile Material Cut-off Treaty (FMCT) to eliminate production of weapons-grade Highly Enriched Uranium (HEU) and plutonium. Far more needs to be done to control and dispose of existing stockpiles of HEU that run the risk of falling into the hands of terrorist groups. Significant numbers of tactical nuclear weapons continue to be deployed in Europe and elsewhere, while pressures mount from certain quarters for developing and deploying space weapons. Given that no weapons are currently deployed in space, the time to preserve the sanctuary of space for its tremendously important civilian benefits is now.

High oil prices, the development of new and safer nuclear technologies, and concerns over global climate change have once more made nuclear power a potentially attractive option for generating energy. Serious attention must be paid, however, to the proliferation ramifications of building a new generation of nuclear power plants and spent fuel reprocessing facilities. Of special concern are needed measures to prevent plutonium-based fuel cycles. Options such as multilateral control of nuclear fuel cycles, as recently presented in a report from the International Atomic Energy Agency, could help strengthen the barrier between civil and military nuclear programs.

In this regard, more information is needed on the recent talks between the US and India on resuming full cooperation in civilian nuclear issues. While we grant the necessity of sharing technology and best practices to make nuclear power as safe and efficient as possible, one must carefully weigh the precedent for other countries of such cooperation between a nuclear-weapons state and a non-member of the NPT.

The Pugwash Council calls upon all states to respect their commitments to the NPT, to ratify the CTBT, and to conclude a FMCT, as important near-term steps to reduce the nuclear threat. Additional measures such as the adoption of nuclear No First Use polices and the de-alerting of nuclear delivery systems would provide additional security against miscalculation and inadvertent use of nuclear weapons in a crisis.

Additionally, the Pugwash Council believes that constructive work should be started by like-minded States to identify the legal, political and technical requirements for the elimination of nuclear weapons. As recommended by the Middle Powers Initiative, these efforts would be a contribution to the NPT process
and could provide the framework for eventual negotiations for a Nuclear Weapons Convention prohibiting and eliminating such weapons.

Nuclear weapons must be declared illegal and immoral. Meeting just steps away from Hiroshima's ground zero, we urge our fellow scientists and citizens to confront the threat of nuclear weapon use that could materialize at any time, without warning, in any part of the world. To political and government leaders, our message is simple, but stark: as long as nuclear weapons exist, they will one day be used.

**Regional Conflicts**

In East Asia, there are hopeful signs that the resumption of the Six-Party talks could lead to a relaxation of tensions and a negotiated solution over the nuclear program of the Democratic People's Republic of Korea (DPRK). The DPRK's withdrawal from the NPT in early 2003 posed one of the gravest challenges ever to the non-proliferation regime. An agreement that codifies North Korea's stated commitment to a nuclear-free Korean peninsula, and the return of the DPRK to the NPT, would be a major boost for global non-proliferation.

Similarly, the situation in South Asia gives reason for optimism that India and Pakistan will continue to improve relations and open up toward each other. The Pugwash initiative in December 2004 on the Kashmir issue is one element in a broad array of confidence-building measures between the two countries. Nonetheless, great caution is needed to ensure that possible future tensions do not lead to conflict and the possible use of nuclear weapons, making the implementation of nuclear confidence-building measures between the two states all the more important.

The situation in the Middle East is, of course, far more worrisome. Terrorism and instability continue to plague Iraq, postponing the date for the needed withdrawal of US and foreign troops so that Iraq can build its own political future. Similar concerns exist in Afghanistan. Israel and the Palestinians have a long way to go in resolving their conflict, the next stage of which is the critically-important Israeli withdrawal from the Gaza Strip, which must be followed by a return to negotiations aimed at a just and peaceful solution.

Pugwash has invested much effort on the issue of a WMD-free Middle East. Major complicating factors include Israel's policy of nuclear opacity, Middle East states that have not yet signed and ratified either or both of the Chemical or the Biological Weapons conventions, and the lack of resolution on the modalities and aims of Iran's uranium enrichment program.

In this volatile region in the world, bold steps are needed to reduce threats from nuclear, chemical, and probable biological weapons, through steps toward
implementing a WMD-free zone in the Middle East. More broadly, international support for democratic reforms and economic development could do much to blunt the attraction of radical terrorist groups. Of critical importance to enhancing regional security will be a solution to the Israeli-Palestinian conflict.

Conflict and instability in other regions of the world, from the newly independent states in central Asia and the Caucasus, to West and East Africa and Southeast Asia, is of concern as well, even if these areas are not as prominent in terms of the threat of nuclear-weapons use. Effective cooperation among regional and international organizations presents the best chance for resolving conflicts, rather than unilateral action, pre-emption, or excessive use of military force. In particular, dialogue must be promoted between old and new strategic alliances, namely between NATO and the CSTO (Collective Security Treaty Organization), as well as between the European Union and NATO, regarding potential cooperation in peace support and in any future crisis.

**Human Security**

True global security will never be possible until the fundamental components of human security, including equitable access to food, water, healthcare, education, and economic opportunity, are attained.

At the 55th Pugwash Conference in Hiroshima, these and other themes were touched on by such speakers as Judge C.G. Weeramantry of Sri Lanka, who gave the Dorothy Hodgkin Memorial Lecture, by Dr. Nobuyasu Abe (Under Secretary General for Disarmament Affairs at the United Nations), Mayor Tadatoshi Akiba of Hiroshima, Prof. John Holdren (Harvard University), and by Prof. M.S. Swaminathan and Prof. Paolo Cotta-Ramusino, the President and Secretary General, respectively, of Pugwash.

In the context of the UN Millennium Development Goals announced in 2000 and being reviewed in the fall of 2005 at the United Nations, the sad truth remains that human security for the world's peoples is at greater and greater risk. The large majority of them continue to face unacceptable deprivation in their access to basic human necessities. Intensive international cooperation, especially between industrial and developing countries, is needed to redress these imbalances, many of which contribute directly to human insecurity and conflict. As noted during the 55th Pugwash Conference, the promise of new technologies for advances in the sustainable use of resources is clear, yet such benefits are not distributed evenly to the world's peoples. It is critically important for scientists to remember their individual responsibility regarding the beneficial applications of their work in promoting true human security for all individuals, and to carry that message to the public, governments, and international institutions.

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The 55th Pugwash Conference is the first that our co-founder and past President, Sir Joseph Rotbalt, has not been able to attend since Pugwash was founded in 1957. As a co-signatory of the 1955 Russell-Einstein Manifesto, the founding document of the Pugwash Conferences, Sir Joseph in his message to the conference recalled the words of the Russell-Einstein Manifesto on its 50th anniversary - "we appeal, as human beings, to human beings: Remember your humanity, and forget the rest".

The Pugwash Council urges all of us to act in this spirit, and for national governments, multilateral institutions, and international NGOs to lead the international community away from a misplaced reliance on nuclear weapons and the catastrophic dangers that await us if clear progress is not made to decisively reduce and eventually eliminate nuclear weapons.

What happened in Hiroshima and Nagasaki must never happen again.

_The 55th Pugwash Conference, 60 Years After Hiroshima and Nagasaki, was attended by 159 participants from 37 countries, including 29 International Student/Young Pugwash participants, and was held at the International Conference Center Hiroshima._