

## Nuclear Dangers: The Race between Cooperation and Catastrophe

by Sam Nunn

At the dawn of the nuclear age – after the devastation of Hiroshima and Nagasaki – General Omar Bradley said: “The world has achieved brilliance without wisdom... We know more about war than we know about peace, more about killing than we know about living.”

It might surprise General Bradley, if he were alive today, to know that we have made it 60 years without a nuclear attack. We were good, we were diligent, but we were also very lucky.

Making it through 60 years without a nuclear attack should not make us complacent. If we're to continue to avoid a catastrophe, all nuclear powers will have to be highly capable, careful, competent, rational – and if things go wrong, lucky – every single time.

### The world is heading in a very dangerous direction

We do have important efforts underway and some important successes, but the risk of a nuclear weapon being used today is growing, not receding. The storm clouds are gathering:

- Terrorists are seeking nuclear weapons, and there can be little doubt that if they acquire a weapon that they will use it.
- There are nuclear weapons materials in more than 40 countries, some secured by nothing more than a chain link fence.
- A number of countries are considering developing the capacity to enrich uranium to use as fuel for nuclear energy, but this would also give them the capacity to move quickly to a nuclear weapons program if they chose to do so.
- Meanwhile, the United States and Russia continue to deploy thousands of nuclear weapons on ballistic missiles that can hit their targets in less than 30 minutes, encouraging both sides to continue a prompt launch capability that carries with it an increasingly

unacceptable risk of an accidental, mistaken or unauthorized launch.

The bottom line: The world is heading in a very dangerous direction.

### New vision for our global nuclear policy

With these growing dangers in mind, former U.S. Secretaries of State George Shultz and Henry Kissinger, former U.S. Secretary of Defense Bill Perry and I published an op-ed in January 2007, and a follow-up piece in 2008, in *The Wall Street Journal* that called for a different direction for our global nuclear policy with both vision and steps.

The four of us, and the many other security leaders who have joined us, are keenly aware that the quest for a nuclear-weapon-free world is fraught with practical and political challenges. We have taken aim at the practical problems by linking the vision of a nuclear-weapon-free world with a series of steps for reducing nuclear dangers and carving a path towards a world free of the nuclear threat.

Without the bold vision, the actions will not be perceived as fair or urgent. Without the actions, the vision will not be perceived as realistic or possible.

We don't believe our example is likely to inspire Iran, North Korea or al Qaeda to drop their weapons ambitions, but we believe it would become more likely that many more nations will join us in a firm approach to stop the proliferation of nuclear weapons and materials and prevent catastrophic terrorism.

I believe that we cannot defend ourselves against the nuclear threats facing the world today without taking these steps. We cannot take these steps without the cooperation of other nations. We cannot get the cooperation of other nations without the vision and hope of a world that will some day end these weapons as a threat to mankind.

### Strategic cooperation against nuclear weapons

This will be a challenging process that must be accomplished in stages. The United States must keep nuclear weapons as long as other

US senior statesmen **George Shultz, William Perry, Henry Kissinger and Sam Nunn** renewed their call for a nuclear-weapon-free world by supporting, among other measures, the adoption of a process for bringing the CTBT into effect, “which would strengthen the Nuclear Non-Proliferation Treaty (NPT) and aid international monitoring of nuclear activities. This calls for a bipartisan review, first, to examine improvements over the past decade of the international monitoring system to identify and locate explosive underground nuclear tests in violation of the CTBT; and, second, to assess the technical progress made over the past decade in maintaining high confidence in the reliability, safety and effectiveness of the nation's nuclear arsenal under a test ban. The Comprehensive Test Ban Treaty Organization is putting in place new monitoring stations to detect nuclear tests – an effort the U.S should urgently support even prior to ratification.”

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nations do. But we will be safer, and the world will be safer, if we are working toward the goal of deemphasizing nuclear weapons and keeping them out of dangerous hands – and ultimately ridding our world of them.

Strategic cooperation must become the cornerstone of our national defense against nuclear weapons. Even a quick glance at the steps we are proposing in our two *Wall Street Journal* essays reveals that none of the steps can be accomplished by the United States and our close allies alone:

- Changing nuclear force postures in the United States and Russia to greatly increase warning time.
- Reducing substantially nuclear forces in all States that possess them.
- Moving toward developing cooperative multilateral ballistic-missile defense and early warning systems.
- Eliminating short-range “tactical” nuclear weapons.
- Working to bring the Comprehensive Test Ban Treaty into force – in the United States and in other key States.
- Securing nuclear weapons and materials around the world to the highest standards.
- Developing a multinational approach to civil nuclear fuel production, phasing out the use of highly enriched uranium in civil commerce, and halting the production of fissile material for weapons.

- Enhancing verification and enforcement capabilities – and our political will to do both.
- Building an international consensus behind ways to deter and, when necessary, respond strongly and effectively to countries that breach their commitments.

The most difficult and challenging step is the need for redoubling our efforts to resolve regional confrontations and conflicts that give rise to new nuclear powers.

### **Establishing a durable security relationship with Russia**

There can be no coherent, effective security strategy to reduce nuclear dangers that does not take into account Russia – its strengths, weaknesses, aims and ambitions. So, it is remarkable – and dangerous – that the United States, Russia and the North Atlantic Treaty Organization (NATO), have not developed an answer to one of the most fundamental security questions we face: What is the long-term role for Russia in the Euro-Atlantic security arc? Whether caused by the absence of vision, a lack of political will, or nostalgia for the Cold War, the failure of both sides to forge a mutually beneficial and durable security relationship marks a collective failure of leadership in Washington, European capitals and Moscow.

If we are to be successful in dealing with the hydra-headed threats of emerging new nuclear weapon States, proliferation of enrichment, poorly secured nuclear material and catastrophic terrorism – many nations must cooperate. We must recognize, however, that these tasks are virtually impossible without the cooperation of Russia. It is abundantly clear that Russia itself faces these same threats and that its own security is dependent on cooperation with NATO and the United States.

### **Global security depends on regional security**

As NATO prepares for its 60th anniversary, we must address a fundamental question. In the years ahead, does NATO want Russia to be inside or outside the Euro-Atlantic security arc? The same

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### **Biographical note**



*Former Senator Sam Nunn is co-chairman and Chief Executive Officer of the Nuclear Threat Initiative (NTI), a charitable organization working to reduce the global threats from nuclear,*

*biological and chemical weapons. He served as a United States Senator from Georgia for 24 years from 1972 to 1996. During his tenure in the U.S. Senate, he was chairman of the Senate Armed Services Committee and the Permanent Subcommittee on Investigations. ■*



## Cover story

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can be used for the verification of weather models as well as for science and research.

- Inclusion of the CTBTO-WMO response system for atmospheric backtracking in the WMO Manual for the Global Data Processing and Forecasting System in 2007. A third joint exercise was conducted in December 2007 to perform a final verification of this response system, which became operational on 1 September 2008
- Joint article on quality assessment of ATM backtracking in support of CTBT verification, published in *Atmospheric Environment* 41 (2007) pp 4520-4534.

This article will continue in the next edition of *Spectrum*, describing in more detail the 2007 CTBTO-WMO exercise mentioned above and other ongoing activities. ■

#### Biographical note

*Peter Chen is Chief of the Data Processing and Forecasting Systems Division at WMO. He joined WMO in 2004 and is currently in charge of coordinating operational weather forecasting for National Meteorological Services of WMO, including numerical weather prediction, and ATM for environmental emergency response.*

*Dr. Gerhard Wotawa is a specialist in the modelling of atmospheric chemistry and transport. He joined the CTBTO in October 2000 and currently works as an Atmospheric Sciences Officer at the IDC.*

*Dr. Andreas Becker is an Atmospheric Sciences Officer in charge of ATM software development at the IDC. He joined the CTBTO in 2001 and is a specialist in the field of coupling of ATM systems in support of environmental measurement campaigns. ■*

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question, of course, must be asked by the Russians. If our answer is outside, then it's simple – we both just keep doing what we are now doing. If the answer is inside, we and Russia must make adjustments in strategy and tactics.

The common interests of the United States, Europe, Russia, China, Japan, and many other nations are more aligned today than at any point in modern history. I believe that we must seize this historic opportunity and act accordingly.

Bottom line: In an age fraught with the dangers of nuclear proliferation and catastrophic terrorism, global security depends on regional security. Twenty years after the fall of the Berlin Wall, establishing a more cooperative and productive relationship with Russia will require Europe's leadership as well as the United States'.

#### A world free of nuclear weapons

The reaction of many people to the vision and steps to eliminate the nuclear threat comes in two parts – on the one hand they say: “That would be great.” And their second thought is: “We can never get there.”

To me, the goal of a world free of nuclear weapons is like the top of a very tall mountain. It is tempting and easy to say: “We can't get there from here.” It is true that today in our troubled world we can't see the top of the mountain.

But we can see that we are heading down – not up. We can see that we must turn around, that we must take paths leading to higher ground and that we must get others to move with us.

Nearly 20 years ago, U.S. President Ronald Reagan asked an audience to imagine that “all of us discovered that we were threatened by a power from outer space—from another planet.” The President then asked: “Wouldn't we come together to fight that particular threat?” After letting that image sink in for a moment, President Reagan came to his point: “We now have a weapon that can destroy the world -- why don't we recognize that threat more clearly and then come together with one aim in mind: how safely, sanely, and quickly can we rid the world of this threat to our civilization and our existence.”

If we want our children and grandchildren to ever see the mountain top, we must begin to answer this question. ■