

We May Self-

President John Kennedy's nightmare of nuclear weapons spreading all over the world has returned to haunt the present. All these years after the end of the Cold War, such weapons are again poised to spread around over the globe, thereby ensuring terrorist possession. And the catastrophe of terrorist use of a such a device in a major city today could be a calamity unparalleled in history. Nuclear weapons are becoming a threat even to their owners. In May there is another opportunity to put matter right when the Non-Proliferation Treaty comes up for review.

IN LAST YEAR'S UNITED STATES PRESIDENTIAL elections both President George Bush and Senator John Kerry correctly identified nuclear proliferation, combined with nuclear terrorism, as the principal threat facing the world community. But sixty years into the nuclear era, while most people understand that such weapons are dangerous things, there is no awareness of the degree of danger, or demand for effective action.

Gun Bomb

Hiroshima was devastated by an atomic bomb sixty years ago this summer. One hundred and forty thousand people were instantly killed. Including the effects of radiation poisoning, the five-year death total was over two hundred thousand, almost two thirds of the city's population.

This horrendous effect was caused by a single 12.5 kiloton nuclear device with an explosive yield equivalent to 12.5 tons of TNT. It was built on the gun bomb principle which is so simple it did not need to be tested. It involved a tube

approximately ten and a half feet long. At one end was a piece of highly enriched uranium (HEU) - one of the two types of nuclear bomb fuel. Another piece of the same material was placed at the other end with explosives packed behind it. This second mass of HEU was propelled down the tube by the explosives and Hiroshima was devastated by the result.

Together the pieces of HEU weighed in the range of a hundred pounds, today more sophisticated atomic weapons also fueled by HEU, use a quarter or a third as much material.

Over the years nuclear weapons have vastly increased in both explosive yield and numbers. Different designs permitted the use of much less HEU, or plutonium which is more efficient. Within a few years isotopes of the hydrogen atom resulting in thermonuclear explosions measured in megatons, or a million tons of TNT equivalent, rather than kilotons, hundreds of times more powerful than the Hiroshima bomb.

Thousands of these weapons are still in place, fifteen years after the end of the Cold War, either on hair trigger alert or rapidly useable. They are primarily in the US and Russia, but in other countries as well, ready to destroy cities and with them civilisation.

No Test Needed

But the simple Hiroshima type device is the kind of weapon terrorists would try to build should they come into possession of sufficient nuclear materials, either through theft or illegal purchase. Twenty years ago South Africa built such weapons in secret with a relatively modest commitment in manpower and resources. Scientists used the gun bomb design, knowing the device would perform as advertised. They estimated that their weapons had approximately a fifty percent greater explosive potential than the Hiroshima bomb.

South Africa, as an advanced nuclear technology state, made its own HEU. But in the opinion of officials involved, if the nuclear materials are available, the rest of the weapon building task is not difficult. In their view many countries could do it, as could capable sub-national organisations - such as sophisticated terrorist groups.

The world is awash in nuclear weapons and nuclear explosive material. There are approximately twenty-nine thousand nuclear weapons as well as many hundreds of tons of HEU and several hundred tons of plutonium. Beyond the US and Russia such weapons are also located in Britain, France, China, Israel, Pakistan, India and North Korea and

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Destruct

perhaps elsewhere. A high percentage are either ready to use or can quickly be made so.

Hundreds of tons of HEU and plutonium are stored in Russia, a significant portion in less than entirely secure locations. Important quantities of the material are associated with nuclear research reactors in many countries around the world. They are also not well protected.

According to its 2001 nuclear policy review, the US considers nuclear weapons to be an important part of its national security policy. The US, Britain, France and Russia reserve the right to use such weapons first in a conflict, even against nonnuclear weapon states and contrary to their commitment under the Nuclear Nonproliferation Treaty (NPT).

Scattered Around

India and Pakistan both possess nuclear weapons and from time to time have come close to war. Israel has a large nuclear arsenal which is no longer justified by the balance of forces in the region. North Korea, with a long history of selling dangerous technology to whoever will buy it, may possess six to eight nuclear weapons. AQ Khan, the so-called 'father' of the Pakistani bomb scattered nuclear weapon technology widely around the world by means of his secret underground network, which is perhaps still not entirely understood. As the nuclear weapon states seem unable to give up their commitment to such weapons, all the world may decide to have them, to the grave detriment of everyone.

Effective Defence

This appalling situation is simply not being addressed with sufficient seriousness by the world community. Ultimately, the only truly effective defence against nuclear proliferation and nuclear terrorism is a strong, viable Non-Proliferation Treaty (NPT). This is built on a central bargain agreed in 1968 and reaffirmed in 1995 and 2000. The NPT nonnuclear weapon states now some 182 countries – most of the world, committing never to acquire nuclear weapons. In return US, Britain, France, Russia and China – the nuclear weapon states – commit to share peaceful nuclear technology and pursue nuclear

disarmament eventually leading to the elimination of their arsenals.

But the nuclear weapon states have never lived up to their disarmament commitments. First and foremost this has always meant a complete ban on nuclear weapon tests, or a comprehensive test ban treaty (CTBT), as well as vigorous pursuit of the reduction of nuclear weapons and the negotiation of legally binding security assurances – a commitment by the weapons states that they will never use nuclear weapons against nonnuclear nations.

The CTBT was signed in 1996, but in 1999 the US Senate rejected it and at present America is unwilling to support the treaty. As a result, entry into force of the CTBT appears far off at best.

While nuclear weapons reductions were pursued in the past, there have been no such efforts in the past five years. And while negative security assurances were made by the nuclear weapon states in 1995 in the form of policy statements – not legal obligations – the US, Britain, France and Russia all have national policies contrary to those statements. Other Treaty commitments by the nuclear weapon states remain unfulfilled. Also, India, Pakistan, Israel and now North Korea have nuclear weapon programmes outside of the NPT and Iran is threatening from within.

Weakest Yet

In May the NPT comes up for another five-year review by those countries that are party to it. The treaty regime is weaker than it has been since its entry into force in 1970. It is of the highest importance that the central bargain be revived by the NPT nuclear weapon states, led by Washington, at the review conference, if this vital security instrument is to continue to be effective.

Kennedy truly feared that nuclear weapons would spread all over the world. In 1962 there were predictions that there would be as many as twenty-five to thirty nuclear weapons states with such weapons integrated into their arsenals by the end of the 1970s. If this had happened there would be over forty such nations today. This would have meant that every conflict would run the risk of going nuclear and they would have been so widespread that it would be impossible to keep nuclear weapons out of the hands of

terrorists.

But this did not happen. Today there are only two more states with nuclear weapon programmes than there were in 1970. And the reason the greater spread of such weapons was avoided was the entry into force of the NPT which converted the acquisition of these weapons from an act of national pride into an act contrary to the practices of the civilised world. We must make sure it does not happen now.

The NPT must be revitalised and strengthened this year. To quote the Director General of the International Atomic Energy Agency, Mohammed El Baredi: 'We must abandon the unworkable motive that is morally reprehensible for some countries to pursue weapons of mass destruction and acceptable for others to rely upon them for their security. If the world does not change course we risk self-destruction.'



