



JANUARY / FEBRUARY 2010

# FOREIGN AFFAIRS

---

## **Is the Nuclear Order About to Collapse?**

Graham Allison  
Charles Ferguson

---

## **The Road to Energy Security**

David Victor &  
Linda Yueh

---

## **The Problem With Foreign Aid**

Jagdish Bhagwati

---

## **How to Deradicalize Terrorists**

Jessica Stern

---

## **The Best Defense?**

Abraham Sofaer

---

## **Helping Women Help the World**

Isobel Coleman

---

## **Journalism, RIP?**

Peter Osnos

---

# The New Population Bomb

## **The Four Megatrends That Will Change the World**

**Jack Goldstone**

---

# Let Obama Be Obama

## **Zbigniew Brzezinski on Why American Foreign Policy Should Move From Hope to Audacity**

---

## **Taiwan's Love Affair With Beijing** **Bruce Gilley**

\$9.95 USA  
FOREIGNAFFAIRS.COM

# The Long Road to Zero

## Overcoming the Obstacles to a Nuclear-Free World

*Charles D. Ferguson*

OVER THE past three years, a remarkable bipartisan consensus has emerged in Washington regarding nuclear security. The new U.S. nuclear agenda includes renewing formal arms control agreements with Russia, revitalizing a strategic dialogue with China, pushing for ratification of the Comprehensive Nuclear Test Ban Treaty, repairing the damaged nuclear nonproliferation regime, and redoubling efforts to reduce and secure fissile material that may be used in weapons. During the 2008 presidential campaign, the veteran foreign policy experts Henry Kissinger, Sam Nunn, William Perry, and George Shultz successfully encouraged both major-party candidates, Barack Obama and John McCain, to embrace the idea of a world free of nuclear weapons. In the past year, President Obama has made this goal a priority for his administration, although he admits that it is not likely to occur in his lifetime.

This presents a conundrum, however: In a world where the strongest conventional military power cannot envision giving up its nuclear weapons before all other nations have abandoned theirs, how will humanity ever rid itself of these weapons? In order to speed the reduction of its own nuclear arsenal and encourage other countries' disarmament,

---

CHARLES D. FERGUSON is President of the Federation of American Scientists. From 2004 to 2009, he was Senior Fellow for Science and Technology at the Council on Foreign Relations, where he served as Project Director for the CFR-sponsored Independent Task Force on U.S. Nuclear Weapons Policy. For an annotated guide to this topic, see "What to Read on Nuclear Proliferation" at [www.foreignaffairs.com/readinglists/nuclear-proliferation](http://www.foreignaffairs.com/readinglists/nuclear-proliferation).

the United States will have to confront three daunting obstacles: the insecurities of nations, including some currently protected under the U.S. nuclear umbrella and others that see a nuclear capability as the answer to many of their security problems; the notion that nuclear weapons are the great equalizer in the realm of international relations; and the proliferation risk that inevitably arises whenever nuclear supplier states offer to build civilian reactors for nonnuclear states.

#### STOPPING THE CASCADE

THE UNITED STATES became the world's first nuclear power in 1945, but it enjoyed a monopoly for only four years. In August 1949, the Soviet Union staged its first atomic test and joined the nuclear club, giving the United Kingdom and France a rationale to follow suit. China, facing threats from the United States, began its nuclear weapons program in the 1950s with help from the Soviet Union. Despite the Sino-Soviet split in the early 1960s, China proceeded with its nuclear program and tested its own weapon soon afterward, in 1964. The 1962 border war between China and India helped spur New Delhi to develop nuclear weapons, which in turn convinced Pakistan to do the same. Fearing for its survival among hostile states, Israel also developed nuclear weapons during the 1960s. And, quietly, during the late 1970s and early 1980s, South Africa's apartheid regime built simple Hiroshima-style nuclear bombs, which it later dismantled as the apartheid state began to crumble in the early 1990s. The most recent member of the nuclear club is North Korea, a small pariah state with a massive insecurity complex.

Although this list may seem ominous, the situation could have been much worse. Dozens of countries, including Argentina, Australia, Brazil, Canada, South Korea, and Switzerland, have explored nuclear weapons programs. U.S. leadership has largely thwarted further proliferation. The Nuclear Nonproliferation Treaty (NPT), which entered into force in 1970, has been one of the most effective tools in curbing the spread of nuclear weapons, but its reach is limited. Although the five permanent members of the UN Security Council are all NPT signatories, the other four current nuclear-armed states are not. Israel, for example, never signed because it has never formally acknowledged that

it has nuclear weapons, and Indian leaders have opposed the NPT because they believe it constrains the ambitions of the world's nuclear have-nots while allowing the original nuclear powers to maintain massive arsenals. Given the deficiencies of the NPT and the current nonproliferation regime more broadly, it is vital for the international community to develop principles of responsible behavior for countries with nuclear arsenals and for those with nuclear materials that could be used to make weapons.

The first principle must be that all states would benefit from a world in which no one ever again used nuclear weapons. This leads to the second principle: governments must declare that nuclear weapons are only necessary for deterring the use of other nuclear weapons—a shift that would enhance the security of all states and at the same time reduce the perceived strategic value of these weapons. As Ivo Daalder and Jan Lodal argued in these pages (“The Logic of Zero,” November/December 2008), “only one real purpose remains for U.S. nuclear weapons: to prevent the use of nuclear weapons by others,” meaning that they should not be used to respond to conventional, chemical, or biological attacks. The United States, however, has followed a policy of calculated ambiguity that leaves adversaries in doubt about whether it would employ nuclear weapons if attacked by nonnuclear means. So far, the U.S. government has been reluctant to state explicitly that it will not.

Washington must address several concerns before making such an explicit declaration. First, adversaries may fear that this decision could be reversed easily if, for example, the United States or its allies were attacked with biological weapons. Second, certain allies, such as Japan and South Korea, may doubt the credibility of U.S. extended deterrence commitments because they fear a Chinese conventional attack or conventional, chemical, or biological attacks by North Korea. The United States currently has the strength to establish a new international norm against the use of nuclear weapons to respond to nonnuclear threats, and it should seize the opportunity to do so.

The third principle should be that every state that possesses nuclear weapons or materials and technologies that can be used in nuclear weapons must ensure the security of their arsenals and stockpiles. For example, many nonnuclear weapons states use highly enriched uranium

(HEU) to produce medical isotopes for diagnoses and cancer treatment. However, HEU can also be used to fuel basic nuclear weapons, and therefore states possessing HEU should replace it with less highly enriched materials that cannot be used in weapons or substitute it with alternative nonnuclear technology.

Although adopting these principles should make both U.S. adversaries and U.S. allies more comfortable, some nations would still have many lingering insecurities.

#### STATUS ANXIETY

CURRENTLY, Japan, South Korea, and the nonnuclear NATO countries do not feel compelled to acquire their own nuclear weapons because the United States provides a credible deterrent to nuclear attacks against them. Other states, however, seek to maintain or acquire nuclear arsenals because they do not benefit from any great power's nuclear umbrella and because they see nuclear arms as the great equalizer that will guarantee their security in a dangerous world.

Three types of states fit into this category: U.S. enemies, such as Iran and North Korea; U.S. rivals that share Washington's interest in curbing proliferation, such as China and Russia; and U.S. allies that have nuclear weapons but have not signed the NPT, such as India, Israel, and Pakistan. To deal with the first group, the United States and its partners have employed a combination of sanctions and incentives. If such packages fall short in turning back those countries' nuclear weapons programs, the United States should employ containment strategies to limit the leverage that these aspiring nuclear powers can gain. For example, in the case of North Korea, Washington must show Pyongyang that there is a viable path toward joining the international community while making it very clear that there will be consequences if it uses its nuclear weapons or transfers its nuclear technology to other states or to nonstate actors. The United States must also increase its economic and military support to its allies bordering these states.

The second group comprises major nuclear-armed powers that are already in a mutual-deterrent relationship with the United States. Because China and Russia are weaker than the United States from a conventional military standpoint, they have little incentive to agree to

deep cuts in their nuclear arsenals. Therefore, conventional arms control—in the form of assurances that U.S. conventional forces and missile defense systems will not undercut Chinese and Russian nuclear deterrents—must play a role in any future negotiations on nuclear disarmament.

Washington has leverage over most of the countries in the third group because they are U.S. allies. Renewed U.S. engagement in helping resolve the Indian-Pakistani dispute over Kashmir is one necessary step toward reducing nuclear tensions on the subcontinent. But this is not enough. Because Pakistan relies on nuclear weapons to counter India's conventional superiority, the United States needs to address this imbalance by recalibrating its policy of supplying armaments to both states, giving Islamabad enough assistance so that it feels sufficiently secure to free up more military forces to fight the terrorists who are threatening the Pakistani government and its nuclear arsenal. For Israel, meanwhile, a major prerequisite for considering nuclear dismantlement is a serious commitment from all the Muslim states in the region to honor its right to exist. The United States must, therefore, redouble efforts to work toward this recognition, which will require reaching a final-status agreement between the Israelis and the Palestinians.

Even if the insecurities of these three groups of states are eased, Obama's dream of a world without nuclear weapons will remain just that until nuclear weapons cease to confer elevated status on the regimes that possess them. The fact that every permanent member of the UN Security Council possesses nuclear weapons has led many nations to believe that international clout is dependent on having a nuclear capability. Iran, which has been charged with violating the statute of the International Atomic Energy Agency (IAEA) and pursuing a nuclear weapons program, has repeatedly reminded the international community that the Security Council's permanent members have not lived up to their own NPT commitment to pursue nuclear disarmament.

The permanent members of the Security Council still reflect the international balance of power that existed in the wake of World War II, even though the world has changed substantially since then and many rising regional powers crave recognition. Unlike the Security Council, the IAEA's Board of Governors has sought to reflect these changes by including the ten states with the largest peaceful nuclear energy

