

Nuclear Weapons – The Current Danger

By Marc Pilisuk, Oct, 24, 2017

During times of mourning or fear of grave existential threats, the human psyche is quite capable of denying and ignoring likely and imminent dangers. President Trump raised the prospect of venturing into a nuclear war with North Korea. It is essential that some of us counter this propensity. In nuclear war there are blast, firestorm and radiation effects and no first responders or infrastructure to assist the survivors. This is the time to face the prevention of the unthinkable

Nuclear Weapons

Until the advent of the atomic bomb, war did not have the capacity to end, for all time, the continuation of the human beings or to threaten the continuity of life itself. The atomic bombs dropped on Hiroshima and Nagasaki produced the greatest immediate mass death from individual weapons yet known. Within the first two to four months following the bombings, the acute effects of the atomic bombings had killed 90,000–146,000 people in Hiroshima and 39,000–80,000 in Nagasaki; roughly half of the deaths in each city occurred on the first day.

The threat of nuclear weapons has increased. This reality was expressed by President Kennedy:

Today, every inhabitant of this planet must contemplate the day when this planet may no longer be habitable. Every man, woman, and child lives under a nuclear sword of Damocles, hanging by the slenderest of threads, capable of being cut at any moment by accident or miscalculation or madness.ⁱ

Former Secretary of Defense William J. Perry said, "I have never been more fearful of a nuclear detonation than now—There is a greater than 50 percent probability of a nuclear strike on U.S. targets within a decade."ⁱⁱⁱ Apocalyptic dangers like this, that we know exist but still ignore, continue to have an effect upon us. They push us away from a long-term connection to our planet, pressing us to live for the moment as if each moment might be the last.ⁱⁱⁱ

Current public attention has focused on the possibility of a nuclear weapon attack by terrorists. The RAND corporation conducted an analysis to examine the impacts of a terrorist attack involving a 10-kiloton nuclear explosion in the Port of Long Beach, California.^{iv} A set of strategic forecasting tools were used to examine immediate and long term results. It concluded that neither the local area nor the nation are at all prepared to deal with the potential threat of a nuclear device brought into the U.S. aboard a container ship. Long Beach is the world's third busiest port, with almost 30% of all U.S. imports and exports moving through it. The report noted that a ground-blast nuclear weapon detonated in a shipping container would make several hundred square miles of the fallout area uninhabitable. Such a blast would have unprecedented economic impacts throughout the country and the world. As one example, the report noted that several nearby oil refineries would be destroyed exhausting the entire supply of gasoline on the West Coast in a few days. This would leave city officials to deal with immediate fuel shortages and the strong likelihood of related civil unrest. Blast effects would be accompanied by firestorms and by long-lasting radioactive fallout, all contributing to a collapse of local infrastructure. Impacts on the global economy could also be catastrophic for two reasons: first, the economic importance of the global shipping supply chain, which would be

severely hampered by the attack, and second, the well-documented fragility of global financial systems.^v

By current standards a ten-kiloton nuclear explosion represents a miniscule sample of the power of larger nuclear weapons now in the arsenals of a growing number of countries. It is difficult even to imagine what a larger nuclear strike would mean. Another former Defense Secretary, Robert McNamara recalls his experience during the Cuban missile crisis when the world came close to an exchange of nuclear weapons launched by the U.S. and the Soviet Union against each other. In his sober warning many Years later McNamara cited a report by the International Physicians for the Prevention of Nuclear War, describing the effects of a single 1-megaton weapon:

At ground zero, the explosion creates a crater 300 feet deep and 1,200 feet in diameter. Within one second, the atmosphere itself ignites into a fireball more than a half-mile in diameter. The surface of the fireball radiates nearly three times the light and heat of a comparable area of the surface of the sun, extinguishing in seconds all life below and radiating outward at the speed of light, causing instantaneous severe burns to people within one to three miles. A blast wave of compressed air reaches a distance of three miles in about 12 seconds, flattening factories and commercial buildings. Debris carried by winds of 250 mph inflicts lethal injuries throughout the area. At least 50 percent of people in the area die immediately, prior to any injuries from radiation or the developing firestorm.ⁱⁱ

Had the attack on the Twin Towers involved a 20-megaton nuclear bomb, blast waves would have carried through the entire underground subway system. Up to fifteen

miles from ground zero flying debris, propelled by displacement effects, would have multiplied the casualties. Approximately 200,000 separate fires would have produced producing a firestorm with temperatures up to 1,500 degrees. A nuclear bomb destroys the fabric of water supplies, food, and fuel for transportation, medical services, and electric power. Radiation damages destroys and deform living things for 240,000 years.^{vi}

There is no reason to believe that a nuclear attack would involve only one such weapon. Moreover, the illustrations above are for a nuclear bomb much lower in destructive capacity than most bombs now available on ready-alert status. These larger weapons are capable of what George Kennan has considered to be of such magnitude of destruction as to defy rational understanding.^{vii} Such bombs, and others still more destructive, are contained in the warheads of missiles, many capable of delivering multiple warheads.

Following the collapse of the Soviet Union, nuclear weapon stockpiles in excess of what would be needed to destroy all of the world's population have been reduced. However, 31,000 nuclear weapons remain in the world—most of them are American or Russian, with fewer numbers held by the United Kingdom, France and China, India, Pakistan and Israel. Failure to end the Cold War nuclear confrontation between Russia and the U.S. leaves the two nations with more than 2,000 strategic nuclear warheads on high-alert status. These can be launched in only a few minutes and their primary mission remains the destruction of the opposing side's nuclear forces, industrial infrastructure, and political/military leadership.^{viii} We now have the capacity to destroy, for all time, every person, every blade of grass, and every living thing that has evolved on this planet. But has our thinking evolved to enable us to prevent this from happening?

Our voices need to be heard. First, we can urge our leaders to get Trump to turn off the threats of nuclear war, whether by use of flattery or by pressure from his own military advisors. Second, if we do survive the moment one of the most important tasks is to block nuclear weapons modernization. Nukes do not need to be tested for absolute yield in order to serve as a deterrent. The improvement of destructive capability has led to a nuclear race.

Modernization, according to the CBO will cost \$400 billion immediately and from \$1.25 to \$ 1.58 trillion over thirty years. Upgrades of nuclear weapons designed for battleground use will challenge other nations to procure them and invite the threshold for using nuclear weapons to be violated. Now is the time to insist to our Congress that the modernization of nuclear weapons be dropped from the national budget. This will buy some time to heal a planet and human community under deep stress.

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